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Business-to-business services: multiple markets and multi-disciplinary perspectives for the twenty-first century

Guest Editors: Katherine Tyler, Mark Patton, Marco Mongiello and Derek Meyer

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Services business markets: a further view of a new reality or a blurred landscape?

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Abstract
Purpose – The purpose of this article is to review the emerging literature of services business markets (SBMs) from 1974 to 2007 and analyse main themes that indicate the development of the literature. It also aims to provide an introduction to the special issue on services business-to-business markets by examining the context.
Design/methodology/approach – The literature of SBMs from 1974 through 2007 was searched in relevant databases. The articles were analysed using Glaser's grounded theory. The constant comparison method was used with *in vivo* coding to reveal themes in the literature. These themes were then analysed contextually.
Findings – The literature revealed seven themes which followed a trajectory from implicit to explicit consideration of SBMs, as well as to multi- and cross-disciplinary focus with integration of variables from consumer services marketing. The landscape for SBMs has become blurred due to deregulation, globalisation and information technology, particularly the internet and e-commerce. The complexity and diversity of the literature reflects this new, blurred reality.
Research limitations/implications – This research is limited to indicative literature about SBMs as an introduction to the special issue on services business-to-business markets. The literature would benefit from a full critical review and research agenda.
Practical implications – The integration of theories coupled with the focus on specific service sectors and contexts, provide useful, applicable and transferable concepts which may be helpful to managers who are working in new contexts.
Originality/value – This article surveys the emergence of the literature on SBMs and defines its trajectory, themes and characteristics. It provides a useful background for academics and practitioners who would find a guide to the fissiparous literature on SBMs useful.

Keywords Services, Business-to-business marketing, Services marketing

Paper type Literature review

In 1982, Håkan Håkansson and the IMP Group published their pioneering book, *The International Marketing and Purchasing of Industrial Goods*: *An Interaction Approach*, which viewed business markets as relationships and interactions in a systems view of inter-dependent companies, based on buying and selling as dynamic processes over time, in interactions between counterparts (Håkansson and IMP Group, 1982). This interaction model (Håkansson, 1982) has been recognised as a major contribution to thinking about business markets. It was a new view of reality, which was developed further and encapsulated neatly as the title of Axelsson and Easton's (1992a, b) book. Both these "new views of reality," however, considered services and services business markets (SBMs) implicitly, rather than explicitly. Of the many cases in the IMP work, and hundreds of relationships investigated, many are services, but are neither explicitly identified as services, nor studied from a services perspective. It was not their intention to focus on services.

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Our subsequent understanding of business markets has been transformed by a more thorough conceptualisation of interactions, and relationships, and the development of network theories (Axelsson and Easton, 1992a, b; Håkansson and Snehota, 1995). However, many aspects of these constructs, such as time, methodologies for studying network perspectives (Easton, 1995), and so on, are still being developed and remain opaque. However, services business markets (SBMs), which are the largest sector, by value and by volume, have remained elusive and opaque for a longer period.

If business-to-business markets are complex and opaque, SBMs are even more so. A total of 231 years ago, Adam Smith (1776) wrote about the "invisibility" of services and the problems "invisibility" entailed for measuring economic performance. A total of 30 years ago Bateson (1977) identified "impalpability" in services, not only in the sense of intangibility, but also as difficulty in apprehension and comprehension, and unable to grasp mentally (a current example is the phenomenal growth of hedge funds, "black boxes" which are little-regulated, operate in borderless electronic markets, and which have morphed the financial landscape in the last ten years).

These two themes of "invisibility" and "impalpability" reverberate through the SBM literature. SBMs are ubiquitous. We, are surrounded by them, and yet may be as unaware of SMBs as Schopenhauer's fish were of the water in which they swam[1]. A total of 20 years ago, Turnbull and

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Gibbs analysed the difficulty in researching SBMs because access to companies was difficult; access to respondents was difficult, many of these markets were "invisible", and were, therefore, less obvious research choices, data may be confidential, many SBMs were difficult to understand, and, at that time, there were few guidelines from the literature (Turnbull and Gibbs, 1987). Cunningham was one of the first to link customer service concepts from consumer markets to business markets, and, in so doing so, noted that SBMs were under-researched and inaccessible (Cunningham and Roberts, 1974). These themes are still in evidence, although the landscape is changing.

SBMs are consistently more under-researched than business markets, as seen by the analysis of SBM articles published in one sector, financial SBMs, in *The International Journal of Bank Marketing*. From 1994 to 2006 in *IJBM*, there were 146 consumer articles and 83 SBM articles (Table I). From 1994 to 2003, many issues had no SBM articles, and of the 83 published, 39 were published from 2003 onwards (Table I).

However, the convergence of two major *causa causans* (Gillies and Ietto-Gillies, 2001, using Keynes's framework[2]) from the 1980s onwards contributed to more research attention focused on SBMs: environmental forces, plus the "coming of age" of the services marketing literature.

Environmental forces in the 1980s, such as deregulation, globalisation, and technology, focused attention on SBMs, as the landscape changed and SBMs moved from off stage to centre stage. For example, deregulation occurred in the SBM sectors of air transportation, financial services, health care, telecommunications, and telematics in most developed countries (Gillies and Ietto-Gillies, 2001; Laing *et al.*, 2002). These major forces created subsidiary forces, such as, technology and computer-driven communications systems (telematics), which provided new communications channels and ways of doing business through the internet and e-commerce, which in turn resulted in changes in information flows and knowledge transfer, leading to disintermediation, and asymmetrical and heterogeneous relationships (Laing *et al.*, 2002; Webster and Hardwick, 2005). These forces stimulated the growth and internationalisation of SBMs, who, in turn, needed insights into management, marketing and operations, and business-to-business research focused on a services perspective (Laing *et al.*, 2002).

These environmental forces were coupled with the "coming of age" of services marketing literature (Berry and Parasuraman, 1993; Fisk *et al.*, 1993) which was then mature enough to provide guidelines for the growing SBMs and to stimulate the research focus, multi-disciplinarity and cross-cultural perspectives which the new SBMs required for interpretation (Lovelock and Gummesson, 2004).

In the following decades, especially the 1990s onwards, there has been a diminishing of "invisibility" for SBMs, and a clearer view of a new reality. There have been nearly 100 articles published in mainstream journals, and many more in specialist journals, with an explicit focus on SBMs. The SBM literature has emerged fully, to provide a further view of the new reality of business marketing in the service sector, which comprises more than 74 per cent of the GDP of most developed countries.

As SBM literature takes a further view of the new reality, is this "reality" itself now a blurred landscape (Wind, 2006), has the kaleidoscope through which we view it shifted, or are we viewing it through the rear window as we drive forward[3]?

Table I Consumer and B2B articles published in the *International Journal of Bank Marketing*, 1994-2006

Year	Issue	Consumer	B2B
1994	1	0	2
	2	2	1
	3	0	4
	4/5	1	0
	6/7	3	0
	8	3	0
1995	1	1	2
	2	1	1
	3	3	0
	4	5	0
	5/6	1	0
	7/8	1	0
1996	1	2	1
	2	0	4
	3	2	1
	4	0	0
	5	1	0
	6	1	0
	7	3	0
1997	1	1	0
	4/5	5	1
	6/7	3	1
1998	1	2	3
	2/3	3	2
	4/5	4	0
	6/7	5	0
1999	1	3	0
	2/3	6	1
	4/5	4	1
	6/7	2	1
2000	1	1	2
	2/3	4	2
	4/5	3	2
	6	2	0
	7	0	2
2001	1	1	1
	2	1	0
	3	3	0
	4/5	4	0
	6	1	2
	7	3	1
2002	1	0	2
	2	1	1
	3	3	0
	4/5	4	1
	6	3	1
	7	2	1
2003	1	2	1
	2	1	2
	3	1	3
	4	1	1
	5	0	2
	6/7	3	4
2004	1	1	1
	2	3	1
	3	3	1
	4	2	0
	5	2	2
	6	1	1
	7	2	2
2005	1	3	1
	2	1	1
	3	1	1
	4	2	2
	5	0	2
	6	2	1
	7	1	3
2006	1	2	2
	2/3	5	2
	4	2	0
	5	1	3
Total		145	83[a]

Note: [a]From 2003 onwards, 39 papers in B2B

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In order to assess the SBM literature, this paper identifies the themes which characterise research in SBMs, which may be seen to provide a further view in the landscape of a new reality, which we argue is one in which the landscape has become blurred since the 1990s (Axelsson and Easton, 1992a, b; Wind, 2006).

This is a difficult task, especially in an introductory editorial to this special issue. The emerging SBM literature is disparate and fissiparous, with little consistent dialogue or development. It has developed along the fracture lines of not only services marketing and business-to-business literature, but also different service sectors, contexts and geo-political spaces. It is cross-fertilised by multidisciplinary perspectives, as concepts from biology (Palmer, 2000), chemistry (Xie *et al.*, 2005), e-commerce and information technology (Tan *et al.*, 2007) as well as the more obvious psychology and anthropology, and human and social sciences, are used to explain the phenomena observed in SBMs. The literature is therefore contextual, contingent, and, more often than not, incapable of generalisation. There is however, a consensus that SBMs are perhaps more uncertain, complex, and interdependent than B2B markets (Vickery *et al.*, 2004).

The seven themes outlined below have been developed through a methodological approach of thematic analysis that examined the content of papers to provide categories, and through comparative analysis of categories revealed emergent themes (Glaser and Strauss, 1967; Glaser, 1978).

The seven themes are suggestive rather than exhaustive, and provide a rough guide, rather than a fully developed map. It provides a few landmarks in a further view of the landscape of the new, blurred reality of services business-to-business markets. There is, as yet, no comprehensive, critical literature review of services business markets, nor is there a publication outlet which focuses solely on services business markets (SBMs), which would provide a locus for dialogue. This special issue is designed to begin to fill those gaps.

The literature on services business markets has developed and changed its focus from 1974 to 2007, from one theme to another, as it moved from (see Table II):

- Implicit (Håkansson and IMP Group, 1982; Axelsson and Easton, 1992a, b) to explicit, or off stage to centre stage (see Tables I and II).
- Local/national to international and multi-national, cross-cultural (Webster and Hardwick, 2005).
- Well-known, visible sectors (Halinen, 1997; Hibbert, 2003) to less well-known sectors (Woo and Ennew, 2005).
- Uni-disciplinary to multi-disciplinary approach (Cort *et al.*, 2007; Xie *et al.*, 2005).
- General approach to focus on relationships, relationship variables, interactions, networks and relationship marketing (Gounaris and Venetis, 2002; Gounaris, 2005; Kiely, 2005; Lam and Burton, 2006; Möller and Halinen, 2000).
- Retail services conceptualisations integrated and applied to SBMs, such as customer service, service quality, switching barriers (Banting, 1976; Cunningham and Roberts, 1974; Yanamandram and White, 2006).
- Distribution channels to on-line, e-business and e-commerce channels (Tan *et al.*, 2007; Wilson and Daniel, 2007).

The literature shows, paradoxically, a broadening of focus as well as a narrowing of approach, as papers consider specific service sectors and/or variables from a multiplicity of perspectives. We also see integration of the literature in some areas, especially in the application of research in services marketing to SBMs. We see, in all this diversity and plurality, strength rather than dissipation, and a greater, rather than lesser, analytical power, which reflects the plurality of SBMs.

It appears that the landscape has become blurred, or at least our old vision of it is no longer an adequate map; as Hayakawa would say, cow 1 is not cow 2 (Hayakawa, 1991). A search on the Science Direct database shows that under the category business-to-business, 171 articles were published from 1968 to May, 2007, and from 1994 through May, 2007, there were 65 relevant articles about SBMs with "B2B" services in the title.

Despite the impact of services and technology, we still call our area of study, curiously, industrial marketing, and one of our main journals, *Industrial Marketing Management*, although this is an increasingly outdated label for the reality in the services, network and information economy we study. We are driving in a blurred landscape, and, furthermore, we are driving forward in the twenty-first century, at an ever accelerating pace, while looking out the rear window.

We believe that the papers in the special issue reflect this new reality and blurred landscape. However, what is new in this special issue is that we believe that we are looking forward at the twenty-first century, looking at a new reality and blurred landscape, from the front window. There were more papers accepted than the ones published here, and they will be included in following issues, which together constitute a new body of literature on SBMs. The special issue was over-subscribed and many good papers which deserve publication were unable to be accepted, but will have had their potential advanced from the thoughtful comments by thorough and constructive reviewers. The accepted papers were empirical and conceptual, qualitative and quantitative, and their authors were from the US, Belgium, Germany, Australia, Scandinavia and the UK, but their contextual range is global. The range of papers selected represented all our themes, and much that is published here represents new themes or approaches and a major contribution to the literature on SBMs.

Andreas B. Eisingerich and Simon J. Bell, in their paper on managing SBM networks, apply social network theory to international SBMs to identify network strength and network openness as drivers of business performance in information technology and biotechnology SBMs in North America and Europe. They identify "network intensity" as the trust and timely exchange of information between actors, and "network openness", which is the openness towards new actors. They found that both network intensity and openness underpin competitive advantage, and help to understand innovation in SBMs.

Many papers specifically focus on multi-national and cross-cultural issues. Susan Freeman and Mark Sandwell identify key barriers to internationalisation in emerging markets for professional service firms (legal, media, consulting and financial) from developed markets. In three case studies, they analyse how professional service firms from Australia use social networks to participate in emerging markets in Asia in Thailand, Malaysia and Vietnam. The elements of orientating, positioning and timing were identified as critical in the context of foreign entry, with the network perspective providing a useful theoretical explanation of this process and underpinning the conceptual framework. Key barriers to internationalisation in emerging markets for professional service firms from developed markets are identified: face-to-face communication, language, cultural, work practices and government regulations. How professional service firms use

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Table II SBMs indicative literature in chronological order

Name of author(s)	Theoretical positioning	Key findings
Cunningham and Roberts (1974)	Marketing of industrial products to the engineering industry. Role of customer service. Personal interviews with 13 exec.	Extended credit structures, discounts not important to pump buyers. Delivery reliability and access to authority are important
Banting (1976)	Industrial suppliers' perception of supplier performance. Suppliers of raw materials. Buyers were 25 manufacturers of pumps and valves, products were steel castings and forgings	Delivery reliability, prompt quotation, technical advice are key to customer service. Pump manufacturers want discounts, after sales service
Patterson and Spreng (1997)	Qualitative research, senior managers from four consultancy firms and eight client organisations. Questionnaires complete by 127 Australian client organisations	Value mediated through repeat purchase. Outcomes; methodology; service; relationship; global network; problem identification. Value considered pre and post purchase
Bownsan and Lele-Pingle (1997)	Interviews with key decision makers in the buying centre	Describing patterns of buying behaviour in the foreign exchange contracts of multinationals
Mehta and Durvasula (1998)	Shipping services, Singapore; SERVQUAL	Shipping services, influence exports business, loss of orders, increased claims, lower prices etc. Service delivery. Weak chains in sub systems are concern
Cannon and Perreault (1999)	Survey. A total of 45 purchasing managers were contacted by phone then mailed. A total of 362 were mailed directly. A total of 34 and 123 responded respectively	Relationship connectors. Antecedent market and purchase situations influence types of relationships. Supplier performance
Schellhase *et al.* (2000)	Personal survey of 146 employees in the food-retailing sector. Interviews using standardised scripts	Suppliers of food retailers should not base decisions only on consumer needs. Retailers satisfaction: contact persons, intensity of co-operation, management of prices and conditions and quality and flexibility
Tikkanen *et al.* (2000)	Finnish software industry. Case study	Customer satisfaction is complicated. Need to study the business structures
Gounaris and Venetis (2002)	Questionnaires issued to 340 companies as recommended by 74 advertising agencies. A total of 152 useable questionnaires were returned	The time element is important. Some dimensions of service quality can be related to trustworthiness. Similar with customer bonding techniques
Svensson (2002)	Questionnaire based on servqual sent to service and producer industries	Service quality measured in triadic network context. Balance level and quality of triadic service quality be developed
Helzberg (2003)	Conceptual – Ideas and arguments based on experience	Complaints and resolving problems create great services
Svensson (2003)	Conceptual – literature and theoretical review	Conceptual framework of service quality in a service encounter. Interactive service quality coming from multiple perspectives
Theoharakis and Hooley (2003)	A total of 750 surveys were faxed to the managing director or marketing director of the firm. A total of 189 usable respondents returned	Relationship marketing depends on the firm's culture and overall sources
Eng (2004)	Survey involving food service companies, retailers, and wholesalers in the UK	E-marketplace supply chain enables automate transaction-based activities, procurement-related processes. Integration of internal and external supply chain activities, share of strategic information are needed for full participation
Farley *et al.* (2004)	Data observation. A total of 5,457 observation in UK bond market, 4,418 in US. A total of 6,790 in UK foreign exchange market and 5,739 in US. Interviews with a key decision maker in customer offices	Country differences do not impact marketing mix. Bond market is more price sensitive, foreign exchange is more product sensitive
Fontenot and Hyman (2004)	Literature review	Firm's commitment to the marketing may diminish if channel relations reduce competition and customer benefits
Money (2004)	A total of 48 companies were interviewed. Regression analysis	Companies using referrals do not switch easily. Oversea companies are more likely to switch
Roth *et al.* (2004)	Interviews with 48 service buying companies	Market segments: "networkers", "opportunists" and "independents". Identify referral sources. Who and where buyers are, what services purchased
Skaates and Cova (2004)	Multi-lingual literature review; conceptual	Project marketing concepts capture key aspects of marketing project-related services better internationally. Pluralist approach may be useful

(continued)

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Table II

Name of author(s)	Theoretical positioning	Key findings
Svensson (2004)	Swedish automotive industry. Mail survey to 70 suppliers, 46 purchase managers and 6 materials managers	Both supplier and receiver have low interactive service quality
Zolkiewski (2004)	Literature review and case study	Relationship management is a key tool for health service mangers
Bennett *et al.* (2005)	Survey distributed to 1,472 decision-makers. A total of 267 respondents were useable	Involvement with service category is important to brand loyalty. Experience moderated its influence
Colgate and Lang (2005)	A total of 2,500 companies surveyed with 991 usable questionnaires returned. A total of 879 out of the 991 are small businesses. Case study	Relationship managers are important to the quality of the relationship between small businesses and the banking services provider
Peterson *et al.* (2005)	Clinical laboratory directors in Europe and the US were surveyed using the dimensions of SERVPERF	Service quality in Clinical laboratory in Europe and the USA is perceived to be the same
Theodoras *et al.* (2005)	Food supplier distributing to multiple food multiple retailer stores. 40 retailers were asked to rate the elements of performance and the service of their competitors	Greek sausage market, service measure: order completeness, invoice error – free, on time delivery, delivery of products without defects, efficiency in handling returns, informing about shortages in orders, providing technical information and efficient handling of customer requests
Warts and Van Everdingen (2005)	A large empirical study in 10 European countries. ERP adoption in medium-sized companies	National culture, traditional micro and meso variables explain variance in adoption decisions
Blocker and Flint (2007)	Conceptual – theory and literature review	Segment instability. Integrate related theory on customer value change
Iyer *et al.* (2006)	Conceptual – theory and literature review	Interpersonal relationships are important in global marketing of industrial products. Industry and country contexts are important to marketing strategies
Lancastre and Lages (2006)	In-depth interviews with five managers of pmelink.pt. Survey of 395 usable questionnaires	Cooperation is positively affect costs, supplier relationship policies and practices, communication, negatively affected by prices and opportunism. Commitment and trust are vital
Lian and Laing (2007)	Quantitative and qualitative methods: survey of human resource directors; in-depth case study	Relational exchange and relationship marketing in professional services. Relationship specific tasks
Penttinen and Palmer (2007)	Case study	Strategic repositioning influenced by customer needs, enabled by information technology and networking
Yanamandram and White (2006)	Qualitative study. A total of 20 personal interviews with managers in Australia	Reasons dissatisfied customers stayed with the service providers
Cort *et al.* (2007)	A total of 152 managers of US-based professional service firms	Attribution theory proves effective. Provides insights to managerial issues in internationalisation process
Davis *et al.* (2007)	Two mail surveys. A total of 1,341 surveys were mailed, 672 service providers and 669 customers. A total of 142 service providers and 71 completed responses	Branding theory, applying to the logistics services. Different perspectives on influence of brand image and brand awareness on brand equity
Edwards *et al.* (2007)	Survey. A total of 450 French subsidiaries in Australia and New Zealand were sent questionnaires. A total of 100 usable returned	Significance of entry mode, can influence the experience of animosity. Buyer animosity less pronounced in industrial markets
Ellinger *et al.* (2007)	A multi-survey design was utilised wherein managers and frontline service employees. Data were collected from 123 large logistics service provider organisations	Resource-based theory. Enablers of better performance from some logistics service provider firms
Jayawardhena *et al.* (2007)	Literature review and dyadic in-depth interview were used. A mail survey of customers was undertaken	Face-to-face service encounter quality. A four-factor structure of service encounter quality. Directly related to customer satisfaction and service quality perceptions, and indirectly to loyalty
Peinado and Barber (2007)	Based on 174 entry decisions of service firms	Strategic variables and nature of services are important in understanding complexity
Rauyruen and Miller (2007)	Mail survey and online survey. A total of 306 usable respondents were received. Courier delivery service context. SMEs	Relationship quality influences attitudinal loyalty; behavioural loyalty; customer loyalty; employee level has no significance
Rosenbloom (2007)	Conceptual – literature review	Multi-channel marketing. Issues: role of e-commerce, an optimal channel mix, synergies across channels, strategic alliances, sustainable competitive advantages, more complex supply chains, conflict, and leadership
Wilson and Daniel (2007)	Four case studies; analytic induction	E-commerce era, channel resources not enough for competitive positioning. Seven dynamic capabilities for channel transformation

social networks to participate within the emerging markets of Asia to overcome these barriers reveal that social network elements are critical to foreign market entry, specifically into emerging markets: orientation, positioning and time. Social networks were used by managers of professional service firms to secure market knowledge and to act as a basis for strategic decision-making, with foreign network actors a key influence in the foreign market entry process.

James M. Barry, Paul Dion, and William Johnson, in their paper, "A cross-cultural examination of relationship strength in B2B services" extend relationship marketing theories by testing relationship strength in a global SBM context. They confirm the influence of perceived value, switching costs and relationship quality, defined as satisfaction, trust and affective commitment, on relationship strength. This paper contributes to the limited literature on building B2B service relationships in a global context.

Complex ICT systems, technology, e-service and e-commerce, and their implementation, are currently strong themes in the SBM literature, and these are represented by papers by Mika Hyötyläinen and Kristian Möller, and Adam Rapp, Tammy Rapp and Niels Schillewaert.

Hyötyläinen and Möller integrate three service design and development methods from the services marketing literature, service industrialisation, tangibilisation, and service blueprinting, and describe how they can be utilised as an integrated system to reduce the complexity of ICT services. They use a case study approach based on an ICT service provider. The results include a service architecture framework, which may be transferable to other contexts, and which can be used for creating a module-based offering and implementation system for complex business services.

Their framework provides strong managerial applications, as it reduces the complexity of ICT services, while at the same time, allowing for customer-specific adaptation. Key aspects are the identification of service modules and interfaces in a multi-actor service offering setting, and the providing of adequate resources for the design phase of the customised service project. This is essential in order to be able to simultaneously respond to customer specific needs and to reduce the number of existing technologies and overlapping functionalities, seemingly contra dictionary aims. These findings offer significant, transferable, theoretical and managerial implications for the design and production of not only ICT, but also other complex business services.

Adam Rapp, Tammy Rapp, and Niels Schillewaert's study examines the antecedents and perceived value associated with e-business implementation in service firms. The findings of the study suggest that technical infrastructure and external drivers influence e-business implementation. Additionally, e-business was found to create value for firms through efficiency, novelty, lock-in, and complementaries. The results imply that a firm's behavior, while driven in part by external factors (e.g. shareholders, competitors, customers, etc.), is largely contingent upon a firm's internal infrastructure and environment. Managers should assess a firm's technological infrastructure before launching an e-business venture. The major contribution of their paper is that they integrate and provide the first empirical examination of previous work, and present a robust conceptual framework that incorporates the antecedents and value creation associated with e-business implementation.

The contribution of Carolin Plewa and Pascale Quester's paper is to empirically analyse an area which has had little research attention so far: research-oriented university-industry relationships which are based on the incorporation of RM and technology transfer theory.

In their paper, "Key drivers of university-industry relationships: the role of organisational compatibility and personal experience", trust, commitment and integration were found to positively influence satisfaction and were confirmed as key drivers of successful university-industry relationships. While trust was the strongest driver of satisfaction, commitment emerged as the strongest predictor of intention to renew.

Their results also confirmed the proposed interrelationships between these relationship characteristics. Organisational compatibility emerged as positively influencing all relationship characteristics, indicating its relevance for university-industry relationships and suggesting its potential importance for other relationships crossing essentially different organisational environments. Surprisingly, only a weak influence of staff personal experience on commitment was found. The primary contribution of this paper lies in the development of a foundation for research in a new services business context by combining the established theory of RM with the emerging area of technology transfer.

Arun Sharma's paper, "Evolution of the sales organization for B2B services markets: an agenda for research and practice" is an area which is infrequently examined in the literature, and provides a foundation for further investigation of sales organisation for SBMs.

There is also an integration of the literature from services marketing and other disciplines, as the conceptualisations about relationship variables, such as trust, and the literatures on relationship quality, service quality, satisfaction and value creation are applied to SBMs in this special issue.

Genevieve Catherine Myhal, Jikyeong Kang, and John A. Murphy, explore B2B services customer-perceived relationship quality in their paper, and provide a B2B services conceptual model of relationship quality from the customer's perspective. Their findings provide guidelines for managers in terms of identifying which relationship quality dimensions are important to customers. Managers can use their model to help to adjust their current customer relationship management strategies, or to develop new ones, to best suit customer needs.

Another paper, "Segment differences in the asymmetric effects of service quality on business customer relationships", by Simona Stan, Kenneth R. Evans, Charles M. Wood, and Jeffrey L. Stinson, is the first effort to explore the differences in effects across service quality dimensions and customer segments in a professional business service context. The findings indicate that aggregating customers and the service quality measurement can offer misleading information to managers.

Their advice to managers is to invest resources in improving low performance in those service quality dimensions with strongest impact on customer satisfaction and highest negative asymmetry. The identified segment differences suggest the need to achieve strong results for large accounts and relatively new accounts. The customer relationship is the most important for small accounts and relatively mature accounts. Maintaining service reliability is critical for small and new account retention.

Graham Whittaker, Lesley Ledden and Stavros P. Kalafatis's paper, "A re-examination of the relationship between value, satisfaction and intention in business services", adds to the little researched area of the functional relationship between determinants and outcomes of value with specific emphasis on the value to satisfaction and intention to re-purchase relationship in professional services.

In professional services, different dimensions of value act at different levels of the value hierarchy. The important finding in this paper for managers is that value creation happens differently, and is created differently during the process and outcome stages in professional services. Therefore, managers should consider the "process" and "outcome" stages of the service delivery separately.

There are few studies of trust in either services business markets, or financial services business markets. Therefore, the paper by Katherine Tyler and Edmund Stanley makes a contribution by integrating the literature on trust form a multi-disciplinary perspective and applying it to financial services business markets. The results show that the perceptions of trust and the operationalisation of trust were asymmetrical across the dyads and segments. Small companies were more trusting than large corporates. Bankers used calculative and operational trust and were cynical about their counterparts' trustworthiness. Bankers were quick to eliminate clients from their portfolio who did not, in their view, provide full disclosure of pertinent facts.

Managers may be able to gain insights for themselves and their clients in order to understand the importance of trust in their relationships, and how it is operationalised differently by the counterparts in business relationships.

The literature on customer service is integrated and applied to business-to-business service relationships by Judy Zolkiewski and Barbara Lewis in their paper, "An assessment of customer service in business-to-business relationships". Their findings show that that service quality in a business-to-business context is a complex and multifaceted issue, the different parties in a relationship have differing perceptions of what constitutes service quality and that actors from the wider network can have an impact on perceptions of service quality.

Managers need to be aware of the complexity of service quality perceptions in a business-to-business context. They must consider dynamics, actions of other actors and how best to demonstrate their expertise and experience. The findings are significant because this is one of the few pieces of research into business-to-business service quality in which perceptions of quality from both sides of the dyad are collected and analysed.

We would like to thank our editor, Professor Charles L. Martin, for his sterling guidance throughout this process, and our thoughtful, helpful and constructive reviewers, who provided multiple reviews of many papers. The contributions of this special issue are entirely due to them and to our authors, while any shortcomings remain our own.

Notes

1 A deliberate transliteration here: Schopenhauer's idea is usually applied to the inability to perceive culture because it surrounds us; used here in the same sense about SBMs (Young, 2005).

2 John Maynard Keynes's methodology, to analyse the prime mover, or the "cause of all the causes" (Gillies and Ietto-Gillies, 2001).

3 Marshall McLuhan's metaphor for the inability to perceive the influence of the mass media in the 1960s (McLuhan, 1964).

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Service packaging: key to successful provisioning of ICT business solutions

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Abstract

Purpose – Business services have an important role in the development of global knowledge-base economy. This is particularly clear in the field of ICT services where business customers are requiring an increasing amount of complex services in order to support their utilization of advanced ERP, SCM and CRM solutions for boosting their business processes and competitive advantage. The complexity of these services and customers' requests for special adaptations form a critical challenge for service providers. This paper seeks to develop solutions for managing this complexity.

Design/methodology/approach – Three service design and development methods – service industrialization, tangibilization, and service blueprinting – are introduced and then analyzed as to how they can be utilized as an integrated system to reduce the complexity of ICT services. This is carried out through an action research-based case study of an ICT service provider.

Findings – The results include a service architecture framework, which can be used for creating a modularized offering and implementation system for complex business services. It reduces the complexity of services while allowing their customer specific adaptation.

Practical implications – Key aspects are the identification of service modules and interfaces in a multi-actor service offering setting and the providing of adequate resources for the design phase of the customized service project. This is essential in order to be able to simultaneously respond to customer specific needs and to reduce the number of existing technologies and overlapping functionalities, seemingly contra dictionary aims.

Originality/value – Findings of the paper offer significant theoretical and managerial implications for the design and production of complex business services.

Keywords Communication technologies, Customer service management

Paper type Research paper

An executive summary for managers and executive readers can be found at the end of this issue.

Introduction

The importance of business services based on information and communication technology (ICT) has been increasing dramatically since the commercialization of internet and mobile technologies. Successful operation of companies in almost all industries is becoming highly dependent on their ability to harness the breakthroughs in enterprise resource planning (ERP) systems, supply chain management (SCM) systems, and customer relationship management (CRM) systems; all these systems are either based on ICT technologies or utilize them extensively. For example, the exceptional growth and cost reduction in airline services could not have been achieved without comprehensive application of ICT services (Buhalis, 2004). In other words, ICT services play a strategic role in the business processes of most firms. This observation is reflected in the steady increase of the demand for ICT services (IDC, 2003a, b, c; Sarissamlis, 2003).

Considering the relevance of business-to-business ICT services we have only scant knowledge of their development and marketing as most research has been technologically oriented. The production and marketing aspects of ICT services are, however, becoming increasingly important and challenging due two major trends. First, rapid technological innovation has led to a significant increase in the complexity of ICT services (Kallinikos, 2005) influencing the design and production processes, and customer interface of the services (Chapman and Hyland, 2004). Second, because of the strategic character of services, the customer expectations have become more demanding. Reliability is taken for granted and customization is needed to differentiate from competitors (Johnson and Ettlie, 2001).

From an ICT service provider's point-of-view, this creates many challenges concerning service development, marketing, and implementation. Development becomes more difficult, as the variety of different software technologies concerning the actual service increases, and marketing and selling become more challenging, as the customers' requirements are more and more unique. If a service provider cannot manage this complexity it will lead to increasing production costs, systems failures resulting to serious problems in customers' business processes, and to customer dissatisfaction and defection. We argue that service design is a critical phase in addressing the described complexity as design influences service production, implementation, and customer perceptions and satisfaction.

The purpose of this study is to present three service design and development methods – service industrialization, tangibilization and service blueprinting – and to describe how they can be used to reduce the complexity of ICT business services. The study draws on an action research oriented case study of a large Finnish ICT company and comprises five sections. In the next section, we will discuss the characteristics of business services and outline the methods

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suggested for reducing the complexity through service "packaging". This develops the conceptual basis for the empirical part. The third section focuses on the adopted methodology providing a description of the case study concerning TeliaSonera, Finland, a major ICT company. The fourth section describes and discusses how service packaging methods were employed in reducing the complexity of the ICT services provided by TeliaSonera. A discussion on the theoretical and managerial implications concludes the study.

Complexity of ICT services and service packaging

Characteristics of ICT services

One of the central themes in the study of services has been their complexity compared to products (Brown *et al.*, 1994). Since the early writings of Judd (1964), who defined services as market transactions where the object of the exchange is not a physical commodity, key authors in services, for instance, Rathmell (1966), Shostack (1977), Levitt (1981), Lovelock (1983), and Parasuraman *et al.* (1985), have addressed the characteristics of services and reflected their consequences. Services are generally seen to be characterized by intangibility, diversity, perishableness, and inseparability of production and consumption (Grönroos, 1990; Parasuraman *et al.*, 1985; Zeithaml *et al.*, 1985). Services are also seen as composed of activities or performances rather than things or objects.

While contrasting of products and services has been useful for identification of the unique characteristics of each category a more important notion is that most products and services often share some of the mentioned characteristics. This view lead to the proposition of product-service continuum, where pure products are at one end and pure services at the other; the key differentiator being the share of tangible versus intangible characteristics (Rathmell, 1966; Shostack, 1977). Related to this continuum perspective, Thomas (1978) divided services into two categories, those that are equipment based (e.g. automatic telephone exchanges) and those that are people based (e.g. consulting services). This view was emphasized by Levitt (1981) who considered the difficulty of pre-assessment of the quality and value of service as the most important outcome of the relative intangibility. Another aspect is that the competence of the customer influences the performance of service and the utility the customer can derive from the service.

The discussed general service characteristics are also relevant in the ICT business services. The key aspect in the ICT services is their complexity. ICT services are composed of large number of service categories (United Nations, 2004):

- *IT technical consulting*. Expert opinion on technical matters related to the use of IT.
- *IT design and development services*. Design and development of IT solutions such as custom applications, networks and computer systems.
- *Hosting and IT infrastructure provisioning services*. Access to IT infrastructure (hardware, software and networks) enabling the hosting of applications and the processing of information.
- *IT infrastructure and network management services*. Management and monitoring of a client's IT infrastructure.
- *IT technical support services*. Technical expertise to solve IT related problems.
- *Information and document transformation*. Technical expertise and equipment to transform information from one format or media to another.
- *Internet access and backbone services*. Connection to, and carriage of traffic on, the internet.
- *Published software*. Software developed for wide distribution and produced for multiple sale or licensing.

Most strategic business applications like CRM and SCM services are actually combinations of interrelated equipment and service packages involving several technological and software solutions (April, 2004). This makes their design, production and provisioning highly complex. It is very difficult for the customer to evaluate and compare different service providers and to try to assess the performance and return-on-invest aspects of major ICT service contracts in advance (Kallinikos, 2005). These problems are intensified by the rapid development in different software languages and other ICT technologies causing further uncertainty (Hyytinen and Pajarinen, 2005). Customers fear of getting locked-in into non-winning technological solutions. The long-term commitment inherent in strategic ICT investments makes customers very risk aversive Miyazaki and Kijima (2000). Another aspect increasing the challenge of successful ICT service production is the customized character of major ICT services. In order to achieve best support for their business processes large corporations are requesting at least partly customized system solutions (Johnson and Ettlie, 2001). This complicates further the design and provisioning of the services and managing the customer interface.

How to try to manage this technological and commercial complexity raising the production costs of services and increasing the risk of service failures and customer dissatisfaction? One solution is reducing the complexity through service packaging.

Managing the complexity of services – service packaging

One of the central themes in developing service marketing and management theory has been the issue of trying to control and manage the problems caused by the characteristics of services for their efficient production and marketing. In the following we present three key propositions or methods for service packaging: service industrialization, service tangibilization, and service blueprinting.

Industrialization of services

Levitt (1972) argued that there is no such thing as service industry. Instead, there are only industries whose service components are more or less than those of other industries. He saw the humanistic emphasis as a profound weakness of services discussion. In his opinion services should be "industrialized" by applying techniques found from manufacturing. Levitt (1972) suggested that industrialization should be done by focusing more on the activities that are required in producing the service – and how they could be re-engineered – than on the performer of those activities.

In a case of human-intensive activities, hard, soft and hybrid technologies should be used to systematically industrialize services (Levitt, 1976). Hard technology means replacing human activities by technology-based processes (as

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in the ATM and internet banking services), soft technology refers to rationalizing and specialization of the human activities involved in services, as well as repacking or modularizing them (as in the modularized service and maintenance packages offered by the ICT providers for, e.g. corporate telephony services), and hybrid is a combination of hard and soft technologies. Leavitt mainly applied the principles of limited discretionary action of personnel, division of labor, substitution of technology for people, and service standardization in his industrialization efforts. Also Johnston (1994) and Bowen and Youngdahl (1998) argued that service management has a lot to learn from operations management in manufacturing.

Tangibilization of services

Levitt (1981) also discusses the role of tangibility in the processes of winning new service customers and retaining the existing ones. He points out that in order to make prospective customers confident and comfortable about intangibles that cannot be pre-tested, organizations should go beyond the literal promises of specifications, advertisements, and labels to provide reassurance. Intangible promises have to be "tangibilized" in their presentation; making intangible tangible should be done as a matter of routine on a systematic basis (Levitt, 1981). Reddy *et al.* (1993) and Buttle (1993) have applied Levitt's ideas of tangibilization in the service mix and in relation to the corporate image. According to them in order to remain competitive a service firm must tangibilize or concretize its services. Buttle (1993) provides helpful examples how hotels have tangibilized their services offering by developing different kinds of printed material (e.g. floor plans, area maps, meeting room set-up's), property tours, photographic material of the property, newsletters, conference books, videos etc., for both business and customers. For a broader discussion on service tangibilization (see Sempels, 2002).

Service blueprinting

Shostack (1987) emphasized the process perspective of services and stated that process manifests the fundamental nature of services. She suggested that the service process should be first described as steps and sequences and by the complexity and divergence of those steps and sequences. Shostack (1987) defined process complexity as the number and intricacy of the steps required carrying out the process. Divergence was defined as the degrees of freedom allowed performing a process step or sequence.

Based on the process perspective Shostack (1984) presented a service development method called service blueprinting. Blueprinting comprised four steps. First, the service process should identified and broken down into steps and sequences. Second, the potential failure points (where the performer is seen to have too much discretion) should be isolated. Third, a suitable timeframe for service should be established. Fourth, the service should be analyzed to identify possible changes of unprofitable sequences or timeframes. Shostack (1987) argued further that service blueprinting could be used to re-engineer the service structure to gain strategic advantage.

Methodology – a case study of packaging ICT services

This section discusses first the selection of research approach and describes then the chosen case company and its service packaging project, and concludes with the data collection methods.

Research approach

Packaging ICT services is a complex process generally involving several organizational units and their personnel. In order to achieve the necessary understanding of this complex process an action research oriented case study was chosen. Case study is a suitable method for studying complex organizational processes in their real life context (Yin, 1984). Action research (AR) refers to such qualitative research where the researcher participates actively in organizational problem solving or change programs. In AR theory is developed bivalently, theoretical understanding is sought of the object to be constructed or tested and of the change process associated with the process of constructing or testing (Checkland and Holwell, 1998; Stowell *et al.*, 1997; Susman and Evered, 1978). In this sense the main difference between ordinary case study and AR is the interventionist action of the researcher.

Action research was chosen in this study as the lead author was responsible for a project aiming at restructuring the ICT service production of the case company. This project matched well Susman and Evered's (1978) view of action research as a cyclical process with five phases:

1. *Diagnosing*. Identifying or defining a problem.
2. *Action planning*. Considering alternative courses of action for solving a problem.
3. *Action taking*. Selecting a course of action.
4. *Evaluating*. Studying the consequences of an action.
5. *Specifying learning*. Identifying general findings.

In brief, action research was seen to provide both in depth conceptual understanding of the ICT services packaging process and relevant managerial implications and know-how (Baskerville, 1999; Baskerville and Wood-Harper, 1998; Klein and Myers, 1999).

Case company

The selection of the case company, TeliaSonera Finland, was heavily influenced by the access aspect. The lead author has been working in the company since 2000 and was the owner of the ICT service packaging project that forms the empirical object of this study. We argue, however, that TeliaSonera Finland (TSF) is in fact a highly suitable case company for studying the management of ICT services in business-to-business context. TSF operates in the field of telecommunication services being the largest telecom operator in Finland. Its annual revenue is around €2 billion (2004), and the share of ICT business (b-to-b) is around €70 million (2004) depending on the classification of ICT (€70 million does not include any traffic charges). TSF currently employs around 6,000 people.

TeliaSonera Finland has quite a wide ICT offering. The offering covers everything from data and voice networks, to workstation and server management all the way to horizontal application platforms. To use the categorization of Market Visio (2003) TeliaSonera Finland offers four types of ICT services:

1 Hardware and software support services.
2 Consulting services.
3 Integration and implementation services in a relatively small scale.
4 Managed services, which form the core of offering.

The last group forms the focus of this study and contains the following kind of services "fieldwork" (brings the information from SAP to mobile devices), "eCenter" (integrates companies' internal as well as external business and support systems with each other with formats such as EDI, xml etc.), "Cstream" (provides means for multichannel messaging, for example enables sending emails as faxes or sms's), "security services" (firewall services, anti-virus protections, encryptions etc), "Alerta" (burglar alarm systems, building automation, automatic metering systems etc.).

TSF service offering is targeted to the whole business-to-business segment from SMEs to large corporations. Relationships with customers in this business area are generally long-term in nature. Length of the contracts is usually a minimum of two years and they often comprehend several individual ICT services. As the relationship with the customer grows and develops in time, usually more complex and sophisticated services are adopted by the customer. This makes the customer generally more profitable for the service provider but also complicates the successful management of the service provisioning, maintenance, and up-grading.

ICT service project

In the early 2004 the management of the TeliaSonera business services started to recognize that their key business services – the "managed services" group (containing among others the briefly described "fieldwork services", "eCenter services", "Cstream services", "security services", and "Alerta services") were becoming very difficult to manage. These services originated from earlier subsidiaries of the company and had been created by various organizational units serving special customer needs. Because of this history the services utilized many different software technologies, provided different functionalities, had different processes, and used different kinds of backend systems. Some of the challenges concerning development, production, and selling of these services were originated from the incorporation of most subsidiaries back to the mother company (TeliaSonera Finland) in the summer of 2002. The extent of different types of services and their technological variation led to increased complexity, which manifested in problems concerning service quality and increased production costs. In other words there was too much everything.

In diagnosing the situation (diagnosis phase of action research) complexity was identified as the core problem. As a result a project labeled service architecture redesign (SARDIN), targeted at reducing the service offering complexity, was launched in the beginning of 2004. The project concentrated on business process networking (BPN) services in the managed services portfolio. An example of these services is a BPN User Integration service that enables a company to mobilize their SAP system, in a way that all data traffic between the SAP and a mobile device is secured and guaranteed.

When the core problem was examined further it was identified that the large variety in every aspect of the services led to increased complexity (Miyazaki and Kijima, 2000), which in turn led to challenges concerning service quality, cost structure, and customizability. As alternative actions were identified (action planning phase) to reduce the variety, it was recognized that the complexity challenge could be approached from various perspectives – customer need, technology, process, system etc. In the end it was decided that the project would concentrate on developing a framework that encompasses both the customer need perspective as well as the technology perspective (action taking phase). Industrialization, Service Blueprinting and Tangibilization were identified as suitable methods to do this. From the customers point of view, it was seen that the about ten services under the old BPN concept should be integrated and regrouped into one BPN service.

The SARDIN Project was concluded in February 2005. As a result (consequences phase) of the project, a new service architecture framework was developed that will enable significant reduction in the number of different software technologies as well as functionalities used and offered by the BPN services. The framework also contains rules and standardized ways of working for processes that involve service design, development and production. These processes themselves will be also significantly simplified. The implementation efforts of the framework were started during late fall of 2005.

Data collection

The case material was collected during the project in on-to-one interviews, project meetings, and methodology meetings which Mika Hyötyläinen, the lead author participated being in charge of the Project. In three one-to-one interviews (October, 2004) the pursued service architecture model and working methods were discussed with the Business Services Vice President. Project meetings focused mainly on the content of the project. Altogether three project meetings were held (September-December, 2004) involving nine managers representing directors of the various business services and their business development and technical managers. In eleven methodology meetings (August 2004-January 2005) the methods (industrialization, tangibilization and service blueprinting) and their application were discussed together with the interim results of the Project with the Project Manager. All meetings were documented through memos containing information of the decisions, activities, and frameworks. This rich material base was further supported by e-mail logs.

Packaging of complex ICT business services

At the start of the project available methods for reducing service complexity were looked for and examined. Based on the authors' experience and knowledge from the field of service marketing and management and involvement in the project, service industrialization (Levitt, 1972), tangibilization (Levitt, 1981) and service blueprinting (Shostack, 1984) were chosen as the appropriate methods. This section describes how these three methods were employed in practice and how the analysis resulted in the construction of a new Service Architecture framework.

Applying service industrialization: building a modular service architecture

Service Industrialization means using hard, soft or hybrid technologies, borrowed from manufacturing, in service design and development (Levitt, 1972). In the SARDIN project mainly soft technologies were used because of the critical design phase of the ICT services were highly people-dependant, being carried out by various groups of experts. Applying soft technologies in this context means systemizing something that has been done uniquely every time and/or pre-planning something that has been done in an ad-hoc manner (Levitt, 1976).

When reflecting the potential principles of complexity reduction, it was identified that we should minimize idiosyncratic, one-time performances and that as much as possible of the service design work or actions should be reusable. This in mind, modularization from manufacturing industry was selected as a cornerstone principle (Peters and Saidin, 2000; Jiao *et al.*, 2003). Modularization in general aims at packaging individual functionalities in a way that functionalities in one module would have as much in common as possible and that those modules would be as reusable as possible (Tsai and Wang, 1999).

When analyzing the modularization of TSF's BPN services, it was discovered that modularization could be used at two levels: technical and functional. At the technical level modularization involved an ability to create a limited set of product platforms to produce the targeted functionalities, instead of using about ten different individual products to produce the same functionalities. The targeted product platforms were based on a handful of selected software technologies, leading further to a considerable reduction in the software complexity. The original products had each been based on a separate software technology.

At functional level, modularization led to splitting original service products into functionalities. Because the existing BPN services were not structured in a similar manner, the very first task in the modularization was to examine the current architectural situation. When the current situation was unfolded, it was realized that the reusability of modules could be further enhanced if the functionalities were further divided into two sets: peripheral functionalities and core functionalities.

The core functionalities (e.g. message conversion, reliable message routing, triggering chain of events etc.) were crucial in addressing actual customer needs so greater variability existed among them. The peripheral functionalities in turn, were ones that were more involved with service management issues or of the service aspect per se (e.g. billing of the service, service desk operation, service delivery, service reporting, etc.). These peripheral functionalities had more commonalities among the ten different BPN services, or at least it was seen that these could have more in common, which meant greater reusability in practice.

The impact of modularization on the service production architecture is illustrated in Figure 1. It should be noted that the functional product elements (FPE's) or technology elements (TE's) of the different services were not so clearly known nor structured before the SARDIN project. Here similar structure is used to illustrate the before and after the project situation so that they could be more easily compared. As an example of the acronyms in the left side of the Figure 1, service 1 stands for "c-stream" (providing means for multi-channel messaging), product 1 would be "Topcall" and technology 1 would be "WM Ware". TEs in this context would be "Link Server", "Archive Server" and "Voice Server". FPE 1 in turn is "office messaging", FPE 2 "message archiving" and FP3 "business critical messaging."

The modular service architecture comprised now of three levels: technical modularity (shown in the left hand side of Figure 1 as technical modules/elements), core functional modularity (shown in the left hand side of Figure 1 as core functional modules/elements) and peripheral functional modularity (shown later in Figure 2 in left hand side as peripheral functional modules/elements). After this basic high-level structure of the service architecture was developed, the actual existing set of functionalities provided by BPN services were examined. This was done by using a kind of tree methodology to break down each functionality into its smallest possible elements. After this basic step, the individual functionalities were examined in order to find ones that were fulfilling the same customer need. When this was done, those functionalities that were used in several services were all grouped into one module called CORE. The CORE module would then be made usable for other modules. At this point it was not yet selected which software technologies would be used to produce the functionalities in the CORE module and which ones were to be abandoned.

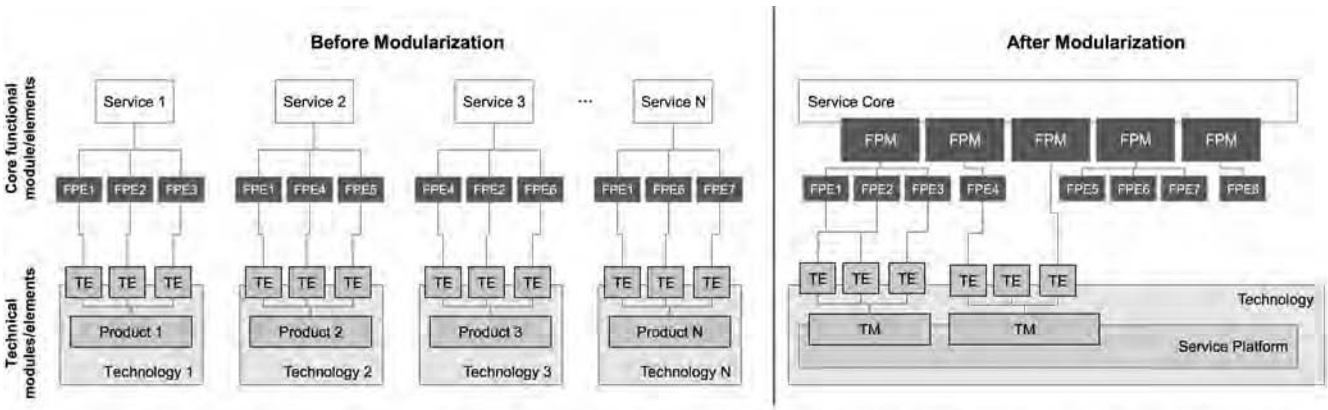
When the lowest functionality level (those that were not part of the CORE module) was further examined, functionalities that had the most synergies between each other (Tsai and Wang, 1999) were grouped together into three modules (M2M, B2B and UI). In the end the about ten services were reassembled into a one BPN service that consisted of four basic and one extra modules: CORE, B2B (business transactions), M2M (machine initiated transaction), and UI (user initiated transaction). In addition there is a fifth module (Integrated Network Services) for integrating other services to the BPN. These are shown in Figure 2 as the five functional product modules (FPM).

Applying principles of tangibilization: creating service manuals

The main philosophy of tangibilization is to transform intangible activities, acts or doings into an as concrete form as possible (Levitt, 1981). In the case of BPN services, very often the different functions are in fact outcomes of certain processes performed by different units in the organization. For example, price rating or billing functions in a BPN service are only the intangible outputs of the billing process performed by TeliasSonera's billing organization. In a similar matter, also service design and delivery functions are intangible outputs of design and delivery processes. The challenges with these intangible outputs are that they are often quite hard for people to grasp and the variance in the outputs is high, because the output itself is not usually defined in a clear and consistent manner.

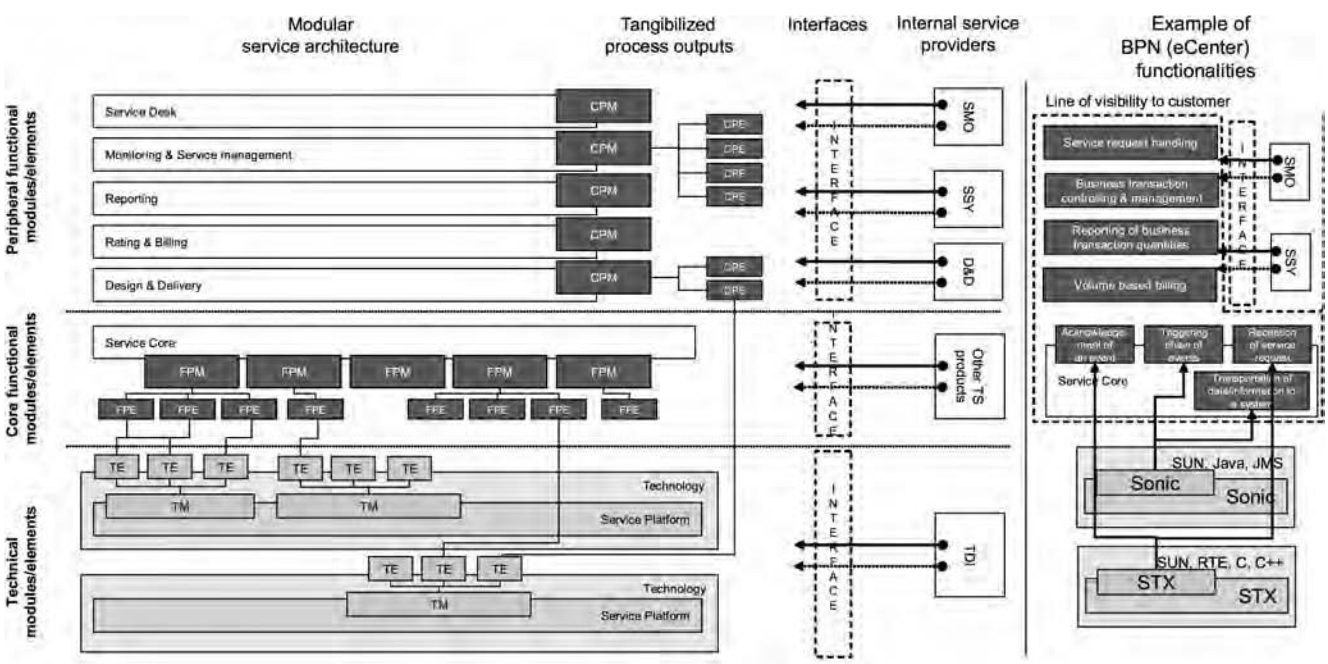
By applying tangibilization, the number of outputs will be limited and clear boundaries are set for those outputs. In other words, some choices are made in advance for controlling that actions and things are allowed and which are not during the service production. As a result there will be a limited number of, e.g. billing structures that can be used in a billing function or a limited number of attributes (e.g. duration, man-days etc) in design function that are allowed to

Figure 1 Influence of modularization on the architecture of complex ICT services



Note: FPE = Functional Product Element, TE = Technology Element, FPM = Functional Product Module, TM = Technology Module

Figure 2 The service architecture framework of the SARDIN project



Note: FPE = Functional Product Element, TE = Technology Element, FPM = Functional Product Module, TM = Technology Module, CPM = Common Product Module, CPE = Common Product Element, SMO = Service Management & Operations, SSY = Service Systems, D&D, Design & Delivery, TS = TeliaSonera, TDI = Technology Development & Innovations

be changed. Second stage in tangibilization is to concretize the outputs to make them more tangible for people to handle.

In the SARDIN project, the original variety in rating and billing functions alone was quite large. So first the number of allowed outputs was limited and then some design attributes were set as fixed. The second stage of tangibilization in the project was done by establishing the idea of service design manuals for different internal organizational units that were producing the functions. In practise this meant that instead of making rating structures uniquely for every product, the rating and billing organization would have a ready service manual containing the possible rating structures (= service elements) that they are allowed to produce. The manual would also indicate the cost levels of different service elements, so that the designer developing a new ICT service would appreciate the implications to the overall costs his/her decisions concerning billing, delivery, and help-desk opening hours etc., would have.

By utilizing this form of tangibilization helped to limit the number of the outputs and by defining the content of service outcomes clearly in the service manuals reduced further the perceived complexity of service design and production. The overall variance in both the outputs and in their production was significantly reduced. All this makes the outputs, which are functions in the overall ICT service, easier for people to handle.

Applying service blueprinting: defining interfaces

Service blueprinting (SB) looks at a service from its process point-of-view. Its aim is to find points in the process that cause unnecessary variance for the overall output or which could be carried out more efficiently Shostack (1987). After it was clear that the different functions of the overall ICT service were to be tangibilized as service elements in the service manuals, the next thing was to concentrate to the interfaces in the processes between the development organization and the internal units that were producing the service elements. The interface term here refers to methods, tools, and the actual processes used.

As the processes were broken into smaller peaces became clear that especially those parts of the processes which involved two different organizational parties (one was the performer and other was the internal customer of the process) were more or less performed by ad-hoc manner. This meant that the performer had quite a lot of discretion in many process phases, which often lead to quite long lead-times. After this diagnosis the main service blueprinting activities were targeted to those parts of the processes that involved interfaces with different organizational parties.

This turned out to be probably one of the easiest parts in the SARDIN Project. All that needed to be done, was to develop simple rules and guidelines to the interfaces for the people to use, to significantly reduce the need for performers' discretion as well as to remove phases that were not producing any real value for the service elements. This process redesign shortened the design and service production times considerably.

Service architecture framework

Based on the analyses and outcomes of the adopted three methods of service design and production (industrialization, tangibilization and service blueprinting) a new service architecture framework was constructed, summarizing the key results of the SARDIN project. The framework is illustrated in Figure 2. Applying industrialization tools resulted in developing overall modularization architecture for the business process networking (BPN) services. In Figure 2 this is shown as the usage of modules and elements. Tangibilization in turn was used to transform the intangible process outputs into more tangible product elements that were listed in service manuals. This is shown as common product modules and elements instead of process outputs in Figure 2. Finally, service blueprinting was used to standardize the interfaces between the organizational units that were producing functions to the services. In Figure 2 this is illustrated as systemized interfaces between the internal service providers.

Although the implementation work of the SARDIN project has just been started, some effects can already be reported here. When only the basic principles of the modular service architecture (cross use of modules between different services) were discussed in the development organization, the results were immediately shown in the new development projects: Functionalities from different services (e.g. Alerta) were planned to be reused in new services (new versions of, e.g. Cstream). Also old hardware (e.g. of eCenter) has been utilized more efficiently in new development projects (e.g. in new versions of Alerta). While at this point it is too early to report any quantitative results, the goals for the implementation are high. In the hardware level it is expected that the amount of servers can be reduces by 30-40 percent.

Conclusions

The importance of ICT business services has been increasing dramatically. Company performance is becoming highly dependent on their ability to harness the breakthroughs in the ICT services in business processes. ICT services are, however, becoming increasingly complex due to the continuous development in their underlying technologies. Together with more unique customer needs, driven by the raise in the strategic importance of the ICT services, this creates great challenges for ICT service providers. If a service provider cannot manage this complexity it will lead to increasing production costs, systems failures, and customer dissatisfaction and defection.

We have argued that service design is a critical phase in addressing the described complexity as design influences service production, implementation, and customer satisfaction. Based on this suggestion the paper reports results from a major case study illustrating how complex ICT services can be redesigned through methods – industrialization, tangibilization, blueprinting – tailored from service marketing literature. These results contain several theoretical and managerial contributions.

Theoretical implications

First, the study shows how the service industrialization, tangibilization, and blueprinting methods can be utilized in an integrated manner; resulting in a new framework model of complex ICT services This is a major contribution as the majority of practical applications of these methods have involved only one method at a time (Bowen and Youngdahl, 1998). Our analysis shows that service industrialization, in terms of creating a modular architecture, should be carried out first, followed by tangibilization and blueprinting.

Second, the created service architecture framework is a significant contribution providing increased understanding and guidance for design and production of highly complex ICT services. A significant aspect is the simultaneous application of the customer need perspective and the technology perspective in constructing the service architecture. Although seemingly simple as a principle to be aimed at (de Jong and Vermeulen, 2003; Zeithaml and Bitner, 1996), this was much more difficult than expected in the context of highly complex business services involving several interpersonal and functional interfaces. By enabling the simultaneous responsiveness to customer needs and the reducing existing technologies and overlapping functionalities, seemingly contradicting aims, the process model makes an important breakthrough.

Third, the analytical descriptions of the SARDIN Project specify how each abstract service production method – industrialization, tangibilization, blueprinting – can be applied within the context of ICT services. In summary, we believe that the suggested integrative use of these three already classical service packaging forms offer important opportunities for more efficient production and customer delivery for complex business-to-business services in general (see de Brentani, 2001).

Managerial implications

The detailed results of the study and the proposed Service Architecture Framework offer several opportunities for improving business service management. In order to keep the discussion concise three main implications are addressed. First, in many customer and sales oriented service companies the managers in charge of the service production are usually the last ones to learn about new particular solutions that has especially been sold and promised for one customer. Because of this lack of internal communication and coordination between service marketing, design and production many managers working in the ICT services production are struggling with complex solutions that have been designed and developed to perfectly match a specific customer need, as understood by a salesman, without any concern of their runtime management. This study shows how the abstract methods of industrialization, tangibilization and blueprinting can really be implemented to modularize these "one-time unique solutions" and cut down complexity. As the studied SARDIN project demonstrates, this can have a significant impact on the overall service production costs.

Second, for managers working in the customer interface, this study shows that reducing and streamlining customer service offering does not necessarily mean less customer satisfaction. On the contrary, our results show that the service producer can cut down the number of offered service products and functions, but fulfill the same real and differentiated customer needs. By achieving better transparency between the unique customer needs and the implemented modular service offer, which allows reduced delivery time and improves functionality, customer satisfaction can actually be improved while simultaneously reducing service production costs.

Third, designers and developers of ICT services can use the Service Architecture Framework as a guiding foundation for new service development. After all, the framework presents an abstract but well articulated ground rules for an ICT "service factory." It illustrates how different aspects of the ICT services can be built with minimal complexity by modularizing functions, reusing modules, and clearly defining and packaging any elements of the services which form the desired service process outputs. In brief, the studied SARDIN project with its service architecture framework and detailed process descriptions provides concrete guidelines how to restructure and manage a complex business service portfolio.

Our suggestions and propositions must be considered together with the limitations of the study. The conclusions are based on a single longitudinal case study involving only one company. More empirical evidence is needed to support the validity of the Service Architecture Framework and to gain more knowledge about the applicability of the service design methods across different types of business services. An important extension would be to study also the perceptions and activities of customers as their competences and practices influence greatly the total benefits they can derive from the ICT services. In sum, we hope that the results of this study will pave the way for further empirical research on the management of complex business services.

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An assessment of customer service in business-to-business relationships

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Abstract

Purpose – The purpose of this paper is to develop a deeper understanding of customer service/service quality in business-to-business contexts.

Design/methodology/approach – An in-depth case study was used to discover the perceptions of both key individuals in the supplying company and key customers.

Findings – The paper shows that that customer service/service quality in a business-to-business context is a complex and multifaceted issue, the different parties in a relationship have differing perceptions of what constitutes service quality and that actors from the wider network can have an impact on perceptions of service quality.

Research limitations/implications – This work is tentative in nature so it is not possible to generalise the findings to a wider context. However, it suggests that this area needs much more detailed and in-depth investigation.

Practical implications – Managers need to be aware of the complexity of customers' service quality perceptions in a business-to-business context. They must consider dynamics, actions of other actors and how best to demonstrate their expertise and experience.

Originality/value – The findings of this research, although only exploratory, are significant because they are one of the few pieces of research into business-to-business service quality in which perceptions of quality from both sides of the dyad are collected and analysed.

Keywords Business-to-business marketing, Customer services quality, Customer service management

Paper type Research paper

An executive summary for managers and executive readers can be found at the end of this issue.

Introduction

Early research in business-to-business markets indicated the importance of customer service (e.g. Cunningham and Roberts, 1974). More recently, customer service appears to be an implicit assumption within the notion of relationships, be it from an interaction or other relationship perspective: feedback takes place through the interactions that occur between customer and supplier (Håkansson, 1982; Turnbull and Valla, 1986; Ford, 2002). However, this feedback will often be informal in nature and may well be given to technical personnel. The question of how this can be best collated and used for strategic purposes then becomes vital. Some researchers suggest that the collection of such market intelligence is the role of the sales engineers although, in practice, this can be fraught with problems such as pressure to achieve new sales and failures in management information systems (Donaldson, 1998). Little explicit attention seems to be given to this issue in either the business-to-business marketing or the sales management literature. Indeed, Parasuraman (1998) has remarked upon the paucity of research into customer service in business-to-business markets. Additionally, Homburg and Garbe (1999) believe that quality should be seen as a key issue in business-to-business services.

On the other hand, within consumer service markets, the collection of customer feedback appears to have become integral to the service process itself. A number of tools have been proposed and are widely discussed within the service quality literature, e.g. Grönroos (1984, 1988) and Zeithaml *et al.* (1988).

This research project provides an exploratory investigation of perceptions of service quality within a business-to-business setting that covers a range of diverse business interfaces (e.g. from a four-hour service visit to a major hotel chain, to the complete installation of a multi-million pound fire protection system) and customers (e.g. the end user, an architect, a prime contractor or a combination of these).

The remainder of this paper is structured as follows. Firstly, we review the different streams of literature that are appropriate to our research, starting with an overview of customer service and service quality in consumer markets. Then we consider the extant literature relating to customer service and satisfaction in business-to-business markets. We then describe the methodology utilised for the research, present our tentative findings and discuss the managerial and theoretical implications they suggest. Finally, we discuss how the research can be developed.

Customer service and service quality in consumer markets

There is substantial research evidence on customer service, service quality and customer relationships in consumer markets. This has focused primarily, but not exclusively, in

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service industries and the findings are largely applicable in product markets.

Research has been fuelled by a number of concerns, a key issue being the role of people in service production, delivery and consumption such that quality control in the traditional way is not possible as people become integral to service quality (Bitner *et al.*, 1994; Glynn and Lehtinen, 1995; Schneider *et al.*, 1998). This issue remains pertinent, although perhaps to a lesser extent today, with the prevalence of e-commerce and e-service. Increasing interpersonal interactions and relationships have been evident and of significance in a number of consumer markets, and a further set of research evidence deals with links between customer service, satisfaction, customer loyalty and retention, and profitability. For example, one can consider the costs and benefits of retained customers *vis-à-vis* new customers, the lifetime value of customers and the links between loyalty, revenue growth and profitability. Zeithaml (2000) has reviewed the evidence on the profit consequences of service quality. Further, there is research that considers the impact of employee performance, loyalty and retention on customer satisfaction and retention, and organisational success (e.g. Heskett *et al.*, 1994).

The well-known major contributions to understanding service quality in consumer markets have related to definitions, dimensions and measurement issues. Early definitions were offered by Grönroos (1984), Berry *et al.* (1985, 1988) and Zeithaml *et al.* (1988). More recently, Bitner *et al.* (2002) have examined the ability of technology to effectively customise service offerings, and recover from service failures, and discussed the infusion of technology as an enabler of both employees and customers in efforts to achieve these goals.

Early discussions on dimensions of service quality focused on outcome and process (e.g. Grönroos, 1988; Lehtinen and Lehtinen, 1982); design, production, delivery and relational dimensions (Gummesson and Grönroos, 1987); and technical, integrative, functional and outcome (Edvardsson *et al.*, 1989). The most widely reported set of service quality determinants, proposed by Parasuraman *et al.* (1985, 1988), has been used in a host of studies in varying industries and cultures in which the factor structure is frequently not replicated. Further, Johnston *et al.* (1990) and Silvestro and Johnston (1990) provide a framework of hygiene, enhancing and dual threshold factors.

When measuring service quality, most research attention has been given to SERVQUAL and, to a lesser extent, SERVPERF and similar tools, and discussion surrounding their use. Tools of this nature are used widely by consumer market researchers and by practitioners. However, a number of authors believe that SERVQUAL cannot be easily applied in a business-to-business context, see Homburg and Garbe (1999), for example. Thus, it is necessary to consider how service quality can be understood in a business-to-business context.

Customer service and satisfaction in business-to-business markets

Customer service/service quality

Within the antecedents of business-to-business marketing there is evidence of explicit focus on customer service. For example, Cunningham and Roberts (1974) investigated the role of customer service in engineering and found two categories of customer service. Convenience factors, that add value to the product and include: technical advice to help in search; quotations; availability of manufacturing facilities; ease of contact with supplier; and financial services. Reliability factors, that help to decrease uncertainty and are: quality control; replacement guarantees; delivery reliability; repair/maintenance services; and operator training assistance. Service was found to be one of several important variables influencing choice of supplier, and it may be a qualifying factor – i.e. to be sufficiently high for a supplier to be considered, or a determining factor – in the final decision. Convenience factors simplified work and reliability factors reduced risk.

In a business-to-business context, customer service and quality comes from the product/service, the physical environment, personnel (their attitudes and behaviour) and service encounters. Some research has been reported which pertains to assessment of customer satisfaction to embrace both product related and service variables. Other work is focused, more specifically, on customer service. Both these streams of research are considered below.

Arnaud (1987) (cited in Michel *et al.*, 2003) offered four dimensions of service that form a system in which the elements can reinforce one another or weaken them. The technical dimension is the heart of the service offer, the technical solution, in which some variables are more visible than others. The relational dimension impacts on the maintenance of credibility over time, and the functional dimension concerns how service is delivered and the added value. The institutional dimension is a result of the other three dimensions.

Szmigin (1993) makes the point that different elements of service quality may well come into play at different times in the relationship cycle; the elements she identifies are hard, soft and outcome aspects of service quality. She also suggests that clients' changing priorities over time need to be considered when assessing perceptions of service quality. These dimensions are similar to those developed and tested by Homburg and Garbe (1999), who believe that service quality in a business-to-business setting encompasses three dimensions: structural quality, process-related quality and outcome-related quality. Their empirical data also suggest that process-related quality in particular has a strong effect upon trust, satisfaction and commitment.

All these approaches are in keeping with the key elements of the interaction approach (the process of ongoing exchange, including mutual adaptation, the experience of the participants and relationship development (Håkansson, 1982)) and are important because they acknowledge the temporal aspects of the process and the dynamics that underlie the service quality process.

Lewis and Craven (1995) considered the relationship between a major industrial supplier and its business customers. They investigated the importance of 40 criteria in choice of a supplier and 18 criteria that would influence the replacement of an existing supplier. They found dimensions of service quality relating to product, the organisation and its personnel, and also operations/systems. These were classified as: reliability services which reduce the uncertainty/perceived risk of a buying decision; convenience services which add value to the product by adapting it to individual customer needs and simplify the work of the buyer; and interaction services – i.e. to develop and enhance successful buyer-seller relationships. These dimensions were seen to play a significant role in developing and maintaining relationships.

Wouters (2001) considered the role of customer service in vendor selection criteria when it can be either an order qualifier – i.e. a set of requirements that a supplier has to meet, or an order winner – i.e. a set of performance specifications that are important but not automatically expected by the customer. He delineated Reliability services (availability, delivery reliability, quality of deliveries) and Responsiveness services (communication skills, commercial flexibility). His fieldwork indicated that critical to achieving customers' service objectives were supplier performance with respect to production flexibility, complaints handling and order processing. Problems were found to be related to keeping to delivery times, order processing and communications. His conclusions were that customer service is still seen mainly as an order qualifier. The order winning potential lies in the responsiveness of organisations, i.e. the communication and information aspects regarding the supply process. So, customer service is important during the buying process but its order winning capability is often not addressed explicitly.

Gounaris and Venetis (2002), although having a primary focus on the development of trust, looked at the role of service quality as an antecedent to trust and found that different dimensions of trust become more important as a relationship develops. For instance, they found that in the early stages of a relationship, potential quality (the cues the company uses to signal its ability to handle the project) is the most important dimension. While in more mature relationships, soft process quality (related to interpersonal interactions) and immediate outcome quality are also influential.

On the other hand, Svensson (2001, 2002) reminds us that service quality should not be seen as a unidirectional construct; the perspectives of both the provider and user need to be considered, as do other actors in the network who have the potential to affect service quality in a given encounter. Svensson (2001, 2002) uses Parasuraman *et al.*'s (1985) service quality dimensions to assess the quality perceptions of matched pairs of users and providers. He finds significant imbalances in these perceptions and suggests that balancing these perceptions should be a management priority.

Woo and Ennew (2005) believe that the interaction approach (Håkansson, 1982) provides the framework for business-to-business service quality measurement and their empirical research supports their views. They find cooperation and social exchange to be the most influential dimensions in this context. However, it could be argued that they need to develop more detailed measures for their dimensions and to include the views of both sides of the interaction before they can confirm the utility of their dimensions. They also see these dimensions as antecedents to customer satisfaction, which leads us into a discussion of the role of customer satisfaction in business-to-business markets.

Customer satisfaction

Research into satisfaction in business-to-business contexts has also come up with a variety of findings, as discussed below. Geyskens *et al.* (1999) note that despite a significant focus on satisfaction in the channels literature, there is no consensus as to how satisfaction should be conceptualised or measured.

For example, Schellhase *et al.* (2000) considered satisfaction of companies as a result of complex processing of information, a key of which was an evaluation of the business relationship based on a target performance comparison (like expectations – perceptions). They asked various employees within the buying centres in food retailing to assess their satisfaction with elements that included the organisation of the interface between the manufacturer and the retail trade. Their findings emphasised the importance of suppliers' contact personnel (e.g. the need to be competent, their product/market knowledge, and reliability), and the degree of co-operation between companies (e.g. availability of contact people, problem free processing of orders, availability of information).

In a substantive study, Homburg and Rudolph (2001) developed a measure and assessed seven satisfaction dimensions across 12 countries among three roles in the buying centres – involving departments with different interests and different criteria in judging suppliers. Overall, order handling, to include speed of confirmation and delivery times, and salesperson interaction were the most influential criteria, and differences were found between different members of the buying centre.

Additionally, some researchers have considered customer service and satisfaction from a network perspective (e.g. Holmund and Kock, 1995; Tikkanen *et al.*, 2000). Holmund and Koch posit the importance of three dimensions of service quality in this context: economic, functional and technical. Another interesting model is that of Tikkanen *et al.* (2000) who look at both the relational and contextual aspects of customer satisfaction and dissatisfaction in business-to-business markets. They observe that customer satisfaction occurs within a buyer-seller relationship within a network context and that satisfaction of both parties is prerequisite for relationship formation. They draw attention to the inner context of an industrial buyer-seller relationship which impacts on the relationship between organisations, e.g. within an organisation the structures which influence co-operation, interaction and relationships and the process involved in buying-selling; also the different departments involved; and the key roles in buying and selling. So, one needs to understand the complex network of internal relationships as well as the actions of other actors in the immediate and wider network.

A summary of all the empirical studies that we have identified is included in the Appendix (Table AI) along with a list of the dimensions proposed for either service quality or satisfaction.

The above discussion illustrates that there is no clear consensus on which dimensions of service are applicable in a business-to-business context nor whether both parties in a relationship agree on which dimensions of service quality are important. Hence our research questions:

- Which dimensions of customer service/service quality (from existing models) are applicable in a business-to-business context?
- Can any new dimensions of customer service/service quality be identified?
- Is there consensus within relationships as to the important dimensions of customer service/service quality?

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Setting the research context

Who to collect data from?

In a business-to-business context it is important to consider not only designated buying centres and associated roles, but also key individuals in supplier firms and even in intermediary organisations. For example, in supplier organisations – sales departments, salesmen, service engineers, customer service, IT staff: and in customer buying centres – purchasing agents, users, IT personnel, engineers and managers. This issue can be considered in the context of the interaction model and network theory, whereupon the complexities of interaction and/or relationships that impact on buyer-seller relationships and expectations and perceptions of customer service become apparent. Collecting perceptions from both sides of a relationship is too often neglected, especially in the extant business-to-business services marketing literature.

How to ask questions? What to ask?

In consumer markets, SERVQUAL and other, similar, measurement tools have been used extensively. Attempts to replicate such techniques in business-to-business markets are in evidence. However, Szmigin (1993) notes that, because of the nature of business-to-business services, it may be more appropriate to investigate subjective perspectives of service quality at different stages in the business-to-business relationship. Additionally, the complex interactions that take place at many different levels in inter-organisational relationships mean that a single perception of service quality collected through a one-off administration of a questionnaire may not give real insight into the complex nature and perceptions of the quality of service being provided. Yet this is the insight that managers and researchers need to ensure that they can meet customer needs in the most efficient and effective manner.

When to ask for information/feedback?

Key research issues to address here pertain to stages in the buying process or, in service terminology, the position in the cycle of business relationships. Szmigin (1993) proposes a relationship cycle that suggests the likely path that typical relationships may follow. Various people from a service provider organisation may be involved at different stages of the cycle, and various people from the buyer's DMU involved at different stages of the buying process. During the life cycle of a relationship, customer requirements, expectations and satisfaction change, and the experience of clients can grow which may lead to declining needs for support. Vandermerwe (1990) refers to this as an activity cycle within which critical points relating to hard or soft quality may be more in evidence.

Pilot fieldwork

The preceding sections demonstrate that there is no accepted consensus as to what to collect, who to collect it from, when and how to collect it. Hence, we use an in-depth pilot case study of one business-to-business service firm as an exploratory platform. As Yin (1994) states, case studies are appropriate for how, why, when and what questions; the findings of Tikkanen *et al.* (2000) illustrate the benefits of taking this approach.

A manufacturer and service provider that is part of a multinational company, situated in the North West of the UK, was the focus of this pilot study: they identified service quality as a key performance indicator in their desire to maintain market leadership. The company is the UK's largest provider of fire protection, safety systems and specialist control technology engineering. They provide a multitude of products/services and serve a diverse range of industries, with their customers ranging from large retail chains to petrochemical and electricity generating industries, facilities management companies and consultants and architects. Service interactions range from a four-hour service visit to a hotel or retail outlet, to the complete installation of a multi-million pound fire protection system. Further, the initial customer may often not be the end user, adding an additional complication to the challenge of collecting, analysing and acting upon service quality/customer satisfaction data.

In the pilot case study, we utilised multiple forms of data collection. These included: semi-structured in-depth interviews, observation within the company and its customer organisations, as well as collecting appropriate secondary data. Two interview guides were developed, one for customers and one for the company's employees: questions were designed to determine what people's perceptions of service quality were in the context of this company and the services they provide. All the interviews were recorded and subsequently transcribed[1].

The interviewees included:

- Company personnel: e.g. senior management, sales engineers, support engineers, site engineers, service engineers, quality managers and service desk personnel.
- Subcontractors working for the company.
- Customer personnel: e.g. end users (managers and users); consultants and architects; and facilities management personnel and their customers.

A total of 13 interviews were conducted within the company and its subcontractors and 12 with their customers. Of the 12 customers, three of them were contractors and nine were end-users. Eight of the customers had long-term relationships with the company (i.e. lasting more than ten years and one had been working with the company for more than 50 years).

Two research students, who worked in the company for three months on this project, undertook the observation; all the observation was overt. Field notes were made during the observation and subsequently used as part of the data analysis.

Analysis

The data were analysed using principles outlined by Miles and Huberman (1994): pattern matching and thematic development were utilised. The coding was cross-checked amongst the researchers to ensure consistency of findings. The analysis involved both inductive and deductive coding, with the researchers using codes developed from the extant literature as well as defining new codes as they explored the data collected.

Findings

The research supported much of the extant research with respect to the factors that were identified as components of service quality. These are discussed below and summarised in Table I.

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Table I Customer service/satisfaction factors identified

Dimension	Existing	New	Buyer	Seller
Communication	*		*	*
Installation	*		*	*
Invoice accuracy/clarity of written material	*		*	*
Price	*		*	*
Responsiveness	*		*	*
After sales service	*		*	
Competence	*			*
Complaint handling	*		*	
Courtesy	*			*
Efficient office work	*			*
Good safety and environmental record	*		*	
Meeting requirements	*		*	
Performance of employees	*		*	
Product performance	*		*	
Product related information	*		*	
Quality of technical service	*			*
Solution development	*			*
Technical advantage	*		*	
Training	*		*	
Trust	*			*
Understanding	*			*
Wide range of products and services	*			*
Experience		*	*	
Minimum disruption		*	*	
Peace of mind		*		*
Performance of subcontractors		*		*
Problem handling		*		*

Factors identified by both customers and the selling company

Five factors from existing models can be identified in the data collected from both the case study company and its customers. These were communication, invoice accuracy, installation, price and responsiveness.

Communication

Informants from both the selling company and the customers identified two elements to communication: internal and external. Although, many researchers (e.g. Parasuraman, 1985, 1988), Wouters (2001) stress the importance of external communication with customers, they do not explicitly recognise the importance of internal communication. However, informants reported many problems with internal communication, often relating to messages not being passed to the person who they were intended for or leaving messages for people who were on annual leave that resulted in customers perceiving that their queries had not been dealt with.

One customer noted a particular problem with respect to the type of wiring to be used in his installation. He included a particular wiring type in his specification, but this was not included in the initial drawings that he received, so he discussed this with the people involved and got it changed; then, when the system was installed on site he found the installation engineers were not using his specification but their usual one, so he had to get this corrected again. He summed this up as follows:

> I had meetings with Company W's people, I said you should do this, should not do that. But the point is, it does not get through to the guy actually installing it.

Installation

The significance of installation as a component of service was noted by one engineer in the selling company "a good service means a good, organised installation. A clean installation, very neat and tidy." This supports the findings of Sharma *et al.* (1999). This is supported by the data collected from the customers, eight of whom mentioned on-time installation as being an important element of the service offering. Although this factor is not prominent in the other research noted above, it may well be because of industry differences, where not all products require installation.

Invoice accuracy

Invoice accuracy/clarity of written material was also noted as a source of customer dissatisfaction by a manager in the selling company. He was aware of a number of customer complaints regarding the clarity of information on invoices. This was confirmed by the data from the customers where a number noted the importance of accurate invoices. This supports the findings of Morris and Davis (1992) and Sharma *et al.* (1999).

Price

Price was mentioned by six customers, and a number of the selling company's personnel, confirming its inclusion as a factor by Perkins (1993). However, there was no consensus as to what aspects of price were important. Senior management in the selling company perceived contractors to be more price-conscious than end-users. Opinions amongst customers varied: one noted that they had chosen the vendor simply because they had the lowest price, while others, although believing that the price was competitive, did not see it as the most important aspect of the service. One customer noted:

> I suppose you could put a value to customer service. If you give customers the product or service they want . . . they actually will pay a higher price.

This confirms Cunningham and Roberts (1974) findings that price does not always play the main role. These different attitudes towards price cannot be related or linked to any other factors identified in the data gathered as part of this research. This suggests that they should, perhaps, be attributed to variability of customer requirements.

Responsiveness

Responsiveness was mentioned by many of the selling company personnel and they indicated its importance to the company by noting that it was a key performance indicator used by the company to judge engineers' performance. Additionally, five of the customers interviewed included a quick response as an important element of service, supporting the views of the selling company's engineers. This factor is mentioned either implicitly or explicitly in nearly all the extant research into services quality (see appendix) and these findings clearly support its importance. Interestingly, these findings may also support a trend identified by Peterson *et al.* (2005) of the higher importance of responsiveness in business-to-business contexts.

Other factors from the existing models

A number of customers mentioned after sales service or follow up services, meaning follow-up visits and service reports and post-installation site audits. This supports the inclusion of this factor by Cunningham and Roberts (1974) and Banting (1976).

Competence

Competence or "Offering knowledge and expertise on fire protection systems" was believed to be the company's strongest area of customer service by many of the selling company's personnel. This is supported by many of the earlier research findings about customer perceptions of customer service, e.g. Cunningham and Roberts (1974), Banting (1976) Parasuraman (1985, 1988), Morris and Davis (1992), Lewis and Craven (1995), Sharma *et al.* (1999).

Complaint handling

Complaint handling was discussed by a quarter of the customers interviewed and all were very dissatisfied with the procedures that the selling company have in place. This can be summarised by the following quotation from a contractor:

> We complained so many times! But nothing has been changed at all! We left the message that asked them to call us back, but received no response at all!

This supports its specific inclusion in the work of Homburg and Rudolph (2001).

Courtesy

Courtesy with respect to telephone manner was mentioned by a number of the selling company's personnel, supporting the findings of Parasuraman (1985, 1988) and Morris and Davis (1992).

Efficiency of office personnel

Efficiency of office personnel was noted as significant by Lewis and Craven (1995). This finding is supported by the quotation below from an engineer in the selling company:

> Speaking to some customers, the problem seems to lie more in the office rather than out in the field. It seems that in a lot of cases, they are not happy with the people in the office rather than the engineers.

Good safety and environmental record

Lewis and Craven (1995) also included a good safety and environmental record in their service quality factors. This is supported by the research reported here, where health and safety issues were mentioned by a third of customers.

Meeting requirements

Two-thirds of the customers interviewed mentioned ability to meet their requirements as an important factor, confirming the findings of Morris and Davis (1992). For example, one customer said:

> I have not any knowledge in this area. The insurance company set a standard. I just hope that they [the products] meet the insurance company's requirements. Since the insurance company said they are OK, they must be OK.

This factor also reflects the complexity of business-to-business markets and the factors that impact upon service quality in this area.

Performance of employees

Another widely mentioned factor is the performance of employees. Two-thirds of customers said that they expected that employees would be professional. Performance included both the knowledge and performance of the engineers and the manner in which installation was conducted. Personal competence was identified as a component of service quality by Gordon *et al.* (1993) and product knowledge was identified by Morris and Davis (1992). However, although other researchers such as Banting (1976) and Homburg and Rudolph (2001) also saw employees' performance as an influential factor, they focused more on sales representatives' performance than others. In this research, most customers think that the engineers' performances are far more important. As one customer noted:

> Who's working on site? Who's talking with us, communicating with us everyday? Who's actually getting the job done? The engineers! No matter how good the sales said the product would be, we could not see it until the engineers have the job done.

Product performance

The majority of the customers discussed product performance. It could be suggested that this is a basic expectation of any product. Many researchers have discussed this, for instance, Parasuraman *et al.* (1985), Sharma *et al.* (1999) and Homburg and Rudolph (2001). However, in this case, almost everyone reported that this is an expectation that is hard to measure:

> It's a product that you wish you never use.

As mentioned by many customers, it is impossible to know whether or not the product performance matches your expectation until you have a fire. Only one customer had any experience of this. In his case, he previously had two buildings, one with a sprinkler system supplied by the selling company and one without. When a fire broke out, only the building with the sprinkler system in place was saved. This experience was a major factor in his subsequent purchasing decisions.

Product-related information

Almost every customer mentioned the need for product-related information, as suggested by many other researchers, e.g. Lewis and Craven (1995), Schellhase *et al.* (2000) and Homburg and Rudolph (2001).

Quality of technical service

Although the interviewees from the selling company did not explicitly mention quality of technical service, it was implicit in many of the anecdotes they provided. For example, the description of how they solved a problem relating to the specification of a valve set for a customer (even though this was not part of their original brief). The nature of the work undertaken by the company is technically complex and we believe that it is taken as a given, so when they talk about "quality of work" implicit within this is an understanding of the technical competence needed to achieve this. Technical issues have been identified in much of the extant research (Cunningham and Roberts, 1974; Banting, 1976; Gordon *et al.*, 1993; Perkins, 1993; Lewis and Craven, 1995; Sharma *et al.*, 1999; Homburg and Rudolph, 2001).

Solution development

Sharma *et al.* (1999) include business solution development as a factor in service quality/satisfaction. Two respondents from the selling company also believed that the ability to offer a total solution to the customer was an important element of service quality. However, this factor was not noted in the customer responses.

Technical advantage

Technical advantage was explicitly mentioned by customers. However, it may be that the technical advantages that the selling company possesses are taken as given by its personnel. Nonetheless, its inclusion in the factors mentioned supports the findings of Gordon *et al.* (1993).

Training

Training is considered to be an important element of service by many researchers such as Lewis and Craven (1995), and Sharma *et al.* (1999). However, only one customer mentioned this aspect of customer service. This could be because the systems are simple to use and do not require extensive training for users.

Trust

Trust was an important factor mentioned many times during interviews with the selling company's personnel. Lewis and Craven (1995) were the only researchers to explicitly mention trust as a factor, when they included trustworthy contact personnel as a factor within service quality. Interestingly, trust is a factor which is much more likely to be discussed as an element of relationship success, see for instance Håkansson (1982) and Ford (2002).

Understanding

Understanding of customers' needs and responding to them was identified as being important by the informants in the selling company. This supports the findings of Parasuraman (1985, 1988), Morris and Davis (1992) and Lewis and Craven (1995).

Wide range of products and services

Respondents from the selling company also believed that possessing a wide range of products and services, along with the ability to manufacture a wide range of products, was important with respect to service quality. This supports the findings of Cunningham and Roberts (1974), Banting (1976), Perkins (1993), Lewis and Craven (1995) and Schellhase *et al.* (2000).

New factors emerging from the research

Five new factors can be identified in the data collected from both the buying and selling companies: these are discussed below.

Experience

Experience was mentioned by many customers. Two main aspects to experience can be identified. Firstly, it relates to the supplier's knowledge or/and experience with its own products and industry. It is recognised that this is similar to knowledge or product related knowledge, which have been identified as factors impacting service quality. However, when the context of the supplier's experience and/or knowledge within their customers' industry and/or particular environments is included, it can be suggested that this is a separate factor. It means that customers are not only looking for suppliers who are knowledgeable and experienced within their own industry, but also have experience in customers' industries.

Minimum disruption

Two customers believed that minimum disruption during installation of the system was very important. This factor does not appear to have been reported in any other research. This could be because most previous research has looked at raw materials or components. However, it can be suggested that lack of disruption will certainly be a very important element in many business-to-business situations and clearly needs careful consideration by both managers and researchers.

Peace of mind

Peace of mind was a recurrent theme in the interviews with the selling company's personnel. It was described variously as "reducing his [the customer's] risk and his effort", "giving them assurance". It is possible that this may be an industry-specific dimension relating to fire protection. A fire protection system is one that customers buy because they need it but hope they will never have to use; it is something they need assurance about.

Performance of subcontractors

It appears that performance of subcontractors has not been identified in any previous research. This is somewhat surprising given the increasing prevalence of outsourcing and franchising. In the case under examination, the company employs subcontractors to perform some aspects of the work. These subcontractors wear the company's uniform and customers are not usually aware of the different employment status of the staff who they interact with. Performance factors identified included lack of subcontractor knowledge about wider issues (such as technical design, financial information, personnel within the contracting company etc.). Clearly, implications relating to service quality need to be taken into account when managers are developing a service or supply network.

Problem handling

Problem handling with respect to being able to sort out customers' problems there and then was also raised a number of times. Although various elements in the extant research do implicitly include problem handling such as in the case of technical advice (see for instance Cunningham and Roberts, 1974) it is not included as a separate entity. The fact that a number of personnel in the selling company explicitly raised it, along with the growing body of research into service recovery (Bitner *et al.*, 2002) suggests that this factor should perhaps be considered in its own right with respect to the contribution it makes to service quality.

Differences between buyers and sellers

The dimensions mentioned by only buyers or sellers show some interesting differences in perceptions of service quality between the different parties involved. Table II provides a

Table II Factors mentioned either by buyers or sellers

Buyer perceptions	Seller perceptions
After sales service	Competence
Complaint handling	Courtesy
Good safety and environmental record	Efficient office work
Meeting requirements	Quality of technical service
Performance of employees	Solution development
Product performance	Trust
Product related information	Understanding
Technical advantage	Wide range of products and services
Training	Peace of mind
Experience	Performance of subcontractors
Minimum disruption	Problem handling

summary of these dimensions. Clearly these differences could be explained because of the relatively small sample size and exploratory nature of the data collected. However, it could also be suggested that these indicate the different perceptions of the service itself and what is considered important by the two sides of the interaction. These different perceptions are important simply because they suggest that there is not a universal understanding of what is meant by service quality and they illustrate the central tenet of services and business-to-business marketing – the need to understand the interaction between all the parties involved. Nonetheless, they also indicate the need for further research to clarify the existence and significance of such differences.

Managerial implications

This research supports our contention that service quality in a business-to-business context is a complex and multifaceted issue. Customers and suppliers appear to have some similar perceptions of quality and some very different expectations. This provides a number of challenges for managers:

- *The dynamic and interactive nature of service quality*. Managers need to recognise the dynamic nature of service quality and the role of both provider and user and make sure they develop strategies that cater for this complexity, e.g. by ensuring that employees are aware of the factors that their customers deem to be significant in service quality and how these requirements may change over time. Collecting meaningful data about service quality perceptions managers need to find mechanisms for collecting perceptions about service quality both internally and externally (including perceptions of actors from their wider network, such as subcontractors). The lack of consensus in our findings suggests that instead of using measures of service quality and satisfaction that have been transferred from consumer markets, managers need to take time to consider the most appropriate method of gaining feedback on aspects of quality in the context of the industries in which they operate.
- *Importance of internal communication*. Managers must be aware of the significance of the role of internal communication in service quality and ensure that procedures are in place to ensure effective internal communication (especially when it relates to customers) as well as for effective external communication. Implementing internal marketing concepts may be a useful aid to achieving improved communication.
- *Technical expertise and experience of a customer's business/industry*. The importance of the central marketing tenet of being aware of the customer's needs and businesses is emphasised by these findings. Managers must ensure that they utilise the experience of their employees to the full in this context and be aware that this factor may well provide them with competitive advantage and bring them repeat business.
- *Problem solving capability*. Managers should empower personnel and give them appropriate technical training to enable them to solve problems before they escalate and become sources of real dissatisfaction.
- *Minimum disruption*. The concept of "minimum disruption" as a dimension of service quality also has wide ranging implications. Once managers are aware that such a factor is of central importance to customers, they should be able to offer solutions that explicitly focus on this aspect of their service. It can also be suggested that this notion does not just apply to aspects such as installation; it may well apply in maintenance and other consultancy visits, even in the context of making sales appointments to visit a customer.
- *Impact of the wider network on service quality requirements*. Managers must also be aware of the influence of other actors in the network, e.g. the requirements that insurance companies place upon purchasers and that the selling company needs to have the expertise to implement.
- *Impact of subcontractors on service quality perceptions*. Managers need to be aware of the impact that subcontractors may have on customer perceptions of service quality. In this context, it may well be pertinent to suggest that managers consider including performance indicators that relate to service quality in any contracts they set up with subcontractors.
- *External communication*. The findings highlight the importance of external communication. Customers need to receive accurate, appropriate and timely information about products and services: such material is at the core of excellent service quality.
- *Quality of employees*. Comments by the buyers emphasise the criticality of the employee to service success. Skills including knowledge, courtesy and understanding of customer requirements should be high priority in the recruitment and development of all employees (both front and back office).

Conclusions

The variety of service quality dimensions identified above confirms Szmigin's (1993) assertion that it is necessary to investigate subjective measures in specific contexts. Our research suggests that it may not be feasible to produce one all embracing measure of service quality in a business-to-business context. Rather, managers and researchers alike must be aware of the components that appear to be able to be generalised across industries and those which are specific to the context in which they are operating.

Additionally, our findings show that personnel from both sides of a relationship have different perceptions/understanding of service quality and that service quality is also affected by actions in the wider network of actors that surround a company. Further research is needed to determine if these differences persist across a larger sample and different contexts. However, it does support Svensson's (2001, 2002, 2004) findings regarding imbalance in dyadic perceptions of service quality and suggests that managers need to pay attention to these factors.

Clearly our work is only exploratory and undertaken in a specific context, a UK provider of fire protection and safety systems, and it is not possible to come up with any definitive models or explanations. However, we believe that it is essential for further research to investigate how dyadic service quality perceptions change over time and how this relates to other dimensions such as trust, commitment, customer profitability and retention. For example, we would suggest that this could be achieved by:

- developing research in different industries and contexts, e.g. do different companies, industries and/or cultures value different aspects of service and therefore evaluate service quality differently;

- how dyadic perceptions of quality change/develop over time and how these perceptions relate to other relationship dimensions, e.g. trust, commitment etc.; and
- developing possible models that illustrate the dynamics of the service quality.

Note

1 In one case the customer asked for the recorder to be switched off. He then provided very interesting insight into the operation of the company; in this interview the researcher took notes, which were subsequently included in the data analysis.

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Appendix

Table AI List of empirical factors relating to service quality and satisfaction

Authors	Industry	Year	Factors
A. Service quality dimensions			
Cunningham and Roberts	Engineering	1974	After sales service
Banting		1976	Credit
			Delivery reliability
			Ease of contact
			Machining facilities
			Pattern design
			Prompt quotation
			Replacement guarantee
			Sales representation
			Technical advice
			Test facilities
			Willingness to manufacture a wide range
Parasuraman, Zeithaml and Berry	Various consumer services	1985, 1988	Access
			Communication
			Competence
			Courtesy
			Credibility
			Reliability
			Responsiveness
			Security
			Tangibility
			Understanding
			(Assurance, empathy, reliability, responsiveness and tangibility)
Morris and Davis	Industrial manufacturing	1992	Ability to expedite shipments
			Ability to meet customer requirements
			Billing accuracy
			Customer notification of problems
			Employee product knowledge
			Follow-up for customer satisfaction
			Responsiveness to unplanned events
			Shipping accuracy
			Telephone etiquette
			Tracking customer complaints
Gordon, Calentone and di Benedetto	Telecommunications	1993	Compatibility with existing customer technologies
			Ease of integration into customer's organisation and existing systems
			Ease of operation and maintenance
			Image
			Long service/product life
			Personal competence
			Reliability
			Responsiveness to customer demands
			Vendor access
			Superiority to competing and existing products/services
Lewis and Craven	Industrial gases	1995	Accuracy of invoices
			Comprehensive quotation
			Consistent and guaranteed product quality
			Delivery in an emergency
			Delivery reliability
			Ease of contact with someone in authority
			Efficient administration and invoicing

(continued)

Table AI

Authors	Industry	Year	Factors
			Financial/credit facilities Good safety and environmental record Helpfulness of delivery personnel Helpfulness of order staff Product availability Technical advice Technical specifications Training for operators Trustworthy contact personnel Wide range of products
Venetis and Kasper **Gounaris and Venetis**	Advertising	1996 2002	Final outcome quality Hard process quality Immediate outcome quality Potential quality Soft process quality
Mehta and Durvasula	Shipping line services	1998	Empathy Perceptions about operations Personal visits Reliability Responsiveness
Homburg and Garbe	Machinery	1999	Outcome-related process-related structural
Wouters	Construction and measurement equipment	2001	Availability Commercial flexibility Communication skills Delivery reliability Quality of deliveries
Svensson	Various industries and services Automotives	2001 2002 2004	Assurance Empathy Reliability Responsiveness Tangibles
Peterson, Gregory and Munch	Critical medical equipment repair in the US and Europe	2005	Assurance Empathy Reliability Responsiveness Tangibility
Woo and Ennew	Engineering consultancy in Hong Kong	2005	Adaptation Cooperation (institution-alisation) Financial exchange Information exchange Product/service exchange Social exchange
B. Satisfaction dimensions			
Perkins	Electronic components supply	1993	Availability Breadth of line Credit Design On-time delivery Price Reliability Sales service Technical knowledge Technical quality

(continued)

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Table AI

Authors	Industry	Year	Factors
Patterson and Spreng	Management consultancy	1997	Global competence Level of service provided Methodology used Outcome of the project Problem identification Relationship with consultancy (note these were performance dimensions hypothesised to influence satisfaction)
Sharma, Niedrich and Dobbins	Computer systems	1999	Business solution development Cost of ownership Delivery Education Installation Invoicing Product hardware maintenance Sales team leader Software Technical support
Geyskens, Steenkamp and Kumar	Meta-analysis of previous empirical data	1999	Economic Non-economic
Tikkanen, Alajoutsijärvi and Tähtinen	Software	2000	Satisfaction affected by aspects of: the buyer-seller relationships the immediate network the wider network
Schellhase, Hardock and Ohlwein	Food retailing	2000	Condition and prices Contact person Field personnel Information and advice Logistics Marketing Product range
Homburg and Rudolph	Mechanical machinery	2001	Complaint handling Interaction with internal staff Order handling Products Product-related information Salespeople Technical services

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The shift in sales organizations in business-to-business services markets

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Abstract

Purpose – The purpose of the paper is to examine shifts in sales organizations utilized to sell services to business-to-business customers. The paper also examines the changes expected in personal selling and sales management.

Design/methodology/approach – Extant academic literature and emerging practices are examined to determine trends.

Findings – The paper suggests that the traditional service-focused sales organization is evolving in two distinct directions. First, enhanced sales automation is resulting in a reduction in salespeople's contact with customers. Second, an enhancement in the level of customer contact is leading to a growth of customer-focused sales organizations and an increase in global account management teams.

Research limitations/implications – Additional research is needed in this area.

Practical implications – Changes are required in the manner in which personal selling and sales management is practiced in organizations. Firms need to make these changes or their sales forces will be less efficient and less effective.

Originality/value – This important area is very infrequently examined in literature. This is the first attempt to examine this area.

Keywords Business-to-business marketing, Customer service management, Sales force, Sales automation

Paper type Research paper

An executive summary for managers and executive readers can be found at the end of this issue.

Introduction

The area of business-to-business services marketing is an emerging area of research and interest. The primary reason is that the majority of purchasing within organizations takes place in the context of business-to-business services, and enhanced global competition is increasing the pressure on the marketing function to perform better. In spite of this increased attention, the organization of selling activities of business-to-business firms has been infrequently examined. This paper outlines the history of sales practice and suggests directions of future change. Sales organizations associated with business-to-business services marketing have changed in the last three decades, and continue to change. In this context, the paper examines the decline of the "service-oriented" sales force and suggests that the traditional service-focused sales organization is evolving in two distinct directions. First, enhanced sales automation has resulted in a reduction in the face-to-face contact that salespeople have with their customers. Second, there is an enhancement of salesperson-customer relationships that will lead to growth of customer-focused sales organizations and an increase in global account management teams. Specifically, using extant research, shifts in sales organizations, and changes in personal selling and sales management in emerging organizations is highlighted in this paper.

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The focus of this paper is on understanding current practice and research in the personal selling sales management area in business-to-business service markets and presenting the future direction of practice and research. The paper borrows heavily from and extends previous research with colleagues (Sharma, 2001; Sheth and Sharma, 2007). This section introduces our research focus. The next section discusses business-to-business marketing and sales force research and practice. The third section discusses the attributes of the service firm and the service economy and the reasons for the evolution of the sales force, and subsequent sections examine the shifts in sales organization and sales practice. The final sections discuss managerial implications and limitations.

Business-to-business marketing and sales force

Webster (1980) observed:

> With well over half of America's economic activity accounted by industrial marketing, as distinct from the sale of products and services to business customers, it has been remarkable how little attention, relatively, industrial marketing has received in the professional literature and in academic research.

This observation is true even today as the majority of global marketing research focuses on consumers rather than business customers. The research output is even smaller when research in business-to-business services marketing is compared to research in business-to-business products marketing. Within this context, personal selling and sales management issues associated with selling of business-to-business services, the focus of this paper, have been even less frequently examined (Crosby *et al.*, 1990). In the examination of literature, few papers have addressed this issue (e.g. Ulaga and Sharma, 2001; Shepherd, 1999).

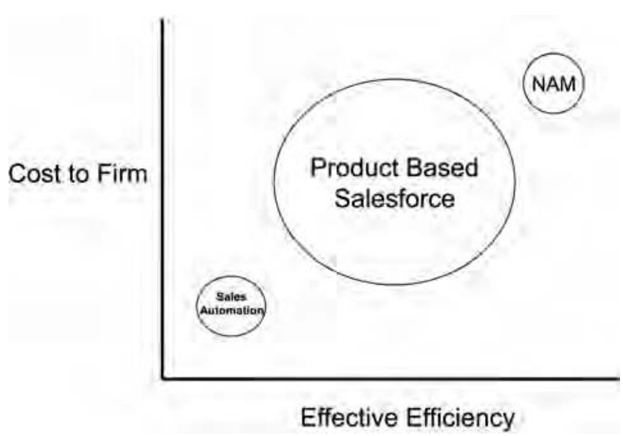
When business-to-business sales organizations initially emerged, salespeople sold products, worked from a specific location, and served a geographical area. This was referred to as the "local office." Salespeople were assigned customers in a "local" area, and customers typically interacted with the assigned salesperson during business hours. Also at this stage, salespeople were typically product experts who could explain the attributes and functionality of their products. Due to the required product expertise, some firms had multiple sales forces selling different products. Thus, salespeople sold a product in a specific location during business hours. The product salesperson was an expert on the output of his or her own product and product selling, had a relationship with a key buyer, and did not acquire in-depth knowledge of the buying organization's processes.

At this stage, two additional types of sales forces emerged. For some firms, their business customers became larger and national in scope, and firms created a national account management sales force – a sales force that could provide higher levels of service to important customers. Also, a small number of firms recognized that some sales force functions can be automated, i.e. did not need the participation of salespeople. An example is order and payments through mail systems. Sales automation was not extensively adopted by firms, as the cost of salespersons and each sales call was low, allowing firms to develop a sales force for their customers. We explicate the sales force in Figure 1.

Attributes of the service firm and economy

In the initial stages of services selling and sales management, the typical product sales force organization was utilized. This form of sales force became less successful in the context of service firms and the emergence of the services economy. The sales force requirements associated with selling of services posed some special challenges. First, salespeople needed to use unique sales strategies as business customers perceived a higher level of variability and uncertainty in the purchase of services. In addition, the behavior of salespeople influenced business customers' perceptions of quality more in a service setting than in a product context (Crosby *et al.*, 1990). Second, in contrast to product selling, service selling required in-depth knowledge of the customer's processes. The service salespersons needed to understand how their service processes matched the processes and desired outcomes of the buying firm. Therefore, the service salesperson needed to be a customer expert rather than a service or product expert. Third, in some cases, the service salesperson was also responsible for implementation of the service, a requirement that was not present for product salespersons.

Figure 1 Services sales force circa 1970



The constructs of the persuasion knowledge model and information asymmetry are discussed next, to further highlight the nature of services selling.

Persuasion knowledge model

The persuasion knowledge model (PKM) is used to understand customers' processing of salespeople's behavior and presentations (Kirmani and Campbell, 2004; Friestad and Wright, 1999; Friestad and Wright, 1994). This section utilizes arguments from Sharma (2001), as he also examined a service situation. Both salespeople and customers develop knowledge regarding persuasion strategies. Customers' knowledge contains three persuasion elements. These are topic knowledge (e.g. service knowledge), persuasion knowledge (e.g. message meanings), and agent knowledge (e.g. characteristics of the salesperson).

Customers' topic knowledge is their level of knowledge of the service to be provided. Topic knowledge facilitates comprehension of the persuasion message and can be used to verify the claims that the salesperson is making (Friestad and Wright, 1994). Customers have knowledge about the goals and actions of salespeople and the actions that customers can take to cope with the persuasion process. Two coping tactics are discounting and message elaboration (see Friestad and Wright, 1994). Customers feel that the sales presentation's information content will likely reflect the position of the salesperson. Normally, the customer's own-thought is that the primary purpose of the sales message is to sell the service. Thus, own-thoughts typically counter the sales message, and discounting of the sales message takes place.

Agent knowledge or salesperson knowledge is also part of the critical process of persuasion in service settings. The behavior of salespeople influences business customers' perceptions of quality in most service selling situations (Crosby *et al.*, 1990). The reason is that salesperson behaviors reflect the company's attitude toward customers and selection and training of employees. Signaling is particularly important in areas such as services where the quality cannot be observed (Kirmani and Rao, 2000). Signaling theory also suggests the importance of salespeople's behavior in the evaluation of a service as signaling cues.

The relevance of signaling may be high due to four reasons in the services context. First, for services that are experience- or credence-oriented, customers want to reduce the perceived risk of not choosing the correct service (Jacoby *et al.*, 1971; Olson, 1977). Second, customers are unable to a priori evaluate quality of experience and credence services (Kirmani and Rao, 2000; Rao and Monroe, 1988). Third, in some cases, quality is difficult or too time consuming to evaluate (Allison and Uhl, 1964; Hoch and Ha, 1986). Finally, customers have a need for information (Nelson, 1970) and signaling is a very relevant cue. Buying of most services would reflect all four conditions to some degree. The behavior of the salesperson operates as a signal that serves as a heuristic in assessing the quality of offerings being considered for purchase (see Dawar and Parker, 1994). The context is similar to research that highlights the importance of credence and intangibility in business-to-business services markets.

Salespeople's behaviors may influence persuasion because business customers need to interact with salespeople after the

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sales interaction. This characteristic, labeled "centrality," refers to the role of the salesperson in the business customer's marketplace relationship, and is regarded as important by business customers (Friestad and Wright, 1994). Business customers feel that their knowledge of salespeople becomes more important when there are expectations of continued relationship. For example, business customers may expect to interact with salespeople during the service design or delivery process. Similarly, if the service fails to perform to expectations, business customers need to be able to contact the salesperson. Finally, salespeople may be seen as a reflection of the organization, as the behavior of the salespeople may reflect the subsequent service that will be available from the company (Friestad and Wright, 1994).

Perceived information asymmetry

The cognitive state of perceived information asymmetry captures the "knowledge gap" experienced by prospective customers when they feel less knowledgeable about the service than the salesperson. The two aspects of information asymmetry are structural aspects and information processing aspects.

Structural aspects of perceived information asymmetry

Information asymmetry occurs when the service provider knows – but customers do not – the extent and nature of the efforts the service provider will expend in delivering the service (Milgrom and Roberts, 1987; Nayyar and Templeton, 1994). Holmstrom (1984) suggests that output of services is represented as a mathematical function of the service providers':

- time and effort;
- abilities, training, and education; and
- uncertainties under which the service provider operates.

The third element of this model is most interesting in the context of the paper. For a large number of services (e.g. legal, financial) the outcome is not known before the commencement of the service. In cases where the outcome is known and certain (e.g. flying from point A to point B), the performance of the service is a reflection of the effort and ability of the service provider. However, if the outcome is uncertain, the performance of the service may not be a reflection of the effort and ability of the service provider. Thus, customers have no objective method of determining the effort and ability of a service provider based on their past performance. As an example, a positive outcome from a tax appeal may be due to a very strong position, a good tax team, or both.

Information asymmetry exists because of the nature of the lack of customers' topic knowledge. In cases where customers have limited knowledge of a service, customers have no objective method of verifying the amount of effort that the service provider plans to expend. As an example, it would be difficult to verify the service recovery efforts of a firm until a service failure occurs. Second, unknowledgeable customers normally have difficulty in evaluating the ability of certain types of service providers, such as credence-service providers. For example, firms have difficulty determining the competency of health maintenance organization (HMO) networks. Finally, if the outcome is uncertain (e.g. legal service), service customers need to rely on the service provider and are unable to determine whether the result (e.g. winning or losing a lawsuit) is due to the situation or the effort of the service provider.

Information processing aspects of perceived information asymmetry

Information asymmetry persists even when service sellers disclose "full" information to customers. Customers' persuasion knowledge may suggest that salespeople will not provide them with full and accurate information because salespeople will withhold information not conducive to obtaining new business. Also, customers may discount the information (positive toward the service provider) provided by salespeople because they believe that salespeople have an ulterior motive in disclosing that information.

Discounting is expected to be especially pronounced in services buying. Business customers have no objective method of verifying service attributes (compared to product attributes). In addition, business customers perceive greater variability and risk in services (Murray and Schlacter, 1990). Variability increases the perceived information asymmetry because business customers do not have the time or opportunity to analyze available service alternatives in detail. The reasons are consistent with Tellis and Gaeth's (1990) suggestion that information asymmetry is heightened because of:

- proliferation of competing brands that increases the cost of exhaustive search or sampling;
- sellers' biases that are reflected in service evaluations that they provide;
- constant introduction of new services that requires frequent re-evaluation; and
- business customer mobility that requires a reassessment of services.

In summary, the nature of a service transaction, coupled with the manner in which customers are likely to process information provided by service salespeople, are the underlying reasons for the non-applicability of product-focused sales force in the context of service industries.

Shift in sales organizations

This section highlights the shift in sales force organizations and utilizes trends suggested by Sheth and Sharma (2007). The previous section discussed the reasons why the traditional product-focused sales force was ill suited for the service context. In concert, traditional product-focused organizations were declining due to multiple reasons. First, the rise of multi-channels, specifically in the case of inexpensive and effective channels such as the Internet, was causing firms to reexamine the cost of the traditional sales force. Internet channels are inexpensive when compared to the traditional sales force, as salesperson costs have risen tenfold in the last five decades, now approaching about $3,000 per order in the US. For example, costs of lead generation and qualifying from an Internet site are insignificant when compared to a salesperson performing the same functions. In a similar manner, it costs a firm about $500 when a salesperson receives an order, but the same transaction can be accomplished on the Internet for less than $10.

Second, buying firms were moving from a focus on attribute-based products and services to solution-based products and services. Increasingly more firms are seeking a pay-per-use model (Prasad *et al.*, 2003; Libai *et al.*, 2003). In this model, business customers pay for the solution service that is used. In this context, the role of the salesperson is changing from that of a service-based expert to a solution- or customer-based expert.

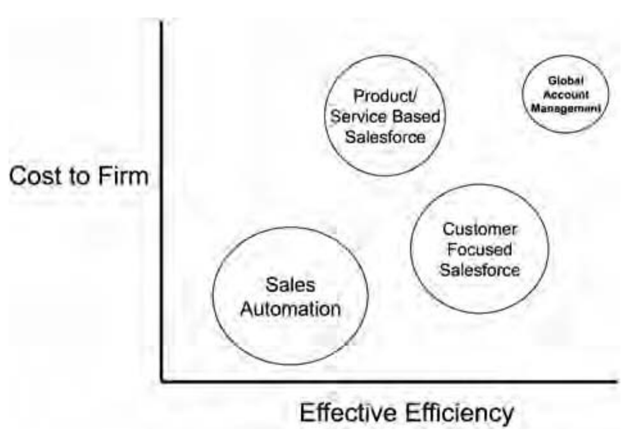
Third, inexpensive and more exhaustive communication tools such as the internet and email were reducing the need for salespeople to be primary communicators of service attributes. Most business service firms have web sites that provide extensive data on their services. Similarly, most firms have downloadable brochures. In addition, technologies such as EDI were making ordering automatic, with the result that some sales processes, such as order taking, have become less relevant.

These environmental shifts have led to changes in the traditional service-based sales force. Sales organizations are evolving in two distinct directions (Figure 2). First, there is a reduction in salespeople's contact with customers due to enhanced sales automation. Sales automation through communication technologies such as the Internet and telephone has reduced costs and in some cases has enhanced customer satisfaction. Second, due to a solution and customer-based focus, there is an enhancement in the level of customer contact. For the majority of firms there will be an increase in the deployment of customer-focused sales organizations. In these sales organizations, the role of a salesperson will change from that of a persuasion agent to that of a consultant and implementation agent to the buying firm. In the case of large customers there is an increase in key account and global account management teams. In key and global account management, the role of a salesperson is more that of a general manager marshalling internal and external resources for the customer. These forms of sales organizations are discussed next, and descriptions from Sheth and Sharma (2007) are utilized.

Enhanced sales automation

Sales automation is increasingly prominent in business-to-business services selling. There are multiple reasons for the growth in sales automation. First, sales automation systems allow firms to operate 24/7, matching the needs of customers that increasingly operate in a 24/7 world. Sales automation also allows customers to deliberate on their decisions, specifically in the context of when the service is co-created (e.g. payroll services), a process that customer firms prefer. Second, sales automation reduces errors, as customers input their requirements directly into an ordering system, bypassing the error-prone transcription. Third, due to the high costs of selling, firms are attempting to reduce the cost of sales through automation. In addition, sales automation allows firms to focus on their entire service line rather than on the prominent one or two services that salespeople emphasize.

Figure 2 Services sales force circa 2005



Automation of information provisioning

Almost all business-to-business service firms have internet sites that provide service specifications and information to customers. This has reduced the need for salespeople to provide information to customers (Sharma, 2002; Sharma and Sheth, 2004). The information that these sites provide are more detailed than salespeople can provide. When the information is query-based, i.e. information is tailored to customer query, the internet is better at instantaneously providing that type of information. The example of travel sites is appropriate, as travel agents could provide only a limited amount of flight information to business travelers, whereas Internet sites can provide all the information that a customer may need.

Automation of sales processes

Some of the traditional processes of prospecting, qualifying, and tiering customers are increasingly being done by CRM software. For example, when a firm contacts a marketing firm, the caller ID or IP address recognizes the customer and automatically routes it to the most appropriate personnel in the sales organization.

Business-to-business selling on the internet

This area of business marketing is growing, with expectations of sales of about $5 trillion in 2005. The arena is dominated by product firms such as Dell, Cisco, and Grainger. Although the services sector is expected to be a small part of this growth, research suggests higher levels of participation (Day and Bens, 2005).

Reverse auctions and surplus auction sites

Reverse auctions have come to the product space where a buyer opens a fixed-duration bidding event in which multiple suppliers compete for business. Similarly, auction sites such as eBay and liquidation.com sell B2B surplus products. The auction sites currently concentrate on product, but the future looks bright for services. Since services are perishable, surplus supply will be a ripe area for auctions.

Decline of the product/service-focused sales force and rise of the customer-focused sales force

Developing from the traditional sales organizations that were product-focused, as firms started selling services, the salespeople became service salespeople. As firms have become more specialized and need different types of services, service salespeople have became more customer experts rather than service experts. The customer-focused sales organization performed better than the service-focused sales organization, increasing the movement away from a service focus. Also, the service focus of both businesses and sales organizations is changing toward a solution- and satisfaction-based service model that is being recognized as the dominant logic in marketing (Vargo and Lusch, 2004). Therefore, the service focus of salespeople has evolved toward a customer- or solution-based service focus that may not include even the firm's product, as in the case of IBM.

The shift toward solution selling has changed the role of a salesperson from a spokesperson for the firm's services to that of a consultant for the buying firm. This involves salespeople being solution experts and seeking solutions for the customer firm (Hannan, 1995; Liu and Leach, 2001). In fact, earlier research has suggested that an expected evolution from product selling to solution selling (customer-focused sales force) to trusted partner will take place (Sharma *et al.*, 1999).

Enhancement in global account management (GAM) and key account management (KAM)

National account management has evolved into key account management and global account management. National firms have become global firms that necessitated the conversion of national account management teams to global account management teams. In the case of national accounts, firms classified some of their accounts as being critical to the firm and labeled these accounts key accounts, and developed a sales force that they labeled as key account management sales force. Customers also like key and global account sales forces, as 80 percent of purchasing managers are already working with suppliers who have key account programs, and 74 percent see their contact with their key account suppliers increasing for strategic reasons (Napolitano, 1997). The growth of global account management has been wide, and has drawn increased interest in academic research (e.g. Millman, 1996; Arnold *et al.*, 2001; Harvey *et al.*, 2003; Wilson and Millman, 2003; Shi *et al.*, 2005).

Shift in personal selling and sales management

The focus of the paper is also on examining the shifts in sales force that will address the needs of business-to-business service customers and the implications of the evolution on practice. In this section, the changes in personal selling and sales management associated with shifts in sales organizations are discussed. Some exemplars are provided in Table I.

Selection and training

In traditional organizations, salespeople were selected based on their ability to sell products and services. Consultative selling requires salespeople that are problem-solvers rather than persuaders. There will be a shift from the use of charisma and aggressiveness, to customer understanding and the ability to provide high levels of customer service (Sharma, 2000).

Sales organizations also seek salespeople who can adapt their communications based on customers' needs and wants. Some salespeople are better at adapting sales presentations, and these salespeople have higher levels of performance (Sujan *et al.*, 1988a, b; Leong *et al.*, 1989; Szymanski and Churchill, 1990; Sujan *et al.*, 1991; Sharma *et al.*, 2000). Research has demonstrated that experience and education lead to higher levels of adaptiveness (Levy and Sharma, 1994). Finally, the kind of salespeople selected should demonstrate high levels of effort with regard to satisfying the needs of customers. Effort has been shown to enhance performance (Morales, 2005; Sharma and Stafford, 2000).

With regard to training, salespeople need to be trained to be better problem solvers and to be more adaptive. Both shifts require an increase in the richness of salespeople's knowledge structures. Knowledge structures contain information about customers and how to address their needs. Training should involve teaching salespeople to categorize consumers based on consumers' needs and wants. Categorization can be aided by market research reports and expert salespeople (Sujan *et al.*, 1988a). Specific sales presentations for different consumer categories can also be developed with the help of expert salespeople, marketing research reports, and experimental research. This training leads to adaptations in a salesperson's actual sales behavior (Weitz *et al.*, 1986; Sujan *et al.*, 1988a). Adaptation had been regarded as critical in business relationships (Johanson *et al.*, 1991; Brennan and Turnbull, 1999; Brennan *et al.*, 2003; Ford *et al.*, 2003).

Salespeople also need to be more accurate about their customers. In training terms, first, salespeople and managers should be provided with market research information about their customers (Sujan *et al.*, 1988a). Another method of increasing the accuracy of salespeople is to schedule customer-salespeople meetings that evaluate the performance of the marketing firm. These meetings provide valuable feedback to the customers, as well as informing salespeople about the performance of the company. Finally, continuous training to improve questioning and listening skills can increase the accuracy of salespeople.

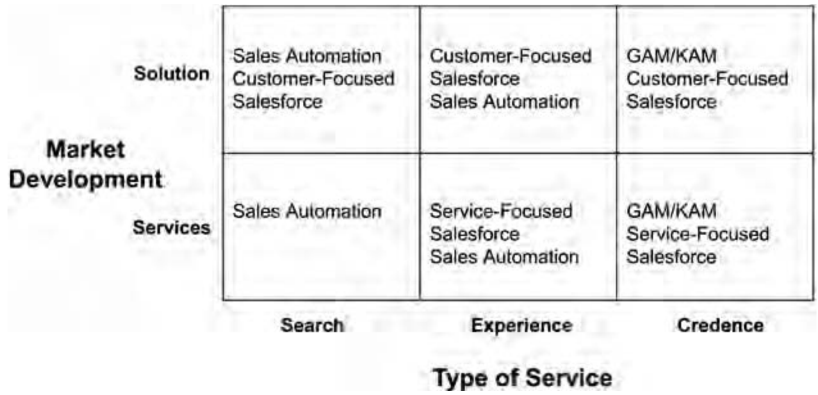
Evaluation and compensation

In the era of consultative selling, both evaluation and compensation systems will need to change. For evaluation, traditional sales quota will need to be enhanced with a profit component and an indicator of customer satisfaction. In that context, salespeople's incentives need to be based on sales growth, profit growth, and customer satisfaction. This compensation would be in the spirit of a balanced scorecard (Sharma, 1997).

Table I Examples of shifts in personal selling and sales management in business-to-business services

Personal selling and sales management	Traditional sales organization	Emerging sales organization
Salesperson selection (key attributes)	Persuasion agents	Problem solvers/relationship managers
Additional salespeople skills	Hunter (get new customers)	Farmer (implementation of solutions)
Information provisioning	Salesperson	Internet, salesperson
Client selection (prospecting/qualifying)	Salesperson	CRM, internet, salesperson
Key metrics for salespeople	Sales	Profitability, satisfaction, loyalty
Sales managers	Supervise salespeople	Maintain customer relationships
Internal marketing requirements	No	Critical
Compensation	Salary + sales commission	Salary only or salary + profit commission + satisfaction commission

Figure 3 Development of markets and sales force



Managerial implications

This paper discusses the expected changes in sales organization in business-to-business services and demonstrates that sales organizations associated with business service markets have changed and continue to change. The paper suggests that the traditional sales organization – service-focused sales organization is declining. In contrast, sales automation, customer-focused sales organizations, and global and key account management organizations are increasing.

The relevant managerial question that arises is how managers should plan for these changes. In order to address the issue, a model is developed that will allow firms to examine the direction of their sales force (Figure 3). We first divide the market based on the development, in that the needs are predominantly service-based or solution-based. The conceptual distinction has been previously discussed. Clearly, solution-based needs require a customer-focused sales force, whereas service-based needs can be met through a traditional service-focused sales force. The second dimension is type of service – search (e.g. on-time delivery for DHL), experience (e.g. airline service), and credence (e.g. legal). Search services require little customer focus, whereas credence services require higher levels of customer focus. There are six cells and we discuss strategy based on type of service.

Search services

In search services, it is expected that most sales processes in business-to-business services markets will move toward automation for both solution and services marketplaces. The reason is that search service attributes can be easily presented in an automated information provisioning platform. Since search services gravitate toward price parity, a reduction in costs will be the desired outcome. In the case of the solution marketplace, there may be a need for salespeople, in which case the customer-focused sales force will be deployed.

Experience services

Experience services require a higher level of interaction before consumption. We expect the primary means of communication in business-to-business services market will be through the sales force. The only difference is that in the service-dominated marketplace, the traditional service-focused sales force will be used. In contrast, in a solution-dominated marketplace, the customer-focused sales force will be used. Both markets will use sales automation to insource some routine sales tasks.

Credence services

Credence services require a very high level of interaction before consumption. We expect the primary means of communication in business-to-business services market will be through the traditional global and key account management teams. For the smaller accounts, different tactics will be used. In the service-dominated marketplace, the traditional service-focused sales force will be used. In contrast, in a solution-dominated marketplace, the customer-focused sales force will be used.

Limitations

The paper develops expectations of sales force changes, but these changes are based on extant literature and practice. There are reasons for empirically examining these expectations. In addition, most case studies in this paper are US and Western Europe-based. There is a need to extend the models to developing countries and even to some developed countries in Asia. Finally, the model expects the technology changes to take place and the markets to be more open. Models with violations of these assumptions also need to be examined.

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The role of trust in financial services business relationships

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Abstract
Purpose – The purpose of this article is to investigate trust in financial services business markets.
Design/methodology/approach – The article provides qualitative research, based on 147 in-depth interviews with corporate bankers and their clients.
Findings – The article finds that perceptions of trust and the operationalisation of trust were asymmetrical across the dyads and segments. Small companies were more trusting than large corporates. Bankers used calculative and operational trust and were cynical about their counterparts' trustworthiness. Bankers were quick to eliminate clients from their portfolio who did not, in their view, provide full disclosure of pertinent facts.
Research limitations/implications – There may be different findings for other cultural contexts and financial service industries. The article encourages research in other contexts and industries and provides a platform to encourage this.
Practical implications – The article provides guidelines for bankers and their clients to understand the importance of trust in their relationships, and to understand how it is operationalised differently by the counterparts.
Originality/value – There are few studies of trust in either services business markets, or financial services business markets. Therefore, this article makes a valuable contribution. It also provides a critical review and integrates the literature on trust as applied to financial services business markets.

Keywords Financial services, Trust, Banking, Business-to-business marketing

Paper type Research paper

An executive summary for managers and executive readers can be found at the end of this issue.

Introduction

Trust in services business markets is an important and under-researched variable, because trust underpins the experience and credence qualities of services (Zeithaml, 1991), as well as service quality and customer satisfaction (Lewis and Craven, 1995; Tikkanen *et al.*, 2000) and the development of relationships in the interaction approach (Håkansson, 1982; Ford, 2002; Ford *et al.*, 2003). Woo and Ennew (2005) find that, using the interaction approach as a framework for B2B service quality, cooperation and social exchange emerge as key variables. Gounaris and Venetis (2002) see service quality as an antecedent of trust, and that different dimensions of trust emerge during the process of relationship development. Therefore, although trust underpins many variables in the interactions and relationships in services business markets, and therefore could be argued to hold a pole position that is crucial to our understanding of services business-to-business markets, surprisingly it has not received much attention with this specific focus (Gounaris and Venetis, 2002).

Additionally, the role of services in business markets has not been thoroughly conceptualised or researched (Barr and McNeilly, 2003), and while there is a growing body of research in financial services business markets, this area has also been highlighted as deserving more attention (Tyler and Stanley, 1999).

The contribution of this research is that it explores the ways that trust is classified, conceptualised and operationalised both through an analysis of the literature and an empirical study in financial services business markets. The literature review is of research on trust in a selective representation of the business and management literature, with a focus on marketing, directed by a critically informed assessment of its utility in services and financial services business markets. The empirical investigation is a qualitative dataset of in-depth interviews with 147 business-to-business financial services providers and purchasers in banking, corporate bankers and their SME and multi-national clients.

The paper begins with a critical review and classification of the literature on trust in business markets, followed by a focused and selective review of literature on trust in business-to-business financial markets. The methodology for the empirical section of the paper is then presented. Results are then elucidated, which present how trust operates in financial services business bank markets in terms of calculation, risk, and market segment. The results are further ordered to demonstrate the discontinuities of approach and response in the operationalisation of trust that existed across the dyads, based on the client market segments. The conclusion evaluates and contextualises these findings. Finally, managerial implications are suggested and research limitations discussed.

A single definition of trust was not used or imposed, following the guidelines of a grounded theory approach, as well as that of Szmigin (1993), who urges that subjective measures should be examined in specific contexts. Instead, interviewee-led interpretations of trust were used, based on respondents' definitions and experiences. One of the key aims of this research was to understand how individuals

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constructed and perceived trust in a financial services business-to-business context. Our interviewees defined trust according to need, context and socialisation. Their conceptualisations and expectations of trust varied, as did their level of service satisfaction, especially when analysed from the perspectives of either the banks or their clients, and the market segment and turnover of the client company.

"Money destroys many relationships between employee and manager, and manager and businessman … so trust is very important". This statement, from one of our respondents, demonstrates that corporate banking services, perhaps because of their direct link to money, are perceived, on both sides of exchange, as fraught with risk, despite the rigorous regulatory framework in which financial services operates. However, when considering the role of trust in financial services business markets, it is vital to recognise that corporate banking engenders particular concerns for both bankers and their clients, the most marked being a pervasive sense of risk and uncertainty.

Literature review

Over the last 20 years, trust has received increasing, multidisciplinary attention. A substantial portion of this literature considers the role of trust in commercial exchange, marketing, supplier-buyer and partner relationships (see reviews by Blois, 1999; Coulter and Coulter, 2002). This attention is merited. Exchange involves non-simultaneous actions by interacting parties. This creates inherent risk and uncertainty, which trust helps to manage. As such, trust has a fundamental and ubiquitous role in exchange, a role that cannot be substituted fully by other control mechanisms (Andaleeb, 1992). This is especially true for services, which are high in credence and search qualities, and whose outcomes, being largely, and sometimes wholly, experiential, are difficult to measure in terms of service quality and added value.

The continued study of trust from a marketing perspective is further recommended because trust is a source of competitive advantage (Barney and Hansen, 1994). Trust reduces transaction costs (Andaleeb, 1992), limits uncertainty and opportunism (Achrol, 1997; Busch and Hantusch, 2000) and creates flexibility (Nooteboom *et al.*, 1997). Trust binds relationships (Ring, 1996) and builds commitment (Warrington *et al.*, 2000). It improves communication (Anderson and Narus, 1989), enables risk taking (Wetzels *et al.*, 1998) and facilitates co-operation and mutual adaptation (Hewett and Bearden, 2001; Mayer *et al.*, 1995). Trust increases satisfaction with interaction (Geyskens *et al.*, 1998; Wetzels *et al.*, 1998; Zand, 1972).

Definitions of trust

However, if the ubiquity and importance of trust is established by the literature, its exact effect and meaning is not. A number of studies argue that the importance of trust has been overstated, especially in the extent to which it predicts/directs action (Achrol, 1997; Grayson and Ambler, 1999). There is no agreed definition of trust, which is a source of anxiety within the literature (O'Mally and Tynan, 1999).

Trust has, broadly, been defined in five ways within the marketing literature:

1 As a cognitive or affective belief held by one party that its partner will not exploit their vulnerability: perceived trustworthiness (Anderson and Weitz, 1990).
2 As a behaviour or behavioural intention of a party to act in a way that inclines it towards risk, uncertainty or increases its vulnerability to another: trusting behaviour (Zand, 1972).
3 As developed by Moorman *et al.* (1993), who define trust as a "willingness to rely on a partner in whom one has confidence"; a synthesis of the belief and behaviour components of trust.
4 As developed by Mayer *et al.* (1995), who recognise the importance and interconnection of the belief component (perceived trustworthiness) and behavioural component (trusting behaviour) of trust, but maintains that these are distinct phenomena.
5 As a broad, socially-defined phenomenon relating to the management and atmosphere of effective interaction as a whole. A central approach within sociological perspectives, in the marketing literature this approach is particularly important in business markets and is central to the work of the IMP group (Håkansson, 1982; Easton, 1989). However, it must be noted that the treatment of business-to-business services in the IMP literature is implicit and not explicit (Håkansson, 1982; Easton, 1989; Ford, 2002).

All of these definitions view the key function of trust as the management of risk, uncertainty and vulnerability associated with exchange. This rationale is reflected in the central components of trust. These include: reliability (Andaleeb, 1996; Dwyer *et al.*, 1987; Morgan and Hunt, 1994); honesty (Bonoma, 1976; Morgan and Hunt, 1994); predictability (Busch and Hantusch, 2000); mutuality, an expectation a partner is equally committed, and will act reciprocally to mutual advantage (Barney and Hansen, 1994; Dwyer *et al.*, 1987); benevolence (Doney and Cannon, 1997) and forbearance from opportunism (Barney and Hansen, 1994; Bradrach and Eccles, 1989).

Typology of trust

Different forms, or types, of trust have also been described. Most simply, trust between individuals, between organisations and within organisations has been seen to differ, even if there are interconnections between each: interconnections mediated and facilitated by individuals holding key organisational or relational roles (Grönroos, 1990). Similarly, research suggests that the context of interaction, both in terms of the immediate exchange context and the wider cultural environment, contributes to the creation of different "types" of trust in response to different exchange situations (Barney and Hansen, 1994; Bonoma, 1976; Hagen and Choe, 1998; Sheppard and Sherman, 1998).

Calculative and affective trust

Further distinctions of approach and analysis arise from the discontinuous identification and evaluation of the processes underlying trust. Most important is the distinction between calculative (rational or cognitive) trust and affective (or knowledge based or irrational) trust (Ring, 1996). Calculative trust is based upon the rational evaluation of risks, rewards, controls and information derived from beyond the exchange interface (frequently connected to reputation), leading to a conclusion that it would be detrimental for a partner organisation to act opportunistically. Affective trust, in contrast, is based on personal experience and rests, to far greater extent, upon emotional inputs and information

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derived within a relationship (Warrington *et al.*, 2000). Researchers have also identified further distinct approaches centred on the institutional, personality, cognitive, or societal/cultural/environmental bases of trust development (Doney and Cannon, 1997; Doney *et al.*, 1998; McKnight *et al.*, 1998).

Power dependence and trust

Unsurprisingly, these differences of approach are reflected in divergent research findings; a number highlighted by Coulter and Coulter (2002). One important area of disagreement is in relation to the question of the interrelationship of trust and power/dependence. One of the key functions of trust is to moderate and control uncertainty and conflict associated with power imbalance/dependence (Hewett and Bearden, 2001). Similarly, it has been established that the power/dependence context influences trust development (Bonoma, 1976; Sheppard and Sherman, 1998).

However, the nature of the relationship between power, dependence and trust remains disputed. Some research suggests that power imbalance/high dependency situations inhibit trust (Anderson and Weitz, 1990), while others (for example, Moorman *et al.*, 1993) contradict this finding.

The relationship between trust and power/dependence appears complex and conditional, based on subjective, perceptual elements. Mutual trust is more common in interdependent relations with less powerful companies less confident in the trustworthiness of partners (Young and Wilkinson, 1989). The expression of coercive power by one party inhibits trust (Geyskens *et al.*, 1998). However, Andaleeb (1996) notes that high dependence does not limit trust *per se*. Rather it is actors' subjective reactions to the power structure which are critical. Geyskens *et al.* (1998, p. 242) note that:

> [R]elationships are not the prisoner of the environment and power structure ... whether trust develops depends on how parties feel and behave.

This perceptual element of trust is not necessarily a positive factor. An individual with an untrusting outlook will interpret trusting behaviours undertaken by a partner negatively (Zand, 1972).

Similar disagreements exist in connection with the question of the effect of control mechanisms on trust. There is a tradition in the literature which associates calculative trust, named "deterrence based trust" by Rousseau *et al.* (1998), to the organisation of effective control, monitoring and punishment systems which make opportunism economically detrimental. Achrol (1997), however, argues that trust thrives best outside a context of control. Organisationally bureaucratic systems of control have been observed to impede trust development (Dwyer *et al.*, 1987; Moorman *et al.*, 1993). Other researchers go further, arguing that control and monitoring systems obviate the need for trust: trust that must be constantly tested and guaranteed by sanctions, which contains no element of "faith", is not trust at all (Wicks, 1999).

Complexity and importance of context

One reason for this lack of consistency is that different epistemological positions make different assumptions about the world, which, in turn, shape the understanding of trust and its development (Doney *et al.*, 1998; Mayer *et al.*, 1995). A further cause of inconsistency is the complexity of trust, and the importance of context.

However, the range of results found in the literature should not simply be seen as reflecting the inability of researchers to encapsulate the full complexity of trust. Trust is a universal, but heterogeneous, phenomenon shaped by subjective processes. It is constructed and operationalised in markedly different ways, in different contexts, by different actors, with different needs. Ganesan (1994) establishes, for example, that different cues are used to assess trustworthiness across purchaser/vendor dyads. Moreover, individuals are able to construct and sustain highly complex and contextually apposite conceptualisations of trust, for example to reconcile simultaneous feelings of trust and mistrust in partners (Lewicki *et al.*, 1998; Wicks, 1999). Interpersonal trust and inter-organisational trust can vary independently (Lipset and Schneider, 1983).

Further complexity arises from the fact that trust is dynamic. Actors reassess and adapt trust behaviours as relationships develop (Coulter and Coulter, 2002; Gounaris and Venetis, 2002). This dynamic is reflected in iterative, longitudinal models of trust development as positive experience, affective links and norms of interaction are established (Dwyer *et al.*, 1987; Harris and Dibben, 1999).

This dynamic development need not be positive, and can lead to spiralling distrust and relationship failure (Morgan and Hunt, 1994; Zand, 1972). Indeed, the literature has underlined the vulnerability of trust, which can be destabilised easily by unsatisfactory exchange encounters or an inequality of trust between parties, leading the more trusting partner to feel "violated" (Harris and Dibben, 1999). Negative experiences have a greater influence on actors' perceptions of trust than positive evaluations (Busch and Hantusch, 2000). However, a reduction of trust need not be associated to explicit exchange failures. The normal movement of key relationship management personnel, for example, can lead to a diminution of trust (Brock-Smith and Barclay, 1997). Similarly, increasing expectations in long-term relationships are associated to trust decay (Grayson and Ambler, 1999).

Faced with such complexity, dynamism and subjectivity, it is unsurprising that the literature, as a whole, is so broad in focus and conclusion. Many authors argue that this breadth is a source of strength: even apparently contradictory findings are complimentary, helping to elucidate a complicated and important subject (Doney *et al.*, 1998; Rousseau *et al.*, 1998).

However, the literature has also established the context specificity of trust. Trust is constructed in different ways in different cultures (Friman *et al.*, 2002; Hewett and Bearden, 2001), in different power/dependence and control systems (Bonoma, 1976; Sheppard and Sherman, 1998), in different types of relationship (Cannon and Perreault, 1999; Naude and Buttle, 2000) and in different markets (Cannon and Perreault, 1999; Singh and Sirdeshmukh, 2000; Knights *et al.*, 2001; Young and Wilkinson, 1989). Certain authors, observing this context specificity, have questioned the cross-contextual applicability of trust research (Bonoma, 1976; Singh and Sirdeshmukh, 2000). Whether one accepts the rigidity of this position or not, it is clearly the case that trust should be examined and understood within the settings in which it operates (Bonoma, 1976; Plank *et al.*, 1999). That is the intention here, in this exploratory research into trust in business-to-business bank markets.

Trust in financial services

The role and development of trust in banking has been observed to be contiguous with its function in other markets. Trust is seen as a response to uncertainty, risk and dependence (Zineldin, 1995). It is also apparent that its development and criteria for evaluation are shared with other markets (even if these elements are often examined in their own right, rather than as components of trust *per se*). The centrality of reliability in corporate bank relations has been stressed repeatedly (Paulin *et al.*, 1998; Smith, 1989; Turnbull and Moustakatos, 1996). The seminal importance of honesty (Haubrich, 1989; Moriarty *et al.*, 1983), mutuality (Crane and Eccles, 1993), benevolence (Turnbull and Moustakatos, 1996), forbearance from opportunism (Turnbull and Gibbs, 1987; Zineldin, 1995), and faith (Smith, 1989; Turnbull and Moustakatos, 1996) in bank-corporate relationships have similarly been highlighted. These relationally-grounded expressions of trust beliefs and behaviours are underpinned by trust derived from the highly organised regulatory framework surrounding the bank market (Morgan and Knights, 1997).

These findings suggest that financial services business markets are characterised by high levels of trust, affective and calculative, at both an interpersonal, organisational and inter-organisational level. It is also clearly a context where trust is deeply important. Zineldin (1995, p. 33) notes:

> Trustworthiness dominates in banking … [because] Banking services may involve more risk and uncertainty than other businesses.

Knights *et al.* (2001, p. 318), go further to argue that:

> [F]inancial services can be said to be in, or even to be, the business of trust. The creation and maintenance of trust relations is a fundamental condition of their existence.

However, despite the identified centrality of trust to bank-corporate relationships, the evidence of the importance and operation of trust components in these relationships, and the existence of a strong regulatory framework, the literature raises doubts about the expression of trust in corporate bank markets. Sheedy (1997) suggests that there are, in certain circumstances, shortfalls or failures of trust. This conclusion is also implied in studies that suggest that relationship strategies have failed to be implemented properly, especially among smaller companies (Chaston, 1994; Paulin *et al.*, 1998). This research investigated these doubts and discovered how trust, a concept conceived differently on each side of bank-corporate dyads (Crane and Eccles, 1993), is constructed and used in business-to-business bank markets, and whether it is really as strong, healthy and fundamental in financial services business markets as its perceived centrality to the operation of banking would suggest, and how it is operationalised.

Methodology

This research is based on qualitative data collected through 147 face-to-face, in-depth interviews with UK corporate bankers and their clients, which took place in their offices between 1999 and 2005. This was not designed as a longitudinal study. The lengthy period of data collection reflects difficulty of access and time restraints of interviewees and researchers. Data were cross-checked to determine whether this influenced results and there was no significance between earlier and later interviews. Of these, 53 were corporate bankers and 94 were senior personnel from companies with responsibility for banking relationships; 27 were dyads (a total of 54 interviewees) and 93 were singletons.

All interviews were tape recorded and transcribed. Interviews lasted from 40 minutes to 90 minutes. Many interviewees were interviewed more than once for purposes of clarification and triangulation. A grounded theory based approach was used for data collection and analysis, with some modifications: An interview protocol was used to guide the first series of questions to ensure that all relationship variables were covered with each interviewee. In addition, due to the lengthy data collection process, data collection and data analysis were not integrated and did not occur simultaneously (Glaser, 1978, 1992, 1993, 1994; Glaser and Strauss, 1967).

These financial services business relationships were socially constructed, that is, individual behaviours were enacted within the context of the social relationship between the corporate banker and his client, cultural idioms, and institutions that these actors create continuously. The power asymmetry between the banker and his client contributes to this social construction, as Berger and Luckman put it:

> He who has the bigger stick has the better chance of imposing his definitions of reality (Berger and Luckman, 1966, p. 109).

Results

The overwhelming majority of respondents identified trust as critically import within their bank relationships. Across the entire sample, only four interviewees, on the client side, believed that other control systems obviated the need for trust. A significant cohort argued that without trust there could be no relationship, while most stated that a significant failure of trust would lead them to exit a relationship.

That the majority of our sample was engaged in long-term relationships suggests that there was some mechanism (levels of trust?) sufficient to maintain the exchange relationships that typify the UK business-to-business bank market. However, serious failures of trust were not unknown. Moreover, numerous bank clients were less than completely satisfied, even if this had not led them to rethink their financial services purchasing and switch banks. This dissatisfaction was particularly marked among SMEs.

Results will be presented in three sections:

1. From a holistic perspective.
2. By relationship context perspective, business bankers and their clients.
3. By customer market segment, large companies and SME's.

Trust is a complex construct incorporating a number of elements and functions that exist severally, but not necessarily interdependently nor constantly. There was no common understanding of, nor response to, trust. Even interviewees sharing many characteristics, for example, managers from the same bank, conceptualised trust differently. For this reason, we offer no single definition of trust, but Håkansson (1982) and Young and Wilkinson (1989) use respondents' understanding of trust as the basis of analysis (see Szmigin, 1993).

However, even if interviewees conceptualised trust subjectively, marked similarities existed between the interviewees' perceptions of trust. For all, trust was a system by which to control or limit risk (although perceptions of risk differed). There was a general appreciation that trust must be mutual. All the interviewees understood the difference between interpersonal, organisational and inter-organisational trust. In general, interpersonal trust was viewed as more critical to relationship success than inter-organisational trust, and was interpreted more positively. As predicted in the literature (Brock-Smith and Barclay, 1997), periods of staff turnover were perceived as periods of relationship instability on the client side.

Within interpersonal relationships, both bankers and their clients commonly saw honesty, integrity, discretion, mutuality, predictability and ability as essential components of perceived partner trustworthiness.

In addition, all clients were concerned with bank manager and bank reliability. The central component of reliability was "doing what was agreed". As one respondent stated:

> You're totally reliant on … a verbal "OK" from a bank… we're sitting down writing-out salary cheques on the basis of that "OK".

Trust in partner reliability created a sense of "confidence" and "comfort". It reduced uncertainty. If bankers failed to complete actions as agreed (this applied equally to dispatching a chequebook as providing finance), or worse, promised actions that were subsequently not approved, trust swiftly turned to mistrust. Bankers understood this danger:

> It's very important … that the Relationship Manager of the clearing bank doesn't say things that he can't deliver.

Failures of this type were comparatively rare. Most respondents acknowledged that banks have become increasingly reliable. However, this development has gone hand-in-hand with less well-received changes. Those with a longer experience of bank markets, on both sides, felt the nature of trust in banking had changed significantly in recent years. In particular, there has been a reduction in the expression of trusting behaviours by banks, connected to increasing use of technology, a proliferation of paperwork, bank centralisation and impersonal call centres, especially in relation to specialist product generation and key decision making.

Company and bank respondents with experience of "old style" account management, expressed disquiet with this change. An experienced banker noted:

> It has long been my view … that the bank in it's training programme and certainly the fast track training programme trains people to be very good money lenders, but there is a lot further to go in developing bankers.

This quote encapsulated awareness that trust, and by extension "good banking", were products of more than simple service satisfaction. However, only a minority of interviewees (mostly bankers) had considered trust development and maintenance in a sophisticated way, despite the widespread acknowledgement of its importance. Most respondents understood trust as the product of positive experience. Others described trust development as a function of the "chemistry" between individuals. In both cases, trust was seen as something that emerged, almost inadvertently, with time, contact and satisfactory experience, as opposed to being developed strategically and consciously through the adoption of behaviours likely to encourage trusting. A number even argued that there was little they could do to develop trust. Only a minority displayed evidence of having thought about trust in the structured way in which they would consider other important elements of their business practice.

Business bankers

Business bankers perceived themselves as inherently trustworthy. One noted: "bankers are honest people". Relationship managers idealised mutual trust between themselves and dyad partners. They prized their integrity and understood its importance to their customers – even when this involved telling difficult truths. All recognised the importance of confidentiality and discretion in handling sensitive company information. They appreciated the importance of reliable service. They took a long-term view and would not risk extended relationships and future business for short-term gains – they did not act opportunistically.

However, if bankers perceived themselves as trustworthy, they themselves were hesitant to trust their clients, especially in relation to risky exchanges, certainly to enact trusting behaviours.

The only exception to this was in connection with what we term "short-cutting". This is an in vivo code that emerged from the data (Glaser, 1992; Glaser and Strauss, 1967). This involved the informal approval of actions by bank staff, often over the phone, before formal paperwork was completed, based on experience and knowledge of a partner, i.e. as an *ad hoc* operationalisation of trust.

"Short-cutting", which ranged from recognising a voice on the phone to facilitating quick responses to critical contingencies, was a feature of interpersonal trust which allowed normal bank procedures, developed primarily to protect the banks, to be set aside temporarily. Relationship managers needed to trust that companies were making suitable requests, and that companies were not attempting to exploit the bank, before the managers would engage in "short-cutting".

"Short-cutting" was critical to perceived relationship quality and service satisfaction for companies. Even bankers acknowledged that bank red-tape was bureaucratic and slow. "Short-cutting" enabled timely response by the relationship manager to their clients' critical contingencies. The failure to institute shortcuts, especially if the failure led to increased complication for the clients, was taken to demonstrate a shortage of trust and was greatly resented by banks' client companies.

"Short-cutting" was not achieved by bankers "wing[ing] it", nor exceeded the limit of risk assumption demanded by central bank strategies. However, shortcuts were deviations from normal procedure, required greater human capital input, had a cost implication, and contained a degree of risk assumption by the banks. "Short-cutting" therefore represented a trusting behaviour as understood by the literature. However, it was not official, sanctioned bank policy and represented *ad hoc*, personal operationalisation of trust on the part of the bank relationship manager.

However, "short cutting" was only approved by bankers in low risk, low uncertainty scenarios. Where risk and uncertainty were greater, especially in connection to the arrangement of new credit lines, trusting behaviours were not instituted. Instead, risk was confronted by extensive bureaucratic controls. These systems were never abbreviated on the basis of trust in a client organisation or individual.

This is not to say that belief in a partner's trustworthiness was not significant during borrowing exchanges. The decision to lend was made on the basis of information supplied by a business customer. This led bankers to emphasise trust in the "honesty" of their clients, both in terms of the accuracy and completeness of supplied information. In similar vein, bankers needed to trust in the competence of their business customers, both on a personal and organisational level. If a banker did not trust a customer's institutional or individual honesty and competence, no actions inclining the bank to risk would be taken.

However, if trust were a prerequisite to the approval of actions inclining the bank towards risk, these were not trusting behaviours as described in the literature. Trust was not used by banks as an alternative to other control mechanisms. Instead, trust acted as part of control mechanisms to make them more effective and secure.

As such, if trust were not directly decisive in deciding which resources to allocate, it was a prerequisite to any such decision being made. Most bankers were clear that without trust there would be no interaction; "no relationship". This demand was ruthlessly policed. One banker had systematically cancelled all business and removed those clients from his portfolio who he felt to be less than completely honest. Another stated:

> One suspicion of a less than honest disclosure, or withholding information, that's it. One mistake and you are out.

Others acknowledged that small inaccuracies must be tolerated, but confirmed that relationships suffered with even small deviations from full disclosure.

As an extension to this, bankers were unwilling to assume the honesty of clients. Indeed, there was a pervasive fear that companies and individuals might attempt to mislead banks for their own advantage:

> If you get into problem situations some people will still come clean with you, others will try and bury it so that you can't see it, and the skill in this job is trying to determine when they're doing it...because again of the role you're in, you're always naturally cynical. So I'm not overly sure whether you ever fully trust your customers in this job.

Another banker even acknowledged:

> I never accept what I'm told at face value.

This hesitance reflected the banks' risk-disinclined organisational culture, which was reinforced by a pervasive fear among relationship managers of being "frauded [sic]" or supporting the provision of credit that subsequently "went bad". This would hamper a relationship manager's career development. A small company respondent noted of his bank relationship manager:

> He doesn't want to blot his copy book within the bank.

This encouraged bank relationship managers to be particularly careful to establish the bone fides of company partners. In effect, bank relationship managers were encouraged not to trust.

Even when trust developed, it had little direct impact on the services that a bank would deliver for a client company if these inclined the bank towards risk. Banks did not act benevolently on the basis of trust. They did not incline themselves towards risk on the basis of trust. Trust seldom led to co-operation or adaptation and contained no element of faith. Despite stressing the importance of mutual trust, the bank conceptualisation of trust was calculative, non-negotiable and rigorously policed; it was connected principally to the minimisation of bank risk.

Large company customers

Respondents from larger companies presumed that the banks were trustworthy, and that the banks were "competent and regulated businesses" with an "interest in maintaining good practice". As a result, organisational trust was invested in them almost without question (despite a number of recent high-profile scandals). Bankers themselves, however, were not given the same predetermined trust as the banks. Risk, for larger companies, was associated primarily to human failures. It was important that they could trust in the "ability" and "reliability" of their banking team. This was established by the experience of bank staff "getting things right", "putting things right", and "doing what was agreed". Smaller companies had a similar conceptualisation, but tended to invest the concern totally in their manager. Larger companies focussed on the ability of the entire banking team, although the relationship manager was of primary importance.

Larger companies were concerned greatly also that their bankers would handle information given to them in strictest confidence, while this was less of a concern among small companies. Larger companies understood the delivery of sensitive information to be a trust behaviour predicated on a confidence that the information would be treated correctly by bank staff. This trust developed with experience. However, as none of those interviewed gave examples of confidentiality having been breached, it appears that the extent of this fear among respondents was out of proportion to the actual risk.

Larger companies did not have a developed expectation of trusting behaviours from their banks. In particular, there was no expectation of bank benevolence or decision making on the basis of affective sentiment. Larger companies accepted that banks had responsibilities to shareholders that they were obliged to fulfil. Larger companies accepted that this primary responsibility shaped bank policy and would, at times, make certain actions impossible.

Larger companies were not entirely sanguine about this status quo. They believed that banks overestimated the extent of the risks confronting the banks:

> [T]hey're in a no risk scenario, we're in the risk side of it.

This led larger companies to question the extent of the paperwork, information and guarantees demanded by banks.

However, larger companies did not feel powerless in the face of these risks, uncertainties and perceived inefficiencies – indeed, they appreciated a "degree of distance" from their banks. They were confident of their own ability to manage uncertainties and risks connected to their bank relationships, without needing to rely on the trust of banks. This was a function of three factors. First, larger companies multi-banked. Risks and uncertainties connected to one bank contact were moderated by the possession of alternative suppliers. Second, the value of their banking business was considerable, giving confidence that banks would wish to maintain relationships with them. This could be described as a form of calculative trust, although our respondents did not interpret it in this way. Third, larger companies usually possessed significant human resources and financial expertise. They could devise and manage complex banking systems to resolve problems autonomously.

If the expectations of larger companies were breached, they took action to resolve, or retreat from, associated risks. Larger companies complained about, and if necessary withdrew, from unsatisfactory relationships:

> When the crash happened, irrespective of the fact that they saw and had no risk to their position, they asked if we would, firstly, secure the unsecured portion, and then increase the security on the secured portion. We felt that broke the trusted relationship we had with the bank and we lifted the positions and didn't do any more business with them.

Against expectations in the literature, the availability of sanctions and alternatives did not promote the perception of trust by larger companies in their banks, or vice versa (Cannon and Perreault, 1999). Nor did they appear to encourage the banks to enact trusting behaviours more frequently. However, they did mitigate dissatisfaction, reducing large companies' perception of uncertainty, while allowing them to feel that they could, to an extent, pressure banks to give them the level of service they idealised.

SMEs

SME respondents had the most complex and varied approach to trust. All, however, emphasised trust in the ability and reliability of their bank relationship manager. This interpersonal trust was frequently very strong, and the heart of a relationship which was considered to be of overwhelming importance by the vast majority of respondents. The period of relationship manager hand-over was greatly feared by small companies.

However, despite this emphasis on trust, small companies, as a group, were more dissatisfied with trust levels than their larger counterparts. This dissatisfaction was connected largely to small company anxieties surrounding borrowing exchanges and doubts over bank support during inevitable downturns. In response to these fears, many smaller companies idealised trust, after Moorman *et al.* (1993), as involving trust beliefs leading to trust behaviours – notably the adoption of risk by a partner. They wanted bank support to be reliable and predictable, predicated on affective as opposed to calculative assessments. They wanted their bank to manifest "faith" in them.

Unsurprisingly, as for banks, trust was calculative not affective; bank relationship managers, and the banks themselves, were unprepared to fulfil this expectation. The outcome was a sense of insecurity, even resentment, among many small company respondents, focussed towards the banks as organisations, especially their credit committees. This organisational mistrust was exacerbated because small company respondents knew little of the processes by which central bank bodies made credit decisions. This lack of knowledge led them to perceive the credit process as capricious.

Even successfully accessing capital did not moderate this sense of insecurity. There was a pervasive fear among many small corporate borrowers that credit lines, once given, might be withdrawn. The many levels of security that the banks insisted upon during credit agreements reinforced a belief that credit was never given on the basis of trust:

> We have substantial overdraft facilities and every time I sign the letter each year renewing those facilities one of the clauses in the letter is "the overdraft is repayable in full immediately on demand" for almost any reason. Now that is not displaying any trust by the bank in the client at all.

This perception encouraged many smaller companies to exhibit a wider negative reaction to the banks as organisations. The banks were seen by some as "dangerous". The "endless" demands for information by the banks were taken to demonstrate that banks were "bottom-line driven" (most saw communication with the bank as a response to bank demands, not an expression of their trust in their bank). This led smaller companies to conclude that banks lacked faith in the companies' future success, that the banks did not act mutually or benevolently. A number of small companies felt, perhaps fairly, that the banks were reluctant to trust information they provided.

Bank personnel had not, as yet, been tarnished by this perception; bank relationship managers were perceived as trustworthy by the huge majority of small company respondents – supporting the thesis that inter-organisational and interpersonal trust can vary independently (Lipset and Schneider, 1983). Indeed, mistrust of the banks as organisations led some small companies to place greater emphasis on trust in bank staff: The hope that a trusted relationship manager would extract resources from a mistrusted bank organisation.

This was not the case. Bank relationship managers invested more effort supporting finance requests from companies with which they had a close relationship. However, there was little evidence that this had a decisive impact on credit committees. This was recognised by a significant cohort of small companies, who accepted that, as the "discretion" of managers was curtailed, so their ability to access bank resources was reduced:

> The old style bank manager was making his recommendations as to what facilities to approve. I think his decision . . . was, to a certain extent, based on the personal relationship and on the trust that he might have built up with the client. Today, I feel it's just figures.

Significantly, it was not only smaller companies that expressed concern with the centralised decision making processes adopted by the banks. Larger companies also worried that credit committees, with which they had no direct relationship, made decisions critical to their business. However, their concerns did not engender the same sense of organisational mistrust as it did among the SMEs.

The negative reactions of small companies cannot be linked solely to a different experience of banking. Small companies do have some disadvantages. Managers have large portfolios and focussed greater effort towards more valuable accounts. Contact, through which trust develops, was denser between large companies with complex banking requirements than small ones with more simple needs. Larger companies found it less taxing to meet the banks' stringent demands for information. A company with a large turnover could access finance more readily than a smaller counterpart. However, fundamentally, banks did not treat small firms more mistrustfully than large companies – no company would be approved significant new credit lines without fulfilling all the bank's information demands and satisfying oversight.

What marked out smaller companies was not only their treatment, but also their response to it. While larger companies accepted that bank policy reflected a primary and legitimate focus on the interests of shareholders, many small companies interpreted bank procedures as manifesting mistrust in them. In addition, small companies most readily saw trust in the breach. A case in point is related to what we have described as "short-cutting", which smaller companies often failed to acknowledge was a means of the bank relationship manager manifesting trust in them. In contrast, when shortcuts were not approved, this was invariably understood as indicative of mistrust. As predicted in the literature, negative experiences had a more profound effect on reactions than positive experiences (Busch and Hantusch, 2000).

These perceptions (which were not universal – a significant minority of small companies, especially those working in financial services themselves, were both realistic and positive about their banks) were shaped by smaller companies' sense of their own vulnerability. This encouraged them to place great emphasis on bank trust in the absence of real confidence that they could expect their banks to support them. Mistrust of banks reflected small companies' own sense of vulnerability.

Compounding this, most smaller companies did not emulate the strategies deployed by larger companies to militate the refusal of the banks to enact trusting behaviours. Few multi-banked. Most were hesitant to take actions to switch banks in any but the gravest situations. In addition, they saw bank policy as ubiquitous across all the banks, and therefore little point in switching suppliers (Grayson and Ambler, 1999; Harris and Dibben, 1999).

Conclusions

Companies trust in the reliability, efficiency and honesty of their bankers. However, it is apparent that trusting behaviours, those which incline banks towards risk, are seldom enacted by bankers. While this is in line with bank policy, and appeared not to have an overly negative impact upon larger companies (turnover over £30 million), many smaller companies demonstrated marked organisational mistrust of the banks as a result, even if interpersonal trust in their bank managers remained strong (cf. Lowe and Kuusisto, 1999).

This negative interpretation reflected the vulnerability of small companies, rather than an objective disadvantage in their bank relationships (although the meaning of trust in corporate banking has clearly changed in recent times). Larger companies, corporates and multinationals, experienced certain advantages over smaller companies on account of their size, security and importance to their banks. However, their relative satisfaction was connected primarily to the ability to militate dissatisfaction through the adoption of purchase strategies that allowed them to limit perceived risks and uncertainties autonomously.

Most smaller companies lacked this ability, which was the root cause of their mistrust of banks as organisations. While smaller companies may be unable to replicate all the strategies used by larger ones to control this dissatisfaction, smaller companies could moderate perceived mistrust by adopting less passive financial services purchase strategies, better suited to the current business-to-business bank market.

Trust is operationalised asymmetrically by bankers and their clients, and is also dependent on the context (Szmigin, 1993). Bank trust is calculative, non-negotiable and rigorously policed. It is more based on risk containment and control than on customer relationship management, customer service, or quality. The larger companies trusted the banks because of their institutional stature, but not bankers, and worried about human failure. While the SMEs wanted affective trust, organizational bank trust was always calculative, unless affective trust was a personal behaviour of the bank relationship manager, operationalised in an *ad hoc* manner. Interorganisational and interpersonal trust varied independently, according to the personal interactions and relationships involved.

While bankers view themselves and their institutions as "trustworthy", they are not trusting of their clients, and the banks' increasing use of technology, which largely distances themselves from their clients, means that the institutionalized myth of bank stature is eroding (see Lowe and Kuusisto, 1999; UNCTAD, 1993).

Asymmetrical trust perspectives

Banks' understanding and use of trust is not explicitly addressed. The conservative, risk-averse bank position is based on calculative trust, the rational evaluation of risks, rewards, controls and information derived from exchange interface and beyond – such as reputation and credit rating (Ring, 1996).

Client companies, especially SME's, approach the banking relationship from the position of affective trust, based on their personal experience of the service process, which is derived from emotional inputs and information derived from the relationship and the relational experiences they perceive during the service process (Warrington *et al.*, 2000).

The asymmetrical approach to, and operationalisation of, trust is an important factor in the perceived unease on both sides. Captive customers, in an oligopoly market, who are not switching because "they [banks] are all the same", are not a sound basis for the industry. Banks and their customers, especially SMEs, build and maintain long-term relationships by default and trial-and-error.

Managerial implications

Although trust is foundational to establishing relationships at a personal, organizational and interorganizational level and an essential element of customer service and service quality, banks and bankers have no explicit strategy or staff guidelines for developing trust. The banks have no generally-recognized and accepted definitions of trust, trusting behaviours, or how trust should be operationalised. As an important underpinning element of customer service, service quality and relationship building and maintenance, trust should be developed explicitly, strategically and consciously through the adoption of behaviours likely to encourage trusting.

Banks should think about and approach trust in the structured way in which they would consider other important elements of their business practice. Trust building behaviours and the operationalisation of trust is currently done through the informal and unscripted informal approval of actions by bank staff, often over the telephone, before the formal paperwork has been completed. This is usually based on the experience and knowledge of the client, and is an *ad hoc* operationalisation of trust. It was not official, sanctioned bank policy. This is a costly, trial-and-error approach.

Neither side has explicitly addressed or understood the fundamental role of trust in providing a basis for service satisfaction, service quality, and relationship building. Both sides have left this completely to chance and individual idiosyncrasy. Both sides refer to the importance of "chemistry", a blanket term for the ability to achieve a mutually beneficial, reciprocal trusting relationship, which is also profitable. This has also been the case in the global market in international equity securities, where "chemistry" is essential for business relationships and firms mix and match personnel through lengthy trial and error processes to try to achieve it (Tyler, 1996).

This research was a consciousness-raising experience for both bankers and their clients and provoked reflection about trust. Bankers and their clients would be well advised to gain an understanding of trust, and provide key people, who build external relationships, with an insight into the role of trust in customer service and relationship building and maintenance in services business-to-business markets.

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A re-examination of the relationship between value, satisfaction and intention in business services

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Abstract

Purpose – The objectives of this paper are twofold: to add to the debate regarding conceptualisation and operationalisation of value within a professional service domain, and to contribute to the relatively sparse literature dealing with the functional relationship between determinants and outcomes of value with specific emphasis on the value to satisfaction and intention to re-purchase relationship in professional services.

Design/methodology/approach – A theoretically grounded model has been developed that comprises three antecedents of value (conceptualised as a higher order construct of six dimensions) and satisfaction both of which impact on intention. The model has been tested, using partial least squares, on 78 responses obtained through an email survey carried out amongst executives of the top 300 UK-based companies listed in the *Times* 1,000.

Findings – The results indicate that although perceived value is a multi-dimensional construct treating value as a unified construct may lead to confounding effects. Although further research is needed it is suggested that different dimensions of value act at different levels of the value hierarchy and differentially reflect process and outcome value creation forces in professional services.

Originality/value – This paper adds to the debate surrounding conceptualisations of the value construct by offering empirical support as to its formative nature. Furthermore, this is the first attempt to examine differences in the nomological relationships of value when it is treated as a single higher order construct and when the higher order structure of value is relaxed allowing its dimensions to directly interact with antecedents and consequences.

Keywords Customer satisfaction, Management consultancy, Services

Paper type Research paper

An executive summary for managers and executive readers can be found at the end of this issue.

Introduction

As early as 1991 the practitioner literature proclaimed that "Value of course is what every marketer should be all about" (*Business Week*, 1991, p. 132). Soon after, Holbrook (1994, p. 22) wrote that "value is the fundamental basis for all marketing activity", a view supported by Slater and Narver (1994, p. 22) who claimed that:

> Where competitive advantage was once based on structural characteristics such as market power, economies of scale, or a broad product line, the emphasis today has shifted to capabilities that enable a business to consistently deliver superior value to its customers.

The need for this refocus is highlighted by Woodruff's (1997, p. 139) observation that:

> The next major source for competitive advantage likely will come from more outward orientation towards customers as indicated by the many calls for organizations to compete on superior customer value delivery.

It is perhaps Holbook (2003, p. 46) who best synthesised current thinking:

> . . . if we accept the Kotlerian definition of marketing as managerial activities that lead toward the facilitation and consummation of exchanges and if we follow Kotler and Levy in regarding an exchange as a trading relationship between two parties in which each gives up something of value in return for something of equal value, it follows immediately that customer value is the basic foundation for everything we do in marketing.

The business-to-business marketing literature demonstrates broad agreement with the above views. In an early review Anderson *et al.* (1993, p. 3) stated that:

> In business markets, the value of a product offering in a given application can be thought of as the cornerstone of marketing strategy.

More recently Anderson and Narus (1999, p. 5) called value "the cornerstone of business marketing management", a view echoed in the papers presented in the *Industrial Marketing Management* (2001), special issue on value.

In this study we focus on value creation within the professional services domain. This is based on both theoretical and commercial considerations. In terms of the former, Devlin (1998, p. 1091) states that:

> Issues relating to which elements of the offering to emphasise when adding value may be particularly important in the case of services.

Furthermore, evidence that satisfied customers often defect (Jones and Sasser, 1995), has led a number of authors (see for example Bolton and Drew, 1991; Cronin *et al.*, 1997) to argue that perceived value is the key marketing construct that helps to explain future service related intentions and actions. As for commercial justification, there is clear evidence that expenditure in professional services exhibits continuous expansion and therefore is a domain that merits attention (Lapierre, 2000).

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The specific objectives of this paper are twofold:

1. To add to the debate regarding conceptualisations and operationalisations of value within a professional service domain.
2. To contribute to the relatively sparse literature dealing with the functional relationship between value, satisfaction and intention to re-purchase professional services.

Review of literature

Current consensus within the marketing literature is that value is something that is perceived by the consumers/customers (Zeithaml, 1988; Woodruff and Gardial, 1996) rather than objectively determined by the seller (Day and Crask, 2000) and that value includes benefits and sacrifices, or according to Zeithaml (1988) perceptions of what is received and what is given. Furthermore, literature evidences convergence (both conceptual and empirical) in terms of value being a multifaceted and complex construct (Sheth *et al.*, 1991; LeBlanc and Nguyen, 1999; Lapierre, 2000) that should be considered to be a distinct concept to quality (Cronin *et al.*, 1997; Teas and Agarwal, 2000; Agarwal and Teas, 2001) and satisfaction (McDougall and Levesque, 2000; Eggert and Ulaga, 2002). Furthermore, its idiosyncratic behaviour is demonstrated by the fact that value perceptions of the same offering have been found to:

- vary across different situations (Zeithaml, 1988; Grönroos, 1997);
- vary across time and experience (Eggert and Ulaga, 2002; Flint *et al.*, 2002);
- vary depending on the type of offering under consideration (Brady and Robertson, 1999);
- are relative to existing competition (Eggert and Ulaga, 2002); and
- depend on customer characteristics (Bolton and Drew, 1991; Brady and Robertson, 1999).

Looking at structural relationships between value and other constructs, quality has been found to be the most often researched antecedent of value (see among others Cronin *et al.*, 1997, 2000; Agarwal and Teas, 2001; Ulaga and Chacour, 2001) followed by sacrifice expressed as price, time, effort etc. (Sweeney *et al.*, 1999; Agarwal and Teas, 2001). Other less frequently examined determinants of value are relationship forming constructs such as trust and commitment (Sirdeshmukh *et al.*, 2002; Walter and Ritter, 2003), risk (Sweeney *et al.*, 1999; Agarwal and Teas, 2001), and image/reputation (Teas and Agarwal, 2000; Agarwal and Teas, 2001). In terms of consequences, re-purchase intention (Cronin *et al.*, 1997; Brady and Robertson, 1999; Sweeney *et al.*, 1999) and satisfaction (McDougall and Levesque, 2000; Eggert and Ulaga, 2002; Lam *et al.*, 2004) dominate current research. Feedback/word-of-mouth (LeBlanc and Nguyen, 2001; Lam *et al.*, 2004) has also received attention.

Focusing on the literature specific to the business-to-business domain the related material appears to be in line with the above general debate. The following definition proposed by Anderson *et al.* (1993, p. 5) reflects the convergence of opinions with general debate:

> We define value in business markets as the perceived worth in monetary units of the set of economic, technical, service and social benefits received by a customer firm in exchange for the price paid for a product offering, taking into consideration the available alternative suppliers' offerings and prices.

Here, value's get-and-give elements are acknowledged as well as its perceptual and comparative nature. However, unlike consumer research that is dominated by issues related to the way that an organisation creates value for consumers the business-to-business literature emphasises value creation as a networking or relationship building process (see for example Ravald and Grönroos, 1996; Flint *et al.*, 1997, 2002; Möller and Törrönen, 2003; Ulaga and Eggert, 2005). Since the domain of developing business relationships is outside the purpose of this paper we do not review the related evidence, focusing instead on research specific to services in the business-to-business domain.

Our review has identified only eight papers that dealt (directly or indirectly) with value in professional services, with the debate presented by Mittal (1999) clearly reflecting the general views, while the reported empirical results are broadly in line with the evidence presented above. More specifically, all three of the empirical studies that tested the relationship between quality and value have provided support for this proposition (Patterson and Spreng, 1997; Lapierre *et al.*, 1999; Kumar and Grisaffe, 2004). The value to satisfaction relationship has been supported by four investigations (Patterson and Spreng, 1997; Lapierre *et al.*, 1999; Eggert and Ulaga, 2002; Lam *et al.*, 2004) with one study providing opposing results (Caruana *et al.*, 2000). As for the direct and moderated (by satisfaction) effects of value on intention, the studies by Patterson and Spreng (1997) (measured as repurchase), Lapierre *et al.* (1999) (measured as a multi-item scale of repurchase and recommendation) and Eggert and Ulaga (2002) (intention partitioned into repurchase, seek alternatives and word-of-mouth) support the proposition that satisfaction acts as a complete mediator. The same conclusion is reached by Lam *et al.* (2004) for intention to recommend while these authors indicate that satisfaction partially moderates the value to repeat patronage relationship. Finally, although the study by Kumar and Grisaffe (2004) also supports the direct effect of value on intention (measured as an index of repurchase and recommendation) their model does not include satisfaction thus direct comparisons with the other studies is not possible.

Despite this convergence (albeit based on relatively limited number of studies), there are some concerns regarding the stability of the presented evidence, mainly focussed on what we consider to be incomplete conceptualisation of the value construct. From earlier debate value is considered to be a multi-dimensional construct, a view supported in the business-to-business domain by Lapierre (2000). However, none of the professional services papers have adopted such a treatment with Patterson and Spreng (1997), Lapierre *et al.* (1999), Caruana *et al.* (2000), Eggert and Ulaga (2002) and Kumar and Grisaffe (2004) employing unidimensional measures/scales of between one and three items. Given value's complexity, we consider that, notwithstanding the recent contribution to the general debate on measures by Rossiter (2002), a multi-item multi-dimensional treatment is required. We also raise concern regarding the treatment of some of the constructs that are proposed to determine value. For example, Lapierre *et al.* (1999) and Kumar and Grisaffe (2004) model sacrifice as an antecedent of value even thought there is almost total consensus that sacrifice/give is part of the overall evaluation of value. The same can be said, for example, of the relationships and global constructs that Patterson and Spreng (1997) have modelled as determinants of value, which should have been treated as parts or dimensions of value. Finally, the nomological treatment of value is also questioned, with a number of studies (e.g. Caruana *et al.*, 2000; Eggert and Ulaga, 2002; Lam *et al.*, 2004) treating value as the starting point of their investigation, thus omitting to include any antecedents of value.

Research framework and related hypotheses

To address the above identified shortcomings we have developed the theoretically grounded model presented in Figure 1.

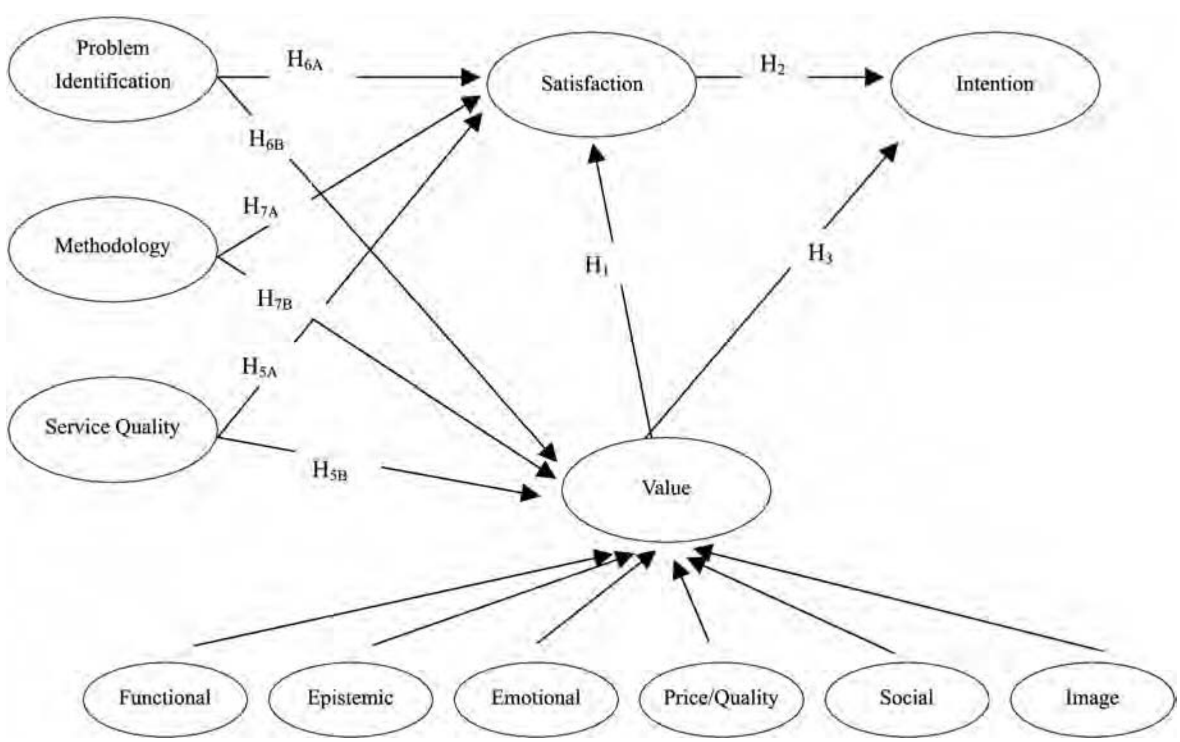
Given the earlier debate, our starting position is that value is a higher order construct. Although a number of value typologies have been proposed (see Sheth *et al.*, 1991; Holbrook, 1994; Lai, 1995; Lapierre, 2000; Lages and Fernandes, 2004; Ulaga and Eggert, 2005) we consider that only those by Sheth *et al.* (1991) and Lapierre (2000) offer a potential basis for adoption. The former was selected on the strength of its cross sector stability (over 200 applications), while the latter was rejected because it:

- fails to account for the nature of some measures (e.g. sacrifice should be treated as formative rather than reflective measure);
- the benefit dimension appears to include what the authors term drivers that are part of the service quality domain (e.g. responsiveness, reliability etc.); and
- the scale lacks theoretical grounding.

Briefly, Sheth *et al.* (1991), following an extensive review of studies spanning disciplines such as economics, sociology, psychology and consumer behaviour, proposed what they termed a theory of five consumption values (functional, emotional, social, epistemic and conditional values) that affect choice behaviour. Although empirical evidence supports this conceptualisation (see for example, LeBlanc and Nguyen, 1999; Sweeney and Soutar, 2001) there are some concerns regarding the behaviour of the conditional value dimension. More specifically, Sheth *et al.* (1991) state that conditional value is derived from temporary functional or social value and consequently can be regarded as an exclusive consideration (i.e. a special case of the other four dimensions; Sweeney and Soutar, 2001) and thus it has not been included in our study. On the other hand, to these values we add image (LeBlanc and Nguyen, 1999; Lapierre, 2000) and price/quality (LeBlanc and Nguyen, 1999):

- Functional value is related to the perceived performance or utility of the product or service, i.e. an offering's ability to fulfil the function that it has been created to provide, as well as the benefits associated with owning it. This dimension is particularly associated with extrinsic attributes.
- Epistemic value refers to benefits derived through an offering's ability to arouse curiosity, provide novelty or satisfy a desire for knowledge. The inclusion of this dimension is based on the fact that many professional services (e.g. consultancy, training, etc.) are specifically designed to improve the skill and knowledge base of the client organisation.
- Emotional value accounts for benefits obtained from an offering's ability to arouse feelings and/or affective states.
- Social value represents the benefits derived through inter-personal/group interactions and, together with emotional value, this dimension is considered to account for relational benefits.
- Image represents benefits derived from being associated with a business partner that enjoys high market status. This dimension is closely related to the reputation of the

Figure 1 Research framework/model



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service supplier and can be considered to act as a risk-reducing mechanism.

- Price/quality value represents an evaluation of functional aspects of value relative to the give aspects of the consumption experience. More specifically its accounts for customers' perceptions of the service they receive in exchange for what they give in terms of payment/sacrifice.

In order to achieve nomological validity, we incorporate appropriate antecedents and consequences. Earlier debate illustrates the existence of a body of research that indicates that satisfaction mediates the value to intention relationship. However, there are also a number of studies that have modelled value as a direct determinant of intention. Consequently, we include both perspectives in the research model:

H1. There is a positive relationship between value and satisfaction.
H2. There is a positive relationship between satisfaction and intention.
H3. There is a positive relationship between value and intention.
H4. Satisfaction mediates (totally or partially) the value to intention relationship.

In terms of antecedents, the related body of literature offers conclusive conceptual and empirical evidence to support the impact of quality (either product or service) on the formation of value and satisfaction (Patterson and Spreng, 1997; Lapierre *et al.*, 1999):

H5a. There is a positive relationship between service quality and satisfaction.
H5b. There is a positive relationship between service quality and value.

Given the widely accepted idiosyncratic behaviour of value we have decided to add the two domain specific (i.e. consultancy services) antecedents of problem identification and adopted methodology (see Patterson and Spreng, 1997):

H6a. There is a positive relationship between problem identification and satisfaction.
H6b. There is a positive relationship between problem identification and value.
H7a. There is a positive relationship between methodology and satisfaction.
H7b. There is a positive relationship between methodology and value.

Of the remaining constructs sacrifice, unlike previous research that has treated it as an antecedent of value this construct is considered to be a part, and not a determinant, of value (see price/quality dimension). In addition, although there is some justification in including risk as an antecedent of value we consider that:

- in the research domain the impact of risk predominantly manifests itself in the pre-purchase stages while our examination focuses on post-decision stages of the service encounter; and
- that image accounts for some of the effects of this construct.

Although the above described research model has been grounded in extant literature there is logic to the argument that the behaviour of the six value dimensions is not uniform. Consequently, a competing model in which the second order structure of the value construct has been removed, thus resulting in direct pathways between:

- the three exogenous constructs and each of the six value dimensions, and
- the value dimensions and satisfaction and intention.

The same logic as in the research model has been employed in order to define the sign of the pathways.

Research methodology

Of the various potential professional services we considered that consultancy to businesses represents an appropriate research domain, i.e. we are concerned with professional service products rather than product related supplementary services. This is viewed as being consistent with other studies in the subject matter (see Patterson and Spreng, 1997; Lapierre, 2000; Lam *et al.*, 2004) and to afford comparisons with the empirical findings of these studies.

Population, sampling and data collection

The target population was defined as "senior marketing staff of UK-based clients of external consulting firms" (i.e. excluded services provided by intra-company units). On the premise that larger companies are more likely to have had experience with consultancy services, UK-based companies listed in the *Times* 1,000 were targeted. Despite the limitations of such an approach our intention to obtain a broad spectrum of responses and the potentially confounding effects of obtaining multiple clients from specific consultancy firms led us to the adopted approach.

Following consideration of the trade-offs involved when deciding which data collection method to employ, and given the position and working habits of the target population, it was decided that an email survey represented the most effective data collection method. Based on reported response rates (see among others Sheehan and McMillan, 1999; Ranchhod and Zhou, 2001) it was decided to approach the top 300 companies of the sampling frame. After adjusting for undeliverables, and respondents that were found to be either peripherally involved in the whole consultation process or had doubts as to whether their views reflected the collective opinion of their organisation (see approach adopted by Patterson and Spreng, 1997), a total of 78 usable replies were obtained, representing an above average response rate of 29 per cent. The number of received replies adhered to the recommendation that the dataset should comprise at least ten times the number of either the indicators of the most complex formative construct (in this case methodology with four indicators) or the largest number of antecedent constructs leading to an endogenous construct (six value dimensions in the competing model), whichever is greater (Barclay *et al.*, 1995). Finally, the usual tests of non-response bias (i.e. limited follow-ups, comparison of early and late responses etc.; Armstrong and Overton, 1977) were carried out and we were satisfied as to the representativeness of the sample.

Measures and measurement

The research constructs were operationalised using a combination/mixture of the scales already developed by Patterson and Spreng (1997) and LeBlanc and Nguyen (1999). These were contextualised and their content and face validity tested during a two-stage exploratory study using a panel of field experts according to the methods proposed by

Hogarth (1978) and Morgan and Krueger (1998). In stage one, a panel of eight consultants practising within the field of professional services was recruited from the population of postgraduate/post-experience students studying for an MBA or other business masters' degrees at a UK business school. The group was asked to discuss their understanding of the research constructs and how these relate to the domain of the research. The discussion generated a list of key words and phrases that was compared with the items in the existing scales. After discarding duplications, the remaining new items were incorporated into the existing scales. In stage two, the revised list of scale items was presented to a second panel of eight field experts who were recruited as before. Using a variant of Zaichowsky's (1985) method, the panel was asked to rate each item as "clearly representative", "somewhat representative", or "not representative" of the construct of interest. Those items that demonstrated a 75 percent agreement among the panel as being "clearly representative" of the construct of interest were retained. The resultant number of scale items and the adopted operationalisation for each construct is presented below, while the wording of each item can be found in the appendix. In all cases a seven-point Likert scale anchored at "strongly agree" and "strongly disagree" was employed:

- *Functional value*. This dimension was measured using an eight-item scale and is a modified version of the outcome (two-items) construct as operationalised by Patterson and Spreng (1997) and the functional value (six-items) construct as operationalised by LeBlanc and Nguyen (1999).
- *Epistemic value*. The three-item scale is a modified version of the five-item operationalisation developed by LeBlanc and Nguyen (1999).
- *Image*. The five-item scale is an amalgamation of the single item used by Patterson and Spreng (1997) to operationalise the global construct of their model and the four-item image construct as operationalised by LeBlanc and Nguyen (1999).
- *Emotional value*. The three-item scale operationalised by LeBlanc and Nguyen (1999) has been employed.
- *Price/quality*. As with emotional value this dimension was operationalised using the three-item scale developed by LeBlanc and Nguyen (1999).
- *Social value*. The two-item scale employed represents a modified version of the two-item scale developed by LeBlanc and Nguyen (1999).
- *Methodology*. The four-item operationalisation represents an expansion to the original three-item scale developed by Patterson and Spreng (1997).
- *Problem identification*. The two-item scale developed by Patterson and Spreng (1997) has been employed.
- *Service quality*. As with problem identification the scale (four-items) employed by Patterson and Spreng (1997) has been adopted.
- *Satisfaction*. A slightly modified version (reduced from three to two-items) of the scale developed by Patterson and Spreng (1997) has been employed.
- *Intention*. Unlike other types of service where word-of-mouth and/or recommendation has been adopted as part of the expression of intention (see for example Cronin *et al.*, 1997; Lam *et al.*, 2004), we consider that in the case of professional consultancy repeat employment/use is the only meaningful form of intention and consequently this construct has been measured though a single item.

At this point we need to explain our conceptualisation of the construct-to-measures relationships. There is emerging interest in the marketing literature as to the potential effect that misspecification of conceptualisation of latent variables (LVs) might have had in theory development and testing. More specifically the debate revolves around issues related to reflective and/versus formative conceptualisations of LVs (Diamantopoulos and Winklhofer, 2001). Based on guidelines provided by Jarvis *et al.* (2003), and accepting the empirical evidence presented by Cronin *et al.* (2000) and DeSarbo *et al.* (2001), we conceptualise value as a higher order formative latent variable (FLV), i.e. an index of its constituent dimensions that in turn are considered to represent reflective latent variables (RLVs). This is in line with the relationship benefits and sacrifices conceptualisation adopted by Ulaga and Eggert (2005). Problem identification and methodology are considered to be FLVs while service quality and satisfaction are treated as RLVs.

Analysis and results

Given the existence of both reflective and formative constructs, together with the relatively small number of replies, and being cognisant of the associated dangers related to measurement model misspecification (Law and Wong, 1999) the data have been subjected to partial least squares (PLS). For a more detailed explanation of PLS and comparisons against covariance based SEM the interested reader is referred to, amongst others, Fornell and Bookstein (1982), Barclay *et al.* (1995), and Chin and Newsted (1999). In order to assess the statistical significance we used the PLS GRAPH software developed by Chin (2003) with bootstrap analysis using 500 sub-samples (Mathieson *et al.*, 2001; White *et al.*, 2003).

Measurement model

The following represents the approach followed by Barclay *et al.* (1995) and is consistent with classical examination of quality of measurements (see Churchill, 1979; Spector, 1992; DeVellis, 1991):

- *Individual item reliability*. This refers to the loadings or simple correlations of the indicators with their respective LV and consequently implies that such an examination is relevant only for RLVs. We retain those indicators that exhibited loadings with the intended construct of 0.70 or more, and were found to be statistically significant. All scale items met the above criteria. However, unlike RLVs there is no need to eliminate/omit non-significant formative measures, the only potential problem is that of collinearity. Consequently, linear regression collinearity diagnostics were employed to test for possible high correlations between the measures of the FLVs. Using the procedures outlined in Hair *et al.* (1998) no evidence of collinearity in the two FLVs (i.e. problem identification and methodology) was uncovered.
- *Internal consistency*. Based on earlier debate it is clear that internal consistency of a set of indicators is again relevant only for RLVs. According to a number of authors (e.g. Barclay *et al.*, 1995; Chin, 1998) when PLS is employed the internal consistency measure developed by Fornell and Larcker (1981) rather than the more often quoted

Cronbach's alpha is reported. In interpreting the values 0.70, is adopted as the benchmark. Information in the appendix indicates that all the RLVs met this criterion.
- *Convergent and discriminant validity*. In PLS the average variance extracted (AVE) created by Fornell and Larcker (1981) provides such a measure of convergent validity and is only relevant for RLVs. In this study their recommendation that AVE should be greater than 0.50 is adopted and is confirmed in the appendix. The structure was further confirmed by examination of the component structure (theta) matrix produced by PLS GRAPH (results not included here). The measure of AVE is also employed as an indicator of discriminant validity (see Barclay *et al.*, 1995; Chin, 1998). For confirmation of discriminant validity the square root of the construct's AVE should be greater than its bivariate correlation with the other constructs in the model. Examination of the information presented in the Appendix confirms discriminant validity.

On the strength of the above we conclude that we are satisfied as to the validity and reliability of the research constructs and proceed to test the structural models.

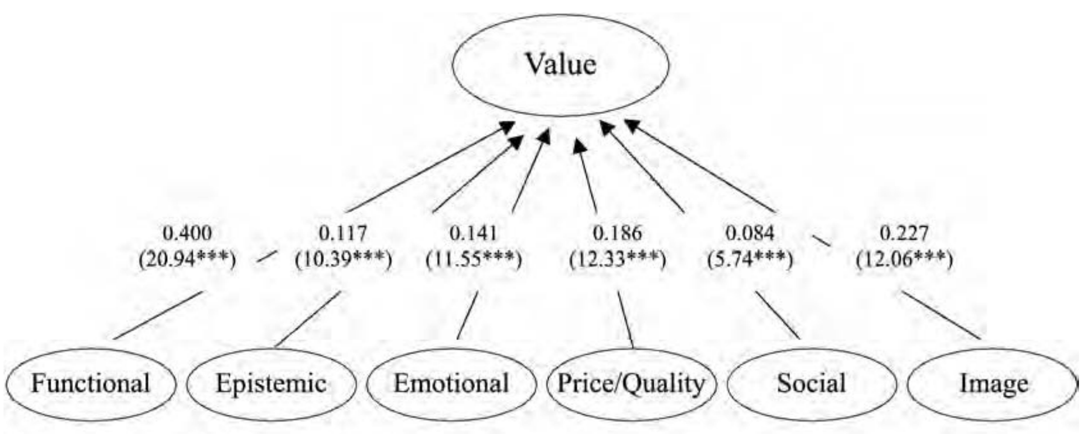
Structural models

Before proceeding to assess the structural models we report results related to our conceptualisation of value as a second order FLV. Unlike covariance-based SEM methodology that provides a clearly defined approach (i.e. confirmatory factors analysis), the situation with PLS is less clear. However, Chin under the FAQ heading of his PLS webpage suggests that the method of repeated manifest variables is an acceptable approach, specifically "if the number of indicators for each of your two constructs are approximately equal, you can use the method of repeated manifest variables" and "essentially, your overall factor that represents the two first order constructs is created by using all the indicators used for the first two order constructs." Accepting the limiting factor of unequal number of indicators, the information provided in Figure 2 indicates that all pathways were highly significant and consequently confirms the proposed conceptualisation of value.

We now turn our attention to testing the proposed and competing models. PLS makes no assumptions about the distribution of the variables and consequently traditional parametric-based approaches cannot be employed. Instead the recommendation (see Chin, 1998; Chin and Newsted, 1999) is to use nonparametric measures such as changes to R^2 for dependent LVs, the Stone-Geisser (Q^2) test for predictive relevance of independent variables and resampling procedures (e.g. jackknife or bootstrapping) when testing the significance of estimates. This means that unlike covariance-based methodologies PLS does not provide a single goodness of fit metric for the entire model, instead the R^2 values of individual dependent variables are examined:

- *Research model*. The results presented in Table I indicate that the model possesses considerable predictive powers. The R^2 values range from a notable 0.55 for satisfaction to a high 0.74 for value. The predictive relevance of the model is further illustrated by the fact that all three dependent LVs are associated with positive Q^2 indices. In terms of the pathways we can see that six of the hypothesised nine pathways are significant with the proposed relationships of the three focal constructs of value, satisfaction and intention are confirmed. In addition, we observe that all three antecedents are significant determinants of value, but not of satisfaction.
- *Competing model*. With R^2 values ranging from a moderate 0.34 to a high 0.69 we can conclude that the competing model also possesses considerable predictive powers (Table II). Furthermore, the predictive relevance of the model is confirmed by the positive Q^2 indices. In terms of functional relationships, the satisfaction to intention relationship is no longer supported and we also observe considerable difference in the behaviour of the six value dimensions with their antecedents and consequences. Of the former, methodology has been found to be a significant determinant of all six value dimensions, service quality of three value dimensions (i.e. emotional, functional and image), while problem identification is significant in the formation of two of the value dimensions (i.e. functional and image). As for the latter, the price dimension of value has been found to be a significant determinant of both satisfaction and intention while the social and emotional dimensions have, correspondingly, significant impact on the formation of satisfaction and intention.

Figure 2 Value as second order construct



Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

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Table I Research model – regression coefficients of hypothesised pathways and goodness of fit

Structural pathways	Standardised path coefficients	*t*-value)	R^2	Q^2
Value → satisfaction	0.462	2.31*		
Satisfaction → intention	0.317	1.69*		
Value → intention	0.500	3.11***		
Service quality → satisfaction	0.200	1.37		
Service quality → value	0.218	2.54**		
Problem identification → satisfaction	0.156	0.79		
Problem identification → value	0.287	2.06*		
Methodology → satisfaction	0.002	0.01		
Methodology → value	0.464	5.25***		
Goodness of fit and predictive relevance values				
Value			0.74	0.38
Satisfaction			0.55	0.40
Intention			0.58	0.41

Notes: $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

Conclusions and discussion

The research presented here set out to investigate issues related with conceptualisations and operationalisations of value and to re-examine the functional relationship of value with other variables, specifically to satisfaction and behavioural intention. We deal with these two objectives in turn using results obtained from a sample of UK-based clients of consultancy services.

The findings supported our claim that value is a higher order formative measure that includes both benefits (get) and sacrifices (give). In this respect, despite our critique, our study offers broad support for the treatment of value presented by Lapierre (2000) and Ulaga and Eggert (2005), and is in line with arguments put forward by a number of authors (e.g. Sheth *et al.*, 1991; Ravald and Grönroos, 1996; LeBlanc and Nguyen, 1999; Lapierre, 2000; Sweeney and Soutar, 2001).

Using a theoretically grounded research model we have tested the functional relationship between value and its antecedents and consequences. The main findings are as follows:

- The model exhibited considerable explanatory powers in terms of value (R^2 of 0.74) and its two consequences of satisfaction (R^2 of 0.55) and re-purchase intention (R^2 of 0.58).
- In terms of the hypothesised pathways, the three exogenous variables (i.e. problem identification, methodology and service quality) were found to be significant determinants of value (*H5b*, *H6b* and *H7b* are supported) but not of satisfaction (*H5a*, *H6a* and *H7a* are not supported). Of the two studies that have examined the impact of service quality on both value and satisfaction the observed behaviour of this construct is consistent with the results presented by Lapierre *et al.* (1999) but not with those by Patterson and Spreng (1997) who reported significant relationships of service quality with both value and satisfaction. As for the relationship between the three core constructs of value, satisfaction and re-purchase behaviour, the results supports all three proposed relationships (i.e. *H1* to *H3* are supported). Examination of the related studies indicates that, with the exception of Caruana *et al.* (2000), the significant value to satisfaction relationship is consistent with extant literature (i.e. Patterson and Spreng, 1997; Lapierre *et al.*, 1999; Eggert and Ulaga, 2002; Lam *et al.*, 2004). On the other hand, the value to re-purchase intention relationship supports the findings reported by Kumar and Grisaffe (2004) and Lam *et al.* (2004) but not those by Patterson and Spreng (1997) and Lapierre *et al.* (1999).
- Finally, in terms of whether satisfaction mediates the value to re-purchase intention relationship we employ the methodology proposed by Baron and Kenny (1986), i.e. we construct two models – model 1 contains value, satisfaction and re-purchase intention pathway while model 2 includes only the value to re-purchase intention pathway. We use the following two criteria in evaluating the results: examination of the behaviour of the value to re-purchase intention indicates that the value of its coefficient in model 2 (0.736) is considerably larger than in model 1 (0.516); and the effect size of satisfaction on the R^2 value of re-purchase intention is 0.09 which, using Cohen *et al.* (1990) guidelines, is considered to be small-to-medium. Collectively, these results lead us to conclude that satisfaction has, at best, only a small moderating effect on the value to re-purchase intention relationship (i.e. there is relatively little support for *H4*). In this respect our results appear at odds with those reported by Patterson and Spreng (1997), Lapierre *et al.* (1999) and to a lesser extent by Lam *et al.* (2004).

From the above we conclude that, despite exhibiting considerable explanatory powers, our results only partially clarify the current state of related knowledge. It is only the value to satisfaction relationship that appears to enjoy almost absolute support. We propose that the observed lack of consistency in terms of the behaviour of the exogenous variables (i.e. the determinants of value and satisfaction), the relationship between value and re-purchase intention and the role of satisfaction in the value to re-purchase intention relationship is due to what a number of authors refer to as the idiosyncratic nature of value (see for example Zeithaml, 1988; Bolton and Drew, 1991; Woodruff and Gardial, 1996; Grönroos, 1997). In other words we suggest that it is the contextual elements of the professional service under

Table II Competing model – regression coefficients of hypothesised pathways and goodness of fit

Structural pathways		Standardised path coefficients	*t*-value)	R^2	Q^2
Emotional →	Satisfaction	0.047	0.22		
Functional →		0.169	0.97		
Epistemic →		0.068	0.55		
Price/quality →		0.523	5.31***		
Social →		0.174	1.89*		
Image →		0.062	0.68		
Satisfaction →	Intention	0.233	1.29		
Emotional →	Intention	0.330	1.59		
Functional →		0.142	0.75		
Epistemic →		0.324	2.96**		
Price/quality →		0.301	2.06*		
Social →		0.117	1.32		
Image →		0.126	1.05		
Problem Identification →	Satisfaction	0.250	1.30		
Problem Identification →	Emotional	0.125	0.82		
	Functional	0.217	1.66*		
	Epistemic	0.213	1.11		
	Price/quality	0.106	0.54		
	Social	0.307	1.59		
	Image	0.446	3.85***		
Methodology →	Satisfaction	0.045	0.33		
Methodology →	Emotional	0.463	4.50***		
	Functional	0.519	5.37***		
	Epistemic	0.379	2.70**		
	Price/quality	0.339	1.83*		
	Social	0.458	2.73**		
	Image	0.220	2.28*		
Service quality →	Satisfaction	0.147	1.54		
Service quality →	Emotional	0.303	2.59**		
	Functional	0.194	1.85*		
	Epistemic	0.146	1.25		
	Price/quality	0.215	1.16		
	Social	0.116	0.82		
	Image	0.174	2.05*		
Goodness of fit and predictive relevance values					
Emotional				0.62	0.36
Functional				0.69	0.45
Epistemic				0.44	0.19
Price/quality				0.34	0.14
Social				0.42	0.24
Image				0.57	0.36
Satisfaction				0.68	0.54
Intention				0.64	0.38

Notes: $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

examination (Lapierre *et al.*, 1999 – engineering consultancy; Lam *et al.*, 2004 – courier service) as well as structural and market aspects of the domain (Lapierre *et al.* (1999) – Quebec based companies; Patterson and Spreng (1997) – Australian companies) that affect these relationships.

Although the above are believed to extend the value in business services debate we consider that it is the differential behaviour of value's dimensions that represents the most important contribution of this study. More specifically:

- The competing model also demonstrates considerable explanatory powers of the six value dimensions (ranging from 0.34 for price/quality to 0.69 from functional) and the constructs of satisfaction (0.68) and re-purchase intention (0.64).
- The pattern of the significance of the pathways indicates that, although analytically justified, treating value as a higher order construct leads to confounding effects of its constituent dimensions and may offer an alternative

and/or additional explanation of the above identified divergence of empirical results.

- Looking at the value antecedents, and given the type of business service under examination, it is not surprising to see that methodology has been found to have a significant impact on all the value dimensions. On the other hand, problem identification and service quality have been found to significantly impact on selected value dimensions. We refer to Woodruff (1997, p. 142) as a possible source of explanation. According to this author value should be considered as a hierarchy model where, at the bottom of the hierarchy "customers learn to think about products as bundles of specific attributes and attribute performances. When purchasing and using a product, they form desires or preferences for certain attributes based on their ability to facilitate achieving desired consequence experiences." On the strength of this we propose that problem identification and methodology relate to the lower level in Woodruff's hierarchy while service quality is located in the middle of the hierarchy of the value-producing process of the service provision. We have attempted to test this proposition by restructuring the functional relationships of the three exogenous variables to reflect the ordering or hierarchical structure as representing problem identification leading to methodology which in turn impacts on service quality. Subsequent analysis resulted in: highly significant relationships between problem identification and methodology (standardised coefficient = 0.776; t-value = 13.20^{***}) and methodology and service quality (standardised coefficient = 0.605; t-value = 6.35^{***}); and all the pathways between problem identification and the value dimensions becoming non-significant. These findings are considered to offer some support not only to the hierarchical nature but also to the means-end nature of value as suggested by Zeithaml (1988).
- Lack of support for the relationship between any of the value dimensions and satisfaction is considered to further support earlier debate regarding the importance of a direct link between value and re-purchase intention. The strength of the price/quality dimension of value is demonstrated by its significant impact on both satisfaction and intention while relational aspects of value (i.e. social) has been found to significantly impact on satisfaction and epistemic value on re-purchase intention. Given the domain, i.e. business, the behaviour of the price/quality dimension of value is expected while we refer to Grönroos (1984) in order to explain the behaviour of the social and epistemic value dimensions. More specifically, we use this author's differentiation between process/functional (how a service is delivered) and outcome/technical (what is delivered) aspects of services to posit that social value should be viewed as a process that leads to satisfaction while epistemic value is an outcome that leads to behaviour (in this case re-purchase intention).

Examination of the results provided by the two models leads us to conclude that there is need for considerable further research before a clear understanding of the nature and role of value creation in business services can be gained. Although we consider that on the balance of the evidence provided here treating value as a higher order construct may result in loss of explanatory sensitivity there is also an argument to be made that, until a robust conceptualisation of the construct and its nomological relationships can be established, and when considering the suggested idiosyncratic nature of the value construct, value as an overall evaluation of benefits/get and sacrifices/give is a legitimate avenue of enquiry.

Managerial implications

Despite the number of still unresolved issues we believe that the results presented here have several practical implications to the marketing of business or professional services. The results support the conceptualisation of emotional, functional, epistemic, price/quality, social and image as collectively comprising perceived value in a business service domain. This in turn implies that in order to engender perceptions of value, providers of business services should consider their actions in terms four main customer perceptions:

1 Outcome directed perceptions (i.e. value related to the very purpose of the business service on offer and the resultant service knowledge).
2 Relationship building perceptions (i.e. value related to inter-personal interactions and development of trust).
3 Atmosphere related perceptions (i.e. value related to feelings and risk reduction safeguards generated through association with a specific service provider).
4 Sacrifices related perceptions (i.e. whether the experience merited the financial and other associated costs incurred as part of the service experience).

Mapping their offering against the above and identifying specific actions designed to account for these facets of value are obvious ways that providers of business services can enhance customer perceptions. Until further research allows us to be more confident in our recommendations we suggest that although our results indicate that emphasis should be placed on actions that enhance perceptions of social, epistemic and price/quality values, the other identified dimensions of value (i.e. emotional, functional and image) should not be overlooked.

The lack of a weak relationship between satisfaction and re-purchase intention combined with evidence that value (or its dimensions) impact strongly on re-purchase intention leads us to suggest that, although service providers could improve customer retention by attempting to increase their level of satisfaction, their efforts will be more effective if focussed on demonstrating the way that the service provided has helped their customers to achieve their goals. In other words, we argue that emphasis should be placed on goal-based rather than consequence-based satisfaction. In addition, we propose that the observed weak impact of satisfaction on re-purchase may be the result of way that customers assess the sacrifice element of value. More specifically, if, as we have done here, sacrifice includes some relative assessment of how costs relate to benefits, then this may act as a surrogate for satisfaction and consequently emphasis should be placed not on absolute cost considerations (i.e. low price) but on how the costs relate to outcomes.

Limitations and further research

It is inevitable that our study has some limitations that confound the results and offer opportunities for further research. First, although we consider that the research domain encompasses many general characteristics of business services there is need to test the results in other domains in order to confirm their generalisability. Second, we have adopted a rather simplistic operationalisation of the service quality dimension and, as a result, we have not attempted to examine the differential behaviour of the service dimensions on those of value. A more analytical examination is needed in case there are hidden patterns between the service quality and value dimensions.

Third, although we have differentiated between the value dimensions, there is logic to model value as a third order formative variable comprising of two second order constructs that respectively represent benefits and sacrifices. Along the same lines further delineation of sacrifices into monetary and non-monetary costs may shed additional light. Fourth, we have only briefly examined alternative nomological relationships between the research constructs and our results offer strong evidence that the position of the constructs needs to be re-examined and also expanded by the addition of both determinants (e.g. trust) and outcomes (e.g. recommendation). Finally, we consider that there is urgent need to examine the impact of moderating variables, such as size or importance of service provided or risk or type of business service, on the functional relationships of value.

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Appendix. Construct items – reliability and validity indices

Problem identification (FLV)
The consulting firm made sure they thoroughly understood:
- our aims and goals; and
- the problem before commencing.

Service quality (RLV; IC = 0.931; AVE = 0.773)
The consulting firm:
- responded promptly when we contacted them;
- were reliable in meeting deadlines;
- were dependable; and
- were thoroughly professional in all they did.

Methodology (FLV)
The consulting firm used:
- the most up-to-date methodologies on the assignment;
- innovative ideas and solutions; and
- some creativity in solving our problem.

The skills of the specific consultant(s) assigned to us were of high quality.

Functional value (RLV; IC = 0.949; AVE = 0.698)
The consulting firm:
- produced results that we have been able to implement; and
- produced results that enabled us to increase our organisation's effectiveness.

Their report(s):
- allowed us to achieve company goals; and
- will help us achieve company goals.

The knowledge acquired through the exercise will allow us to gain competitive advantage.

As a result of the consultation customers are more interested in doing business with us.

We consider:
- the consultation to have represented a good investment; and
- that is was better to have the consultation than to continue as before.

Epistemic value (RLV; IC = 0.870; AVE = 0.690)
The consulting firm was able to present or deliver their findings effectively so that we fully understood them.

The consulting firm empowered us with the skills that enable us to identify and deal with similar problems for ourselves in the future.

We learned new things.

Image (RLV; IC = 0.938; AVE = 0.752)
We have heard positive things about the consulting firm we employed.

The reputation of the consulting firm has had a positive impact on our work.

The image projected by the consulting firm has positively influenced the value of the consultation work.

We believe that our customers would have positive things to say about the consulting firm.

The consulting firm we have employed, due to its global presence, has a reputation that has positively affected our business.

Emotional value (RLV; IC = 0.879; AVE = 0.708)
We enjoyed the consultation process.

We are happy to have chosen the particular consulting firm.

We believe that by applying the consulting firm's recommendations/advice we will improve the worth of our company.

Price/quality (RLV; IC = 0.964; AVE = 0.900)
Considering the price/fees paid:
- the consulting firm delivered sufficient services; and
- the price/quality ratio is good.

We believe that that the consulting firm delivered a high quality service for what we paid.

Social value (RLV; IC = 0.963; AVE = 0.928)
The consultant established good rapport with the relevant staff in our organisation.

The consultant developed a close relationship with our staff.

Satisfaction (RLV; IC = 0.965; AVE = 0.932)
Taking everything into consideration:
- We are very satisfied with our decision to employ the particular consulting firm.
- We have been very satisfied with what we have received from the specific consulting firm during the course of the assignment/consultation.

Intention
If my organisation had a similar type of problem in the near future we would use the same consulting firm.

Table AI Correlations

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Problem Id. [1]	–										
Methodology [2]	0.748	–									
Service qual. [3]	0.602	0.570	*0.879*								
Satisfaction [4]	0.631	0.603	0.597	*0.965*							
Intention [5]	0.573	0.674	0.632	0.674	–						
Functional [6]	0.731	0.789	0.630	0.667	0.685	*0.835*					
Epistemic [7]	0.582	0.628	0.491	0.552	0.491	0.755	*0.830*				
Emotional [8]	0.646	0.716	0.644	0.604	0.681	0.809	0.776	*0.841*			
Price/quality [9]	0.502	0.560	0.480	0.737	0.670	0.642	0.625	0.652	*0.948*		
Social [10]	0.585	0.615	0.341	0.323	0.500	0.604	0.479	0.596	0.377	*0.963*	
Image [11]	0.717	0.652	0.574	0.551	0.547	0.789	0.724	0.672	0.448	0.511	*0.867*

Notes: Diagonal (italic) elements represent the square roots of AVE of RLVs; Off-diagonal elements are the correlations of the respective constructs

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Segment differences in the asymmetric effects of service quality on business customer relationships

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Abstract

Purpose – The purpose of this article is to explore the possible negative asymmetric effects in the impact of service quality on the satisfaction and retention of different customer segments in a professional business services context. Negative asymmetry means that a lower than average service quality evaluation has a stronger effect on customer satisfaction and retention than a higher than average evaluation.

Design/methodology/approach – The article provides a survey of 124 business customers of a Midwestern radio advertising services provider, preceded by nine in-depth interviews with account reps of the advertising firm and two focus groups with business customers.

Findings – Along the service quality dimensions – customer satisfaction – retention chain, there are significant negative asymmetric effects and the mediating role of satisfaction varies widely. There are important differences across customer groups: service outcomes are most important determinants of customer satisfaction for large and relatively newer accounts; functional quality dimensions (empathy) are most important factors for small and relatively mature accounts.

Research limitations/implications – Surveying customers of one organization in one industry reduces the generalizability of the findings. The study employed only two segmentation variables, while many other variables could be investigated. The focus is on the asymmetric effects of service quality; other factors, such as costs, were not considered.

Practical implications – Managers should invest resources in improving low performance in the service quality dimensions with strongest impact on customer satisfaction and highest negative asymmetry. The identified segment differences suggest the need to achieve strong results for large accounts and relatively new accounts. The customer relationship is most important for small accounts and relatively mature accounts. Maintaining service reliability is critical for small and new account retention.

Originality/value – This study is a first effort to explore the differences in effects across service quality dimensions and customer segments in a professional business service context. The findings indicate that aggregating customers and the service quality measurement can offer misleading information to managers.

Keywords Customer services quality, Business-to-business marketing

Paper type Research paper

An executive summary for managers and executive readers can be found at the end of this issue.

The management of customer satisfaction and its determinants, attribute-level performance, and outcomes, customer retention and firm profitability, has become a strategic imperative for most firms, especially in services (e.g. Anderson and Mittal, 2000; Bolton, 1998; Mittal *et al.*, 1998; Rust and Oliver, 1994). Only recently has the literature investigated the exact nature of the links between attribute-level performance and consumers' overall satisfaction and repurchase intentions (e.g. Kumar, 2002; Mittal *et al.*, 1999; Mittal *et al.*, 1998; White and Schneider, 2000). These studies have identified significant asymmetric effects that the literature has largely ignored. Asymmetric effect means that a lower than average attribute performance evaluation has a stronger or weaker effect on customer satisfaction and retention than a higher than average evaluation. Still, in spite of the call to replace the "first-generation" view of the satisfaction-profit chain as linear and symmetric with a "second-generation" perspective that recognizes the greater complexities in these links (Zeithaml, 2000), the extant literature has shortcomings in at least three areas.

First, there is a need for a more theoretical approach to the development of a typology addressing why the magnitude and direction of asymmetry is different for different product

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attributes (Mittal *et al.*, 1998). The literature documents situations in which gains on an attribute outweigh losses, leading to a positive asymmetry. Such attributes are called motivating, satisfaction enhancing, or utility enhancing attributes. For example, if customers see an improvement in the visual aspect of packaging, their overall satisfaction with the product increases significantly; however a drop in the visual aspect of packaging would have little impact on their overall satisfaction. In contrast, if losses outweigh gains there is a negative asymmetry, and the respective attribute is called a hygiene, satisfaction preserving, or utility preserving attribute (e.g. Herzberg, 1968; Mittal *et al.*, 1998; Sirdeshmukh *et al.*, 2002). A typical example is that a drop in reliability lowers a customer's satisfaction with a service provider significantly; however, an equivalent increase in service reliability would have little impact on customer's satisfaction. Further, while attribute performance is theorized to impact overall satisfaction, which in turn determines customer retention, it has been noted that the mediating effect of satisfaction differs across attributes (Mittal *et al.*, 1998). This issue is important because if firms improve performance on relatively strong drivers of overall satisfaction but not repurchase intent, then they may observe a flattening of the satisfaction-intent relationship (Kumar, 2002).

Second, while most studies aggregate customers, it is imperative to consider customer segments separately. Unobserved heterogeneity is a problem in interpreting results because aggregation may create effects that do not exist in any segment or may wash out effects that do exist (Rust *et al.*, 1995). Failure to consider segment-specific differences in the investigation of the strength and asymmetry of the different attributes' effects on customer satisfaction and retention may lead a firm to optimize performance on the wrong attribute for a given segment (Anderson and Mittal, 2000). While Rust *et al.* (1995) advise managers to "consider each segment individually," the academic research offers very little theoretical insight into why there could be systematic differences in the nature and strength of attribute effects across certain segments.

Third, while most studies of attribute performance consider at least some service aspects in the product offering, the context of investigation is predominantly consumer goods and services, while the business-to-business (B2B) service sector is largely ignored. A particularly important but neglected area is professional business services (Lapierre *et al.*, 1999). Professional B2B service providers (e.g. management consulting, advertising, legal, information technology, financial planning) typically conduct larger transactions with fewer customers than B2C services. These services are often knowledge-intensive, technically complex and sophisticated, and their performance is intrinsically difficult for clients to evaluate (Patterson *et al.*, 1997). In professional services, the provider acts as an agent for customers who are typically less knowledgeable and therefore, more dependent upon the provider than in other contexts (Mills, 1990; Sharma, 1997).

In an effort to help address these gaps in the literature, this paper explores segment differences in the asymmetric effects of service quality on the overall satisfaction and relationship continuance intentions of business customers who buy advertising services. The following section details the theoretical foundation for the study, followed by a series of hypotheses pertaining to differences between customer segments based on account size and length of relationship with the service provider. Further, the paper reports the results of an exploratory study on the business customers of a Midwestern radio advertising services provider. The paper concludes with a series of theoretical and managerial implications.

Theoretical background

Asymmetric effects in customer relationship maintenance

Customers have a variety of voluntary and involuntary reasons to maintain relationships with service providers (e.g. Bendapudi and Berry, 1997). It is widely accepted that customer satisfaction is a major determinant of customer loyalty or retention. Consistent with other studies on the consumption system (e.g. Mittal *et al.*, 1999), this paper will investigate the effects of attribute-level performance, here represented by the different service quality dimensions, on customers' overall satisfaction and relationship continuance intentions (i.e. customers' repurchase intent and expectations that the relationship will be long-term; Kumar *et al.*, 1995).

While most research in services assumes linear relationships and symmetric effects of positive and negative service evaluations, some nonlinear effects of service quality have been identified. For example, Zeithaml *et al.* (1996) found a flatter response function below the tolerance zone than within and above it; Rust *et al.* (1995) found a non-linear impact of satisfaction level on repeat purchase; and White and Schneider (2000) found that different service quality dimensions impact the low end and the high end of customer commitment to a service provider. These findings, in the services literature, are consistent with findings in the more general product consumption literature, in which recent studies propose asymmetric effects of positive and negative evaluations of attribute-based performance on overall satisfaction and behavioral intentions (e.g. Mittal *et al.*, 1998; Mittal *et al.*, 1999; Sirdeshmukh *et al.*, 2002).

Asymmetric effects are conceptualized as: one unit of negative performance in a product attribute or service dimension will have a different (greater or smaller) effect on overall satisfaction or repurchase intentions than a corresponding unit of positive performance. This research has primarily argued and found support for negative asymmetric effects. This means that a negative evaluation has a stronger effect on customer satisfaction than a positive evaluation of the same magnitude. For example, on a scale from 1 to 7, if service reliability drops from 4 to 3, the impact on customer satisfaction is larger than if the reliability rating increases from 4 to 5. There are two main theoretical bases for the presence of negativity effects in customer satisfaction. The first is prospect theory, which states that losses loom larger than gains (Kahneman and Tversky, 1979). Psychologically, a one-unit loss is weighted more than an equal amount of gain. In the context of customer retention, negative outcomes on attribute performance should have more impact on satisfaction than equivalent positive outcomes. The second theoretical base consists of the distinctive coding of negative versus positive events in memory (Wyer and Gordon, 1982). Customers' overall evaluations vary on the basis of the accessibility to these events. Negative information is more perceptually salient and elicits a stronger response than positive information (Peeters and Czapinski, 1990). Therefore, with regard to customer satisfaction, information on service attributes/experiences with negative performance should have a greater impact on the cumulative satisfaction judgment.

A few studies that investigated asymmetric effects of attribute performance found some positivity effects – i.e. a stronger effect of a positive evaluation than of a negative evaluation of the same magnitude. For example Mittal *et al.* (1998) found a negativity effect on customers' satisfaction with cars for customers' evaluation of transmission and brakes but a positivity effect for interior roominess. Sirdeshmukh *et al.* (2002) proposed that asymmetric effects are contingent upon the nature of the attribute or dimension evaluated. Negative performance on hygiene (or utility preserving) factors has a stronger effect on satisfaction than positive performance (the negativity effect). However, for motivators (or utility-enhancing factors), a stronger effect occurs for positive performance than negative performance (the positivity effect). In general, empirical findings suggest that hygiene factors tend to be more instrumental in nature (attributes that deliver core functional benefits such as reliability) while motivators tend to be more expressive (attributes that deliver psychological benefits such as visual delight) (e.g. Johnston, 1995; Mittal *et al.*, 1998). However, while consumers make purchases for both functional and emotional reasons, business customers are much more inclined to view the purchase of products and services as a means to achieve rational goals. Therefore, when businesses buy professional services, it is likely that the vast majority of the attributes of an exchange serve functional purposes (Lapierre, 1997). As a result, in this context, any asymmetric effects would be of a negative nature. It is expected that the different quality dimensions will have different effects on customer relationship maintenance and that some of these effects will display diminishing returns for increased quality.

Service quality dimensions

While there is general consensus that service quality is a multi-dimensional construct, empirical studies continue to conceptualize and identify different dimensional structures for service quality in different contexts (see Brady and Cronin, 2001). The most widely used multi-dimensional model, especially in consumer markets, is SERVQUAL, which conceptualizes service quality as having five dimensions (Parasuraman *et al.*, 1988). Alternatively, the model proposed by Gronroos (1984) conceptualizes service quality along two global dimensions: technical (i.e. service product, primarily determined by technical procedures) and functional (i.e. service delivery process, primarily influenced by the interpersonal interaction). More recently, multilevel models combine the two approaches and identify the service product and the service delivery process as primary dimensions of service quality (Rust and Oliver, 1994), which are made up of different subdimensions (Brady and Cronin, 2001).

Organizations purchase services for the utility or value created by the service outcome. For example, businesses buy advertising services hoping that the service outcome will result in sales growth or increased brand awareness. In an analysis of the meaning of value in professional B2B services, Lapierre (1997) identifies "value-in-use" as the organizational customer's outcomes from the service, such as better financial performance or improved strategic decisions. However, the process of service delivery is important as well, because "value-in-exchange" is derived from the technical quality of the service provider's procedures (e.g. schedule reliability, technical expertise) and from non-technical aspects of the service delivery, such as service employees' responsiveness, trustworthiness, and relationalism (Lapierre, 1997). In a similar manner, Szmigin (1993) proposes a B2B service quality model consisting of three primary dimensions: service outcome, technical quality of service procedures ("hard" features) and the functional quality of human interactions ("soft" features). Accordingly, we propose a model of service quality consisting of three primary dimensions: service outcome (results for the client's business), technical quality (e.g. reliability of technical service delivery) and functional quality (e.g. rep's responsiveness, empathy and assurance).

Segment differences in the asymmetric effects of service quality

Customers with different characteristics place varying levels of importance on attribute-level performance because they have different needs, previous experience with the service or the service provider, and/or tolerance levels. A number of empirical studies have investigated segment differences in services (e.g. Pitt *et al.*, 1996; Rangan *et al.*, 1992; van der Walt *et al.*, 1994). While desired service benefits and service expectations are obviously important among the large number of potential segmentation variables, managerial practice notes that it is often more useful to segment the market on easily observable characteristics, which are highly associated with differences in needs and behaviors. Two such variables are account size and relationship length.

Account size

From the provider's perspective, account size is an important classification variable because larger clients generate more revenues. However, there are also likely to be systematic differences in the service needs and expectations of large and small accounts, which would lead them to place different weights on the service dimensions.

An important theoretical rationale for the differences between small and large accounts' relationships with a professional service provider is due to the balance/imbalance of power. The situations in which service organizations are hired by businesses to perform specified technical tasks can be viewed as principal-agent exchanges (Mills, 1990). Such professional service exchanges pose special agency problems of vulnerability and control for the principal, i.e. the service client, because the classical problems created by information asymmetry are compounded by knowledge asymmetry (Sharma, 1997). As noted by Sharma, less knowledgeable clients have difficulty either monitoring the provider's behavior, or evaluating the service outcome.

However, the professional agents are less likely to behave opportunistically if the clients have alternative access to the relevant knowledge base (e.g. a firm might employ a media/advertising manager who coordinates the work of advertising agencies) (Sharma, 1997). Large firms are more likely to have access to such knowledge, either by having internalized knowledge (specialized staff), or by working with multiple advertising agencies. Therefore, as compared to small accounts, large accounts may not only be better able to evaluate the exact nature of the service outcome, but they are also less vulnerable to the service provider's behavior during the service delivery process.

Limited evidence provided by the few empirical studies that have investigated segment differences in services tend to support this argument. For example, de Bretani (1995) found that small firms tend to have a longer-term and more responsive company-client relationship and the company executives tend to have a more intimate understanding of business partners. Rangan *et al.* (1992) found four purchase-behavior based segments which were highly related to account size: small accounts tend to be relationship buyers and value the partnership with the suppliers more than price or service concessions; in contrast, large accounts tend to be more transactional/bargain hunters and put pressure on getting both low price and service concessions.

In conclusion, it is expected that the service outcome would be a more salient, utility preserving factor for large accounts (i.e. large customers are particularly sensitive to losses in service results). In contrast, the technical and functional quality of the service provision process are likely to be more salient, utility preserving factors for small accounts. This means that the respective service quality dimensions have a stronger positive effect on customers' satisfaction and relationship continuance intentions than the other dimensions. In addition, these effects are likely to display negative asymmetries (i.e. a loss on the respective dimension would loom larger than a gain). Finally, as argued before, while it is expected that the effect of service quality evaluations on relationship continuance intentions is at least partially mediated by overall satisfaction, neither the theory nor the previous findings provide any indication as to the relative degree of mediation across the different service quality dimensions. Therefore, the issue of mediation remains to be explored empirically. In summary:

H1. For large accounts, service outcome will have a stronger positive impact, with a stronger negative asymmetry, on customer satisfaction and relationship continuance intentions, than for small accounts.

H2. For small accounts, technical quality will have a stronger positive impact, with a stronger negative asymmetry, on customer satisfaction and relationship continuance intentions, than for large accounts.

H3. For small accounts, functional quality will have a stronger positive impact, with a stronger negative asymmetry, on customer satisfaction and relationship continuance intentions, than for large accounts.

Duration of account relationship

Another practical segmentation variable for service providers, which is extensively used by managers, is the duration of the relationship with the account. As it is well known, firms often offer different deals and treatment to older accounts as compared to new accounts. However, it is less clear how the needs of short-term versus long-term customers differ. More recent literature has suggested that relationships between attribute-level performance, satisfaction, and behavioral intentions are not static. As the consumption of the products and services unfolds, attribute salience, and therefore weights in determining overall satisfaction, shift over time (Anderson and Mittal, 2000; Gounaris and Venetis, 2002; Mittal and Katrichis, 2000; Mittal *et al.*, 1999). Still, it is unclear how and why the weights and asymmetric effects of the different service quality dimensions differ between customers with relatively new versus more mature service provider relationships.

There are several theoretical reasons why attribute salience varies over time. From an agency perspective, it is argued that repeat contact and investment in assets specific to the exchange, which is likely to happen in longer-term relationships, increases the amount of information that the principal has about the agent and decreases the agent's likelihood to behave opportunistically (Sharma, 1997). From a relationship cycle perspective (e.g. Wilson, 1995) it is argued that relationship related constructs have an active phase where they are the center of the relationship development process and a latent phase where they are still important but not under active consideration. In general, as time passes and issues are negotiated and resolved, attributes tend to migrate from satisfaction enhancement to satisfaction maintenance (i.e. negative asymmetry; Mittal *et al.*, 1999). It is easier to surprise negatively a customer with a drop in performance than to surprise positively a customer with an improvement in performance.

These theoretical premises indicate that in the context of professional B2B services, providers' performance along the dimensions of service outcome and technical quality of the service delivery process are likely to be more salient and more critical in the case of recently opened accounts. Indeed, the main reason to approach an advertising agency is to achieve results for the firm (e.g. consumer exposure, traffic, revenues). Further, in the beginning of a B2B relationship it is necessary to negotiate the policies and procedures of service delivery (e.g. scheduling and billing) which represent technical quality. As customers have increased interactions with reps, they expect higher levels of functional quality (e.g. rep's empathy, individualized attention, customized interaction), it is likely that this service quality dimension becomes a utility maintenance attribute (see Mittal *et al.*, 1999).

The idiosyncratic findings reported in the literature, to date, provide an incomplete and often contradictory picture of the time differences in the attribute-level performance and overall satisfaction link. Still, some findings provide support for the theory advanced here. For example, Mittal *et al.* (1999) found that, as customers' relationship with a mutual fund company matures, trust and confidence (equivalent with functional quality here) become satisfaction maintenance attributes. They also found that for car buyers, as time passed, the weight of the functional service quality (honesty) went up, while the weight for the technical quality (wait before write-up; vehicle ready when promised) went down.

In conclusion, it is expected that the service outcome and the technical quality of the service provision process are more salient, utility preserving factors for the newer accounts, while the functional quality of the service provision process is likely to be a more salient, utility preserving factor for mature accounts. As in the case of account size, it is expected that overall satisfaction will at least partially mediate the effects of the service quality dimensions on relationship continuance intentions, but it is impossible to hypothesize *a priori* to what degree this mediation might differ across dimensions. Hence, in formal terms it is hypothesized that:

H4. For relatively newer accounts, service outcome will have a stronger positive impact, with a stronger negative asymmetry, on customer satisfaction and relationship continuance intentions, than for mature accounts.

H5. For relatively newer accounts, technical quality will have a stronger positive impact, with a stronger negative asymmetry, on customer satisfaction and relationship continuance intentions, than for mature accounts.

H6. For mature accounts, functional quality will have a stronger positive impact, with a stronger negative asymmetry, on customer satisfaction and relationship continuance intentions, than for relatively newer accounts.

Methodology

The advertising industry was selected as the context for this study as it is uniquely suited for studying professional business services because, due to the specialized knowledge requirements, such as creative or media management, most organizations hire professional advertising firms to fulfill at least part of their advertising needs. In addition, advertising requires a significant amount of interaction with the client and service customization, which is conducive to service provider – client relationship development (Michell, 1988). A study was performed with the clients of a radio advertising agency in a medium-sized, Midwest city. The agency's management identified 562 businesses that advertise on one or more of four local radio stations for which the agency produces and sells advertising. Each radio station has its own account reps, advertising production and air personnel. Therefore, from the client's perspective, the radio station is the service provider.

The first stage of the study consisted of qualitative research, aimed at developing a valid multi-attribute service quality measure for the specific context of this industry. The qualitative research consisted of nine 30-minute interviews with sales people (account reps) and two focus groups with customers (with 12 small and ten large accounts respectively). The results of the interviews and focus groups indicated that business customers' top priorities in advertising services are: increased revenue or customer response (e.g. traffic) from advertising; reaching the right demographics; good ad production quality; and good value (ROI) of the advertising spots. Further the clients indicated that the most desired rep attributes are professionalism (homework done, appointments kept); creativity; honesty (honest representation of product; fair treatment on rates); understanding client business' needs (genuine interest and tailoring advertising services to the client's business needs); and follow-through (not over-promising and then under-delivering). Overall, the results of the qualitative research suggest that business clients perceive the service outcome and the technical and functional aspects of the service delivery as distinct dimensions.

The qualitative research was used to develop a business client survey. Questionnaires and cover letters were mailed to key informants who were responsible for making advertising decisions in their business. As an incentive, the agency made a charitable donation for each returned questionnaire and invited respondents to participate in a drawing. Three weeks after the first mailing, a second questionnaire was mailed to non-respondents. In total, 124 usable questionnaires were received for a net response rate of 22 percent. The potential for non-response bias was investigated through comparisons of early and late responses and comparisons of the respondents' profiles with that of the non-responding businesses (e.g. account size, length of relationship, volume of advertising). No significant differences were found.

Sample profile

A profile of the 124 respondents indicated that 55 percent were owners, presidents or general managers, 20 percent were vice presidents, managers or directors, 16 percent were marketing, sales, or advertising directors, with the remainder holding a large variety of titles. A total of 65 percent of the respondents had a college degree and 52 percent were female. A profile of the businesses indicated that most were retailing firms (50 percent) and non-food service firms (36 percent). A total of 45 percent of the responding firms had annual sales over $1,000,000 and 44 percent had sales of less than $500,000. About 37 percent of respondents allocated less than 10 percent of their advertising and promotion budget to radio advertising, and 32 percent allocated more than 40 percent of the promotion budget to radio advertising. Some clients advertised on more than one station. Therefore, respondents were instructed to answer the survey by focusing on the radio station to which they allocated the largest advertising budget. The responses were almost evenly distributed across the four stations.

In order to test the hypothesized differences between customer segments, the accounts were split into groups based on the information provided by the management of the advertising agency. Of the 124 accounts in the final sample, 53 (43 percent of the total sample) were classified by the agency as small accounts, 29 (or 23 percent) were classified as medium accounts, and the remaining 42 (34 percent) were classified as large accounts. The medium sized accounts were dropped from the analysis of large vs small accounts. The length of time ranged between 1 and 13 years for the 124 accounts, with a median of three years. Based on the frequency distribution and consultation with management, the 53 accounts with a business relationship of two years or less were classified as relatively new accounts (42 percent of the sample) and the 58 accounts with a business relationship of four years or more were classified as mature accounts (46 percent of the sample). The 13 accounts with a relationship length of three years were dropped from the analysis of newer vs. mature accounts. A chi-square test indicated that 64 percent of the newer accounts were small while 57 percent of the mature accounts were large. While the test suggests a significant relationship between length of time and account size ($\chi^2 = 29.05$; $p < 0.01$), the percentages indicate that the two segmentation variables are sufficiently distinct for practical purposes.

Measurement

Service quality was assessed with a 20-item, seven-point scale, multi-attribute measure. The items, generated from the results of the qualitative research and compared to previous scales (Cronin and Taylor, 1992; Parasuraman *et al.*, 1988), attempted to capture the primary service quality dimensions proposed in the theoretical framework: service outcome, technical quality (reliability) and functional quality (responsiveness, assurance, and empathy). An exploratory factor analysis indicated that the 20 items load on four factors: service outcome, reliability (technical quality), and rep assurance and empathy (two functional quality dimensions). The CFA reported in Table I, indicated an adequate fit to the data, after dropping five items from the initial scale due to cross-loadings and low factor loadings. All the remaining 16 items have factor loading coefficients larger than 0.7. All four service quality dimensions demonstrated

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Table I Confirmatory factor analysis for service quality dimensions

Factor items	Factor loadings
Service outcome (results)	
Station reaches wanted consumers	0.87
Station has strong, positive market visibility	0.78
Station gives good value for advertising dollar	0.74
I can repeatedly reach my target market with this station	0.85
Reliability (technical quality dimension)	
Station airs ads as scheduled	0.74
Station bills accurately	0.77
I receive bills in timely manner	0.83
I am able to review ad copy in advance of airing, when I wish	0.71
Rep assurance (functional quality dimension)	
Rep is able to assist me in evaluating effectiveness of my ads	0.94
Rep would only recommend advertising in my best interest	0.80
Rep shows me how similar companies advertise	0.81
Rep helps me develop effective ad messages	0.91
Rep empathy (functional quality dimension)	
Rep has good understanding of my business	0.87
Rep takes time to get to know me as a person	0.90
Rep has a good feeling for how often I want to be contacted	0.87
I feel comfortable sharing company info with my rep	0.80

Notes: Model fit: $n = 113$, $\chi^2 = 202.92$; df = 98; χ^2/df=2.07; RMSEA = 0.09; Std RMR = 0.07; CFI = 0.91; NNFI = 0.9; GFI = 0.82

adequate reliability (Cronbach reliability coefficients between 0.84 and 0.92 (see Table II). The service quality measure was followed by two seven-point scale measures for overall satisfaction ("overall, I am satisfied with the radio station") and relationship continuance intentions ("I expect our relationship with the radio station to continue for a long time"). Single-item overall satisfaction and relationship continuance intentions measures are frequently used in services studies and considered particularly suitable in B2B contexts, because the cost of additional items is not compensated by the incremental information added by other items (Drolet and Morrison, 2001; Lapierre *et al.*, 1999; Hallowell, 1996; Mittal *et al.*, 1998).

Analysis

In order to test for asymmetric effects, a procedure described and used by Sirdeshmukh *et al.* (2002) was employed. Four new binary variables were created, one for each service quality dimension, representing "1" if the corresponding standardized service quality dimension's score was positive and "0" if the score was negative. The four dummy variables were multiplied with the corresponding service quality dimensions and entered in the regressions as independent variables. Hence, the regression for overall satisfaction is:

$$\begin{aligned}\text{Satisfaction} = {} & b0 + b1SQ1 + b2SQ2 + b3SQ3 + b4SQ4 \\ & + b5SQ1D1 + b6SQ2D2 + b7SQ3D3 \\ & + b8SQ4D4 + e\end{aligned}$$

in which SQ1-SQ4 are the average scores on the four service quality dimensions and D1 to D4 are the dummy variables. An asymmetric effect for a service quality dimension would be indicated by a significant corresponding coefficient estimate. For example, if the estimate for coefficient b5 is statistically significant, then SQ1 has an asymmetric effect on satisfaction. A negative coefficient indicates a negative asymmetry.

In order to test the mediating effect of satisfaction on relationship continuance intentions, it is necessary to verify the following criteria (Baron and Kenny, 1986):

- the independent variables (the four service quality dimensions) must affect the mediating variable (overall satisfaction);
- the independent variables must affect the dependent variable (relationship continuance intentions); and
- when the dependent variable is regressed upon both the independent variables and the mediator, the effects of the independent variables are significantly lower than when the dependent variable is regressed only upon the independent variables.

Therefore, in order to test the hypothesized relationships, three regressions were performed for each of the four groups (small versus large accounts and new versus mature accounts).

Results

A comparison of small versus large accounts' evaluations of the four service quality dimensions, overall satisfaction and relationship continuance intentions, shows no significant differences in means (all *t*-tests rendered non-significant results). However, the three regressions which test the asymmetric impact of service quality on small and large accounts, reported in Table III, indicate that the four service quality dimensions have very different effects on customers' satisfaction. For large accounts, the only statistically significant driver of satisfaction is service outcome ($t = 6.6$, $p < 0.001$) which has a strong negative asymmetry ($t = -2.8$,

Table II Correlation matrix

	Mean	Std. dev.	Cronbach coeff. alpha	1	2	3	4	5
1. Service outcome	5.33	0.97	0.87	–				
2. Reliability	6.01	0.84	0.84	0.38	–			
3. Assurance	5.12	1.41	0.92	0.40	0.33	–		
4. Empathy	5.71	1.24	0.91	0.38	0.43	0.67	–	
5. Overall satisfaction	5.69	1.14	–	0.64	0.37	0.66	0.58	–
6. Relationship cont. intentions	5.59	1.40	–	0.62	0.38	0.65	0.60	0.82

Note: all correlations coefficients are statistically significant at $p < 0.01$

Table III Differences between small and large accounts in the asymmetric impact of service quality dimensions

	Small accounts						Large accounts					
	Overall satisfaction		Relationship continuance intentions (1)		Relationship continuance intentions (2)		Overall satisfaction		Relationship continuance intentions (1)		Relationship continuance intentions (2)	
	β	*t*-value	β	*t*-value	β	*t*-value	β	*t*-value	β	*t*-value	β	*t*-value
Outcome	0.01	0.01	0.18	1.1	0.17	1.2	1.03^{***}	6.6^{***}	1.00^{***}	5.6^{***}	0.33	1.4
Δ positive outcome[a]	0.32	1.6	0.08	0.04	−0.08	−0.5	-0.46^{***}	-2.8^{***}	-0.45^{**}	-2.4^{**}	−0.15	−0.8
Reliability	−0.14	−0.93	0.36^{**}	2.6^{**}	0.42^{***}	3.5^{***}	−0.12	−0.7	−2.25	−1.4	−0.17	−1.1
Δ positive reliability	0.23	1.3	−0.12	−0.8	-0.24^{*}	-1.8^{*}	0.08	0.5	0.14	0.78	0.10	0.6
Assurance	0.50^{**}	2.4^{**}	0.47^{**}	2.5^{**}	0.24	1.5	0.16	0.94	0.16	0.8	0.06	0.33
Δ positive assurance	0.16	0.8	0.11	0.6	0.03	0.2	0.20	1.2	0.08	0.38	−0.06	−0.3
Empathy	0.50^{***}	2.8^{***}	0.36^{**}	2.4^{**}	0.13	0.92	0.09	0.6	17	0.9	0.11	0.7
Δ positive empathy	-0.68^{***}	-3.4^{***}	-0.37^{**}	-2.1^{**}	−0.04	−0.3	−0.05	−0.3	0.07	0.4	0.11	0.7
Overall satisfaction					0.47^{***}	4.1^{***}					0.65^{***}	3.6^{***}
Model statistics	$n = 50$		$n = 49$		$n = 49$		$n = 37$		$n = 37$		$n = 37$	
	$F = 10.4^{***}$		$F = 14.1^{***}$		$F = 19.3^{***}$		$F = 14.7^{***}$		$F = 9.84^{***}$		$F = 13.72^{***}$	
	$R^2 = 0.66$		$R^2 = 0.73$		$R^2 = 0.81$		$R^2 = 0.80$		$R^2 = 0.73$		$R^2 = 0.82$	

Notes: Statistically significant coefficients (two-tailed test): $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$; [a]Significant negative coefficients indicate negative asymmetry for the corresponding service quality dimensions

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$p < 0.01$). This means that large accounts are primarily concerned with getting results from advertising. It is noteworthy that 80 percent of the variance in their overall satisfaction with the service provider is explained by the service outcome. Further, the negative asymmetry means that if large accounts experience a loss in advertising results, their overall satisfaction will be impacted more than if they experience a similar gain in advertising results. In other words, achieving results is a very important utility preserving attribute for large accounts. In addition, service outcome has a similar effect on relationship continuance intentions ($t = 5.6$, $p < 0.001$ with a negative asymmetry, $t = -2.4$, $p < 0.01$). However, this effect is completely mediated by overall satisfaction. As it can be observed, the t-value drops to a non significant level after overall satisfaction is brought into the regression ($t = 3.6$, $p < 0.01$). This means that delivering a consistently high level of advertising results to large accounts is critical for keeping them satisfied, which in turn determines their level of loyalty to the service provider. In contrast, it seems that small accounts are not as influenced by the service outcome, which failed to show a significant effect on either satisfaction or relationship continuance intentions. Hence, overall, *H1* is supported.

In contrast, reliability, which is the technical service quality dimension, has a significant positive direct impact on small accounts' relationship continuance intentions ($t = 3.5$, $p < 0.01$) with a negative asymmetric effect ($t = -1.8$, $p < 0.1$). This effect is not mediated by customers' overall satisfaction. In fact, reliability seems not to play a significant role in determining satisfaction. Instead, it has an additional effect on relationship continuance intentions, after the effect of overall satisfaction has been accounted for. Interestingly, as noted before, reliability has no significant effect in the case of large accounts. This means that, for small accounts, satisfaction and relationship continuance intentions are at least partially determined by different aspects of service quality. Further, while overall satisfaction remains the most important factor in retaining all type of customers, small customers tend to be particularly sensitive to reliability issues, which act as a utility preserving factor, when considering repurchasing from the same service provider. Hence *H2* is partially supported.

Finally, as proposed in the third hypothesis, functional service quality seems to have a significant effect on small accounts but not on large accounts. More specifically, small customers' overall satisfaction is positively impacted by rep's assurance ($t = 2.4$, $p < 0.05$) and empathy ($t = 2.8$, $p < 0.01$). While assurance seems to have a symmetrical effect, empathy seems to have a fairly strong negative asymmetry ($t = -3.4$, $p < 0.01$) which suggests that small accounts tend to view rep's understanding and caring behavior as an important utility preserving factor. The same pattern of effects is displayed for relationship continuance intentions. However, the effects of both assurance and empathy on relationship continuance intentions are completely mediated by overall satisfaction (as seen in Table III, the respective t-values of 2.5 and 2.4, both significant at $p < 0.05$, drop to non significant levels when overall satisfaction is brought into the regression). This means that while large accounts seem to be less sensitive to the quality of reps' interaction, small accounts' satisfaction and, in turn, repurchase intentions, are significantly determined by rep's assuring and nurturing behavior. Therefore, *H3* is supported.

As in the case of account size, new and mature accounts do not differ in terms of service quality perceptions, satisfaction or relationship continuance intentions (all t-tests for mean comparisons are not significant). However, important differences are found in the impact of service quality. As reported in Table IV, service outcome has a significant positive impact on the newer accounts' overall satisfaction ($t = 2.5$, $p < 0.05$) and relationship continuance intentions ($t = 2.7$, $p < 0.01$). It is important to note that both these effects are symmetrical and that the impact on relationship continuance intentions is, in fact, completely mediated by satisfaction. In contrast, service outcome seems to not have any significant effects in the case of mature accounts. These findings suggest that customers with mature relationships may be accustomed to receiving a certain level of results from the advertising services provider and therefore are only slightly affected by perceptions of service outcome. In contrast, new customers seem to be particularly sensitive to the service outcome, which provides support for *H4*.

Further, the reliability of the service provision process seems to be a significant factor in retaining the new customers. As indicated in Table IV, in the case of newer accounts, reliability has no effect on satisfaction but it has a positive influence on relationship continuance intentions ($t = 1.9$, $p < 0.1$). In addition, after controlling for overall satisfaction, the effect of reliability on relationship continuance intentions is even stronger ($t = 3.4$, $p < 0.001$) and it displays a significant negative asymmetry ($t = -3.5$, $p < 0.001$). In other words, among customers with similar levels of overall satisfaction with the service provider, new customers are more likely to end the relationship when receiving lower than average service reliability, than they are likely to continue the relationship when they receive higher than average service reliability. Thus, reliability is an important hygiene factor in retaining the new accounts, but it seems to be an indifferent factor for mature accounts. These findings provide support for *H5*.

Finally, functional quality seems to be important, although in different ways, for both newer and mature accounts. Consistent with *H6*, in the case of mature accounts, empathy has a strong positive impact ($t = 4.7$, $p < 0.001$) with negative asymmetry ($t = -1.9$, $p < 0.1$) on customers' overall satisfaction. In addition, empathy has a totally mediated effect, through satisfaction, on relationship continuance intentions ($t = 3.2$, $p < 0.01$, drops to a non significant level when satisfaction is also regressed on relationship continuance intentions). In fact, in the case of mature accounts, empathy is the only service quality dimension which has a significant impact on customers' satisfaction and intentions to continue the relationship with the service provider. In contrast, for newer accounts, all dimensions of service quality play a role in customers' satisfaction and retention. In addition to service outcome and reliability, it seems that assurance has an important positive effect on new customers' overall satisfaction ($t = 2.8$, $p < 0.01$) and empathy has a significant direct positive effect, independent from that of satisfaction, on relationship continuance intentions ($t = 2.4$, $p < 0.05$). Therefore, the support for *H6* is inconclusive.

Discussion

The reported findings suggest that in the context of professional B2B services, it is appropriate to conceptualize

Table IV Differences between accounts with relatively newer versus mature relationships in the asymmetric impact of service quality dimensions

	Relatively newer accounts (two years or less)						Relatively mature accounts (four years or more)					
	Overall satisfaction		Relationship continuance intentions (1)		Relationship continuance intentions (2)		Overall satisfaction		Relationship continuance intentions (1)		Relationship continuance intentions (2)	
	β	*t*-value	β	*t*-value	β	*t*-value	β	*t*-value	β	*t*-value	β	*t*-value
Outcome	0.44**	2.5**	0.50***	2.7***	0.19	1.3	0.30	1.3	0.36	1.4	0.18	0.8
Δ positive outcome[a]	−0.05	−0.3	−0.16	−0.9	−0.11	−0.9	0.06	0.3	−0.06	−0.2	−0.09	−0.4
Reliability	−0.14	−1.0	0.28*	1.9*	0.38***	3.4***	0.20	1.1	−0.01	−0.1	−0.13	−0.7
Δ positive reliability	0.18	1.1	−0.32*	−1.9*	−0.44***	−3.5***	−0.09	−0.6	−0.00	−0.0	0.05	0.32
Assurance	0.57***	2.8***	0.26	1.2	−0.14	−0.8	−0.23	−1.0	−0.08	−0.3	0.06	0.3
Δ positive assurance	−0.05	−0.2	0.09	0.4	0.12	0.8	0.28	1.3	0.12	0.5	−0.04	−0.2
Empathy	0.07	0.4	0.39*	2.0*	0.34**	2.4**	0.80***	4.7***	0.64***	3.2***	0.16	0.7
Δ positive empathy	−0.16	−0.8	−0.16	−0.8	−0.05	−0.3	−0.31*	−1.9*	−0.05	−0.27	0.13	0.8
Overall satisfaction					0.70***	6.0***					0.60***	3.8***
Model statistics	$n = 51$		$n = 51$		$n = 51$		$n = 49$		$n = 49$		$n = 49$	
	$F = 12.2^{***}$		$F = 11.1^{***}$		$F = 11.8^{***}$		$F = 12.3^{***}$		$F = 7.9^{***}$		$F = 11.0^{***}$	
	$R^2 = 0.70$		$R^2 = 0.67$		$R^2 = 0.82$		$R^2 = 0.71$		$R^2 = 0.61$		$R^2 = 0.71$	

Notes: Statistically significant coefficients (two-tailed test): $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$; [b]Significant negative coefficients indicate negative asymmetry for the corresponding service quality dimensions and measure service quality along the dimensions of service outcome, technical quality and functional quality (see Grönroos, 1984; Szmigin, 1993). The results indicate that, along the service dimensions-satisfaction-retention chain, there are significant negative asymmetric effects and that the mediating role of satisfaction ranges from zero to full mediation, which supports the recent concerns expressed in the literature to avoid oversimplifications in the satisfaction chain (e.g. Anderson and Mittal, 2000; Kumar, 2002; Zeithaml, 2000). Further, and most important, this paper shows that the links in the satisfaction chain display significant differences across different customer segments and therefore suggests that studies on the impact of service quality on customer relationship maintenance should avoid aggregating customers (see, e.g. Anderson and Mittal, 2000; Finn and Kayande, 1998).

The findings of this study should be interpreted within the limits of this exploratory study. Surveying customers of one organization in one industry, while increasing the ability to identify asymmetric effects that are specific to a situation, reduces the generalizability of the findings. Future studies should try to investigate a class of similar services and organizations and compare results for similar customer segments. Further, this study employed only two segmentation variables, account size and relationship length, while many other variables could be investigated. For example, Driver and Johnston (2001) proposed to segment service customers as relaters, who consider soft quality to be relatively more important than hard quality, versus nonrelaters, who consider hard quality more important. Finally, this study focused on the asymmetric effects of service quality and did not take into consideration other factors that may drive customers' satisfaction and retention. One such factor, which should receive more attention, is customers' perception of their costs or sacrifice. This factor, in conjunction with service quality, determines the value of the service, which may be another mediator in the attribute-satisfaction-retention chain (e.g. Choi *et al.*, 2004; Kumar, 2002).

Managerial implications

In spite of limitations, the findings of this research suggest some important implications for services managers. First, managers should invest resources in improving low performance in the service quality dimensions with strongest impact on customer satisfaction and highest negative asymmetry. As noted, there are important differences between large and small customers, which may be overlooked by service providers. Delivering results through the service outcome is the dominant factor in satisfying and retaining large accounts. This factor has a utility-preserving character that means that managers should do everything possible to avoid disappointing large customers in terms of service outcomes. However, these large customers seem to be less interested in the quality of the rep's interaction. While service providers put more time and effort in the interpersonal interaction with large accounts, they should rather direct this attention to the small accounts, which tend to perceive functional quality as a key, utility preserving attribute. These findings suggest that while large accounts seem to employ a rational evaluation model of the professional service, small accounts may be more likely to employ a relationship generalization model, in which service provider's relationship development behaviors drive their satisfaction with the core product (see Crosby and Stephens, 1987, for a discussion of the models).

In addition, it is important to recognize the importance of the temporal perspective. Attributes important to newly acquired customers are different from the ones important to long-time customers. Managers should employ a dynamic attribute importance model (see Mittal and Katrichis, 2000) to investigate the shifts in salience and nature of the relevant service quality dimensions for customer relationship maintenance. It seems that new accounts tend to be most sensitive to the more objective aspects of the service (results and reliability). With time, customers seem to shift toward the softer, more relational aspects of the service. Interestingly, these findings seem to contradict Mittal *et al.*'s (1999), conclusion that, during early stages of building a relationship, suppliers should focus on services and interpersonal aspects of the exchange, and only later focus on the core product of the consumption system. It may be that the shift in time from hard to soft service quality happens mostly in B2B service contexts, while an opposite shift from soft to hard quality may happen in business-to-customer (B2C) contexts.

Finally, it is important to identify the exact effect of a service attribute on satisfaction and on customer retention. In this study, reliability seems to be a significant utility-preserving factor with an important direct effect on customer retention, independent of satisfaction, in the case of small and relatively newer accounts. If managers monitor solely customer satisfaction, they may miss critical factors that drive customer retention, which is the ultimate goal in customer management.

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Key drivers of university-industry relationships: the role of organisational compatibility and personal experience

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Abstract

Purpose – The purpose of the paper is to analyse empirically research-oriented university-industry relationships based on the incorporation of relationship marketing (RM) and technology transfer theory.

Design/methodology/approach – This paper is based on an extensive literature review and initial qualitative research, a conceptual model is presented and tested using structural equation modelling methods. Analysis was conducted, and is reported, in three steps, including path analysis and hypothesis testing, model re-specification and a multi-group analysis comparing university and industry respondents.

Findings – Trust, commitment and integration were found to positively influence satisfaction and were confirmed as key drivers of successful university-industry relationships. While trust was the strongest driver of satisfaction, commitment emerged as the strongest predictor of intention to renew. The results also confirmed the proposed interrelationships between the relationship characteristics. Organisational compatibility emerged as positively influencing all relationship characteristics, indicating its relevance for university-industry relationships and suggesting its potential importance for other relationships crossing essentially different organisational environments. Surprisingly, only a weak influence of staff personal experience on commitment was found.

Research limitations/implications – The results are limited to Australian relationships and by their cross-disciplinary nature. Furthermore, a potential bias towards positive relationships might exist in the data.

Originality/value – The primary contribution of this paper lies in the development of a foundation for research in a new services business context by combining the established theory of RM with the emerging area of technology transfer. Building a thorough empirical basis for future research, the researchers anticipate the development of a comprehensive university-industry relationship research stream.

Keywords Relationship marketing, Business-to-business marketing, Universities, Australia

Paper type Research paper

An executive summary for managers and executive readers can be found at the end of this issue.

Introduction

Business-to-business relationships have emerged as a central theme in marketing research, reflecting their importance and strategic potential. Indeed, the area of relationship marketing (RM) has now grown into an established stream, closely interwoven with the services marketing area. However, while an understanding of business-to-business service relationships has developed over time, this research has focused on relationships between private sector organisations. RM research has examined differences between relationship partners on a national culture basis (Ahmed *et al.*, 1999; Johnston *et al.*, 1999). However, relationships spanning fundamentally different organisational environments and corporate cultures have largely been neglected. In order to address this gap, this article identifies research-oriented university-industry relationships (UIRs) as a highly topical research context.

Given the increasing need of organisations for innovation in competitive, fast-moving marketplaces around the world, research customers provide a highly relevant services business market. Research services are anchored in vast pools of knowledge, capabilities and facilities and may take on a number of forms due to the diversity of research areas and methods accumulated at universities. They all encompass one characteristic, namely the need for a close interaction between the research providers and customers to enable the transfer of knowledge and research, indicating a need for a relational approach. Nevertheless, research services are yet to receive attention from RM or services marketing researchers. Despite the increased relevance of UIRs, the technology transfer literature has retained a largely transactional, rather than relational, perspective. Hence, research is required not only to develop a theoretical foundation but also to inform management seeking to develop successful UIRs.

The paper is organised as follows. First, the areas of business-to-business service relationships and technology transfer are reviewed, followed by a discussion of the concepts included in this study. Relationship success, key drivers and relevant antecedents are then described and propositions developed. Following this, a conceptual model and related hypotheses are presented. An outline of the methodology is then presented before the results are described, including a path analysis and hypotheses test,

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model re-specification and multi-group testing. A discussion of the findings and an extensive outline of managerial implications are provided in conclusion.

University-industry relationships

Business-to-business service relationships

Inter-organisational relationships have emerged as a central research theme in the marketing discipline during the last two decades (Gummesson, 2002; Möller and Halinen, 2000). RM has evolved into one of the most prolific areas in marketing research, following the introduction of the term by Berry (1983) more than 20 years ago. Indeed, the last decade saw RM achieving unprecedented recognition as a major trend in marketing, spawning a large amount of articles, journal issues, among others in the *Journal of Services Marketing*, as well as a specific journal published in the RM area.

A shift from a product to a service focus and to service economies in developed countries has given rise to the development of a different marketing perspective with a priority on customer service and services elements added to products. Marketing services means marketing a performance (Berry, 1980), often rendered on an ongoing or periodic basis. Ongoing interaction, in turn, increases the likelihood of customers developing relationships with people rather than with products. Services marketing research (Berry, 1983; Bitner, 1995) and the Nordic School of Services Management (Grönroos, 1991, 1997; Gummesson, 2002) thus led to the development of RM (Aijo, 1996). In their paper on the future of services marketing, Grove *et al.* (2003, p. 116) discussed the relevance of investigating RM as a specific area in services research, stating that "whatever direction the services field takes in the future will necessarily lead to relationship marketing".

A consensus definition has long been awaited in the literature (Brodie *et al.*, 1997), as a large number of approaches and perspectives spawned numerous definitions of RM (Zolkiewski, 2004). Based on definitions by Grönroos (1997) and Harker (1999), the following RM definition is proposed for this study:

> RM involves proactively identifying, creating, developing, maintaining, enhancing and, when necessary, terminating relationships that are trusting, committed and interactive in nature with selected customers [partners], in order to create a mutual value over time.

Technology transfer and university-industry relationship

The rapid change of competition and the speed of innovation worldwide have forced private and public sector institutions to combine their efforts to foster the diffusion of knowledge and to create innovation-oriented linkages (Organisation for Economic Co-operation and Development, 2000). Academic interest in this area is reflected in the amount of research undertaken around technology transfer and commercialisation (Carlsson and Fridh, 2002) as well as in government and working group reports (Australian Research Council, 2001; Knowledge Commercialisation Australasia, 2003). Despite an increased relevance of UIRs, the technology transfer literature has primarily focused on one-way transactional rather than relational exchanges, reflected in the definition of technology transfer as "the process of moving innovations from their origin to their point of operation" (Guerin, 1999, p. 443). A research stream on UIRs does not exist and a thorough understanding of these relationships is still missing.

Nevertheless, authors and practitioners now advocate a relationship approach for UIRs (Mora-Valentín *et al.*, 2004). Surprisingly, neither services marketing nor RM knowledge has yet been empirically applied in this context, which is the object of this paper. Following the call for the provision of a comprehensive definition of emerging fields (Boulding *et al.*, 2005), the following definition of UIRs has been developed for this study:

> UIRs are trusting, committed and interactive relationships between university and industry entities, enabling the diffusion of creativity, ideas, skills and people with the aim of creating mutual value over time.

This definition adopts a micro approach, focusing on relationship dyads and thus the building blocks of networks (Straub *et al.*, 2004; Auster, 1990). Network theory of the Industrial Marketing and Purchasing (IMP) Group (Ford, 1997; Håkansson and Snehota, 2000) is clearly relevant in this context, due to the embeddedness of a university within a complex system of stakeholders and resources (Håkansson and Ford, 2002). While acknowledging the limitations of a micro approach (Baraldi and Bocconcelli, 2001; Iacobucci and Hopkins, 1992), the examination of individual relationships rather than networks is deemed appropriate for this paper, due to the novelty of the research context. Our results shall provide a foundation for future research on multifaceted university networks.

Success and key drivers of university industry relationships

Relationship success

In a UIR context, empirical research examining relationship success or outcomes has been sparse (Lee, 2000). Nevertheless, the literature reveals different motives for universities and companies entering a relationship (Plewa *et al.*, 2005). Universities are believed to benefit primarily in economic terms, including financial support for future research (Harman, 2001), supplemented by benefits such as the application of basic research results to industry problems (Lee, 2000). Organisations generally aim at the acquisition of technology, knowledge and access to talent, when entering a research-oriented relationship (Cyert and Goodman, 1997). Given the different benefits sought by both parties, the concept of satisfaction was deemed a valuable measure of relationship success. It enables the analysis of an overall impression of success gained by both partners, reflecting their respective expectations and performance perceptions.

Based on previous literature (Hennig-Thurau *et al.*, 2002), this study defines the concept of satisfaction as an affective outcome measure resulting from the evaluation of all aspects of a relationship. Satisfaction derived from a discrete transaction or service encounter (Jones and Suh, 2000) was deemed too restrictive. As a second measure of relationship success, intention to renew, defined as the likelihood that the relationship would be renewed at the end of the current contract, was chosen. Previous research has shown this concept as highly relevant for both parties (Plewa *et al.*, 2005). Given the lack of research on retention as an outcome of UIRs and the importance of this concept for RM marketing, further research appears necessary.

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Trust, commitment and integration

While no general consensus exists in the literature on the primary relationship characteristics, trust and commitment have emerged as the central factors in RM theory (Harker, 1999). The prominence of trust in the RM literature relates to its empirically tested positive impact on relationship success (Smith and Barclay, 1997). In consensus with Rousseau *et al.*'s (1998, p. 395) findings on the cross-disciplinary view of trust, trust in this study is not conceptualised as an actual behaviour, but as an underlying psychological condition based on the overall relationship. Defined as "a willingness to rely on an exchange partner in whom one has confidence" (Moorman *et al.*, 1992, p. 315), it integrates two components, namely credibility and benevolence. The significance placed on trust in the RM literature is reflected to some degree in the technology transfer area (Irwin *et al.*, 1998). However, while the impact of trust on relationship success has been abundantly tested in the RM literature, the literature on UIRs mentions the importance of trust among partners (Barnes *et al.*, 2002), but does not study it extensively.

Closely related to trust, commitment has gained prominence not only in RM theory (Young and Denize, 1995) but also in organisational and buyer behaviour (Reichers, 1985). A wide range of definitions and conceptualisations of commitment appear in the literature, ranging around three themes, namely a financial or other economic loss associated with leaving, an affective bond to an organisation or partner, and a degree of moral obligation (Meyer and Allen, 1991). Inherent to all conceptualisations of commitment is its temporal dimension, with commitment becoming substantive in the longer-term (Dwyer and Oh, 1987). This study adopts Anderson and Weitz's definition of commitment as "a desire to develop a stable relationship, a willingness to make short-term sacrifices to maintain the relationship, and a confidence in the stability of the relationship" (Anderson and Weitz, 1992, p. 19). This comprehensive conceptualisation entails not only attitudinal commitment and behavioural input but also long-term durability (Dwyer and Oh, 1987) and the effort invested into maintaining the relationship (Young and Denize, 1995).

While the link of commitment to trust clearly underpins its prominence in the RM literature, empirical findings also link commitment with relationship success (Jap and Ganesan, 2000). However, the literature on UIRs has all but ignored the concept of commitment. Few exceptions include case studies reported by Barnes *et al.* (2002) and Mora-Valentín *et al.*'s (2004) empirical analysis of commitment. Both described commitment as central to successful university-industry interaction.

With relationships being developed by interaction (Tikkanen and Tuominen, 2000), interactivity and connectedness between partners is one of the main determining factors of RM. One interaction activity employed to link people is communication (Duncan and Moriarty, 1998), which has been included in a range of RM studies (e.g. Anderson and Weitz, 1992) but has more often been taken for granted (Conway and Swift, 2000). This is surprising, given the necessity of bilateral communication for the creation of satisfaction and value in a relationship (Duncan and Moriarty, 1998). The significance of knowledge dissemination in research-oriented relationships and the need to span university-industry boundaries suggest the need for greater communication in UIRs.

However, researchers have argued that communication may not be interactive enough, stressing the need for integration to achieve research cooperation success (Gomes *et al.*, 2003). The concept of integration entails the sharing of information as well as active involvement and participation in the overall processes (Gomes *et al.*, 2003). The analysis of integration in this study was deemed not only to contribute to our understanding of UIRs but also to the further development of the RM and services marketing literatures. In sum, trust, commitment and integration are proposed to positively influence UIRs:

P1. Trust, commitment and integration positively influence relationship outcomes of UIRs.

The interrelationships between trust, commitment and integration

While authors generally agree on an association between trust and communication (Farrelly, 2002; Moorman *et al.*, 1992), the interrelationship between trust and integration has not been clearly established. Furthermore, drawing on the communication literature, the direction of impact is unclear. Given the level of risk involved with exchanging sensitive information in UIRs, this study proposes trust to precede and facilitate integration, supported by reports on the positive influence of trust on interaction and involvement (Grayson and Ambler, 1999):

P2. Trust positively influences integration in UIRs.

The link between trust and commitment has been clearly established in RM (Morgan and Hunt, 1994). While the causality of these two constructs is still disputed, the majority of studies have found trust to positively influence commitment (Farrelly and Quester, 2003) by decreasing the risk associated with attaching oneself to a relationship. Hence, trust is proposed to influence commitment in UIRs also:

P3. Trust positively influences commitment.

The association between commitment and integration or communication has received little recognition in the RM literature, with some research suggesting communication as a positive driver for commitment (Sharma and Patterson, 1999). In this study, however, the reverse effect is proposed. Commitment reflects a certain investment in the relationship, based on an interest in maintaining it. A committed party puts effort into developing a relationship and is, in turn, likely to proactively participate in that relationship and to seek frequent interaction and involvement in the research processes. Hence, commitment should positively influence integration:

P4. Commitment positively influences integration in UIRs.

The impact of organisational compatibility

Research in the area of strategic alliances has recognised the impact of organisational intercultural diversity on success (Bucklin and Sengupta, 1993). Responding to the broad conceptualisations of these concepts, Parkhe (1991) developed a typology of intercultural diversity differentiating resource complementarity and organisational compatibility. The existence of complementary resources is assumed in this study, given the different strengths of universities and firms (Barnes *et al.*, 2002). Based on the reported influence of the cultural dimension of compatibility on trust, commitment, information exchange and performance (Sarkar *et al.*, 2001),

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compatibility of organisational cultures is proposed to positively influence trust, commitment and integration:

P5. Organisational compatibility positively influences trust, commitment and integration in UIRs.

The influence of personal experience

Services marketing and the service-based research streams in RM have highlighted the relevance of the individuals engaged in the process (Bendapudi and Leone, 2002; Haytko, 2004). RM entails a systematic approach to relationship management by creating superior value (Anderson, 1995), achieved through the specialised involvement of all relationship partners in the value creation process. Interaction implies a high level of responsibility of staff, as boundary-spanning employees overtake a marketing and relationship-building role (Webster, 1992) and act as "part-time marketers" (Gummesson, 1991). However, much of the business-to-business research has assumed individuals' relevance without empirically testing it (Haytko, 2004) and authors in related areas such as CRM have called for further research on employees' role in relationship implementation processes (Boulding *et al.*, 2005).

Authors have also emphasise the relevance of individuals, labelled "champions", for the integration and success in technology transfer (Hoppe, 2001). Personal communication among staff not only improves the understanding of the respective other environment (Irwin *et al.*, 1998), it also offers a way to overcome the complexity of research and the implied need for an explanation of offers and results (Hoppe, 2001). While previous research has focused on champions' talent to promote an idea or relationship (Santoro and Chakrabarti, 2002), an understanding of the "other" environment has emerged as important to enable championship behaviour in a UIR, likely to develop by means of experience (Irwin *et al.*, 1998).

Hence, to enhance our understanding of the influence of experience in dealing with another environment, this research analyses individuals' personal experience rather than the general concept of a "champion". A positive impact on trust, commitment and integration is proposed:

P6. Personal experience positively influences relationship characteristics in UIRs.

Conceptual model and hypotheses

Based on an extensive literature review of RM and technology transfer with a focus on services relationships as well as preliminary, qualitative research reported elsewhere (Plewa *et al.*, 2005; Plewa and Quester, 2004), a conceptual model was developed, as shown in Figure 1. The model incorporates the hypotheses developed based on the above propositions, presented in detail in Table I.

Methodology

A self-administered mail survey was conducted with key informants involved in UIRs in Australia. The researchers screened university websites and publications detailing university-industry linkage grants of the Australian Research Council (ARC), awarded between 2001 and 2003. Where appropriate, a snowball approach was utilised, asking academics and staff at industry liaison offices to indicate and/or contact colleagues knowledgeable in UIRs. Notably, the prevalent level of theory in this research is the group level. The review of ARC publications and qualitative exploratory findings showed that UIRs are primarily operationalised on a group level, namely between research groups and business units.

Sampling procedure, frame and size

This research did not concentrate on a specific industry or research field to not limit the potential sampling frame, given that only a limited number of research groups in Australia are involved in UIRs. An effective sample of 855 university academics and 54 industry staff resulted for the first mail-out. With 140 university and 17 industry questionnaires returned, response rates of 16.4 per cent and 31.5 per cent were achieved. These reflect the time-consuming nature of our respondents' jobs and possible concerns about confidentiality but compare well with similar studies (Hewett *et al.*, 2002). A second mail-out was conducted, sending 138 questionnaires to people named by the respondents. From 123 industry and 15 university questionnaires, 61 (49.6 per cent) and 4 (26.7 per cent) responses were accomplished. The number of final, usable responses reached 207. Given the relatively low response rate, non-response bias was examined. An independent samples *t*-test (Coakes and Steed, 2003) did not reveal significant differences between early and late respondents in terms of demographics or parameter values, indicating that a problem of non-response bias was unlikely.

The final sample exhibits several characteristics that need to be considered for data analysis and discussion. While all Australian states and territories were represented, a large number of respondents were located in New South Wales and Victoria, reflecting the high research density in these states. The length of relationships differed considerably (from two months to 30 years), with the mean length of 58.9 months (or nearly five years). Interestingly, 54.5 per cent of the respondents indicated a relationship length well above the general ARC grant length of three years. Furthermore, while only 25 (33.8 per cent) industry respondents previously worked at a university, 86 (64.6 per cent) university respondents indicated they had previously been employed in a private sector institution.

Measurements of constructs

Appropriate measurement items for the seven constructs examined in this study were identified in the available literature. However, due to the lack of any previous application of RM constructs to UIRs, measurement items used in a private sector context were modified based on preliminary interviews and a questionnaire pre-test to capture specific characteristics of UIRs. The final items are shown in the Appendix (Tables AI and AII).

Researchers have used a wide variety of measurements for the construct of satisfaction (Babin and Griffin, 1998; Jones and Suh, 2000). The context of this study required an overall satisfaction measure, and thus the conceptualisation of satisfaction based on an ongoing engagement of parties in a relationship. Hence, satisfaction was operationalised based on Bucklin and Sengupta (1993) and Hennig-Thurau *et al.* (2002). An indication of the likelihood that the relationship with the respective partner will be renewed at the end of the current contract was deemed to provide the most relevant measure. Hence, the intention to renew, and stay in, the relationship was measured on a Juster scale, ranging from 0 to 100 per cent, following Farrelly's (2002) study of sponsorship relationships.

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Figure 1 The conceptual model

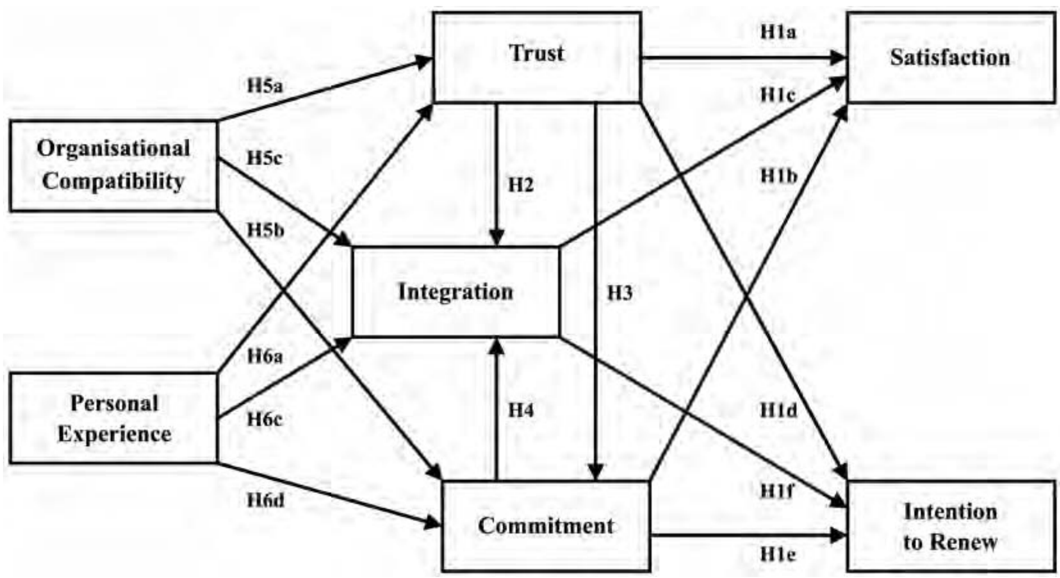

Table I Hypotheses

Hypothesis	Independent variable	Dependent variable	Predicted relationship
H1a	Trust	Satisfaction	+
H1b	Commitment	Satisfaction	+
H1c	Integration	Satisfaction	+
H1d	Trust	Intention to renew	+
H1e	Commitment	Intention to renew	+
H1f	Integration	Intention to renew	+
H2	Trust	Integration	+
H3	Trust	Commitment	+
H4	Commitment	Integration	+
H5a	Organisational compatibility	Trust	+
H5b	Organisational compatibility	Commitment	+
H5c	Organisational compatibility	Integration	+
H6a	Personal experience	Trust	+
H6b	Personal experience	Commitment	+
H6c	Personal experience	Integration	+

Trust has been conceptualised as comprising credibility and benevolence (Larzelere and Huston, 1980). Inter-organisational trust scales integrating both components and validated in the literature, including Ganesan (1994), Doney and Cannon (1997) and Morgan and Hunt (1994), were adapted for this study. The conceptualisation and definition of commitment in this research is comprehensive, requiring the reflection of a variety of facets in the measurement of the construct. Hence, commitment was operationalised based on Anderson and Weitz (1992) and Morgan and Hunt (1994). Few researchers have dealt with the concept of integration used in this study. Based on preliminary qualitative interviews, items measuring participation and cross-functional integration were identified, leading to the use of scales employed by Dwyer and Oh (1987, 1988) and Song and Parry (1997).

Organisational compatibility as conceptualised in this research focuses on cultural rather than operational compatibility. Items used by Bucklin and Sengupta (1993) and Smith and Barclay (1997) were used to measure organisational compatibility, enabling a clear focus on compatibility in organisational cultures. Based on our preliminary exploratory research, personal experience was chosen as the second antecedent, reflecting the individuals in the process. As this construct has not yet been tested in a UIR context, its measurement was based on Patterson *et al.* (1997) and Celly and Frazier (1996), who measured the experience with commissioning consultants and distributors respectively.

Results

Data were analysed with AMOS 5 based on structural equation modelling (SEM) principles. SEM has taken the forefront for the analysis of complete models in recent times (Kline, 2005) by taking a confirmatory rather than exploratory or descriptive approach to data analysis (Byrne, 2001). Prior to analysis, all reverse-coded items were recorded, missing values replaced with maximum likelihood estimation (Byrne, 2001) and normality tested. While values of skewness and kurtosis below 1.351 and 2.219 respectively suggested slight to moderate univariate non-normality (Lei and Lomax, 2005), multivariate non-normality was suggested, given the overall value of 22.987. Hence, a range of procedures was implemented to prevent the impact of non-normality on the analysis. These include the use of the recommended normed fit index (NFI) and comparative fit index (CFI) (Lei and Lomax, 2005) for assessing the model fit and the application of the Bollen-Stine bootstrapping technique (Bollen and Long, 1993).

Reliability was assessed by means of the Cronbach's alpha (α) and composite reliability. This was established for all measures of the overall sample as well as for the university and industry sub-samples, given that all α and composite reliability scores were above 0.7 (see the Appendix (Table AII)). The validity of the constructs was also tested. Convergent validity was ascertained by means of factor loadings and the average variance extracted (AVE). Furthermore, discriminant validity was analysed by relating the shared variance (λ^2) between constructs to the AVE score (Fornell and Larcker, 1981). The shared variance, and thus the squared correlation between two constructs, was adequately lower than the AVE scores, demonstrating discriminant validity among constructs (Fornell and Larcker, 1981) (see the Appendix (Table AII)). Given the complexity of the model and the relatively limited sample size, composite scores were used as a means of data reduction (Rowe, 2002). A composite score was estimated for each multi-item construct based on a fitted one-factor congeneric measurement model, estimated with AMOS 5.

Path analysis and hypotheses testing

While the conceptual model was founded on a thorough review of the RM and technology transfer literature as well as preliminary qualitative research, not all goodness-of-fit indexes showed an acceptable model fit. For example, the χ^2/df (= 2.529), GFI (= 0.980), AGFI (= 0.907), TLI (= 0.982), CFI (= 0.985) and NFI (= 0.976) all indicated a satisfactory fit, but this was not supported by a significant χ^2 ($p < 0.05$) and an RMSEA value of 0.086 suggested a mediocre fit by falling in the value range of 0.08 to 0.10 (Byrne, 2001). Despite this, given that many other indicators point to a good model fit, a test of hypotheses appeared legitimate.

The results of the path analysis provided support for ten hypotheses. Only five hypotheses had to be rejected due to non-significant associations. Findings regarding beta coefficients and the support of hypotheses are provided in Table II. The analysis controlled for a potential effect of relationship length. A Pearson correlation of −0.161 ($p < 0.05$) indicated a slight decrease of integration over time. According to Anderson and Weitz (1989), lower levels of integration in long-term relationships may result from higher interaction effectiveness based on increased experience and familiarity with the other party's customs.

The results indicated a strong positive influence of trust, commitment and integration on satisfaction (*H1a*, $p < 0.001$; *H1b*, $p < 0.001$; *H1c*, $p < 0.001$). While our results did not reveal trust or integration to influence intention to renew, leading to the rejection of *H1d* and *H1f*, a strong positive influence of commitment was established (*H1e*, $p < 0.001$). The influence of trust on integration and commitment was also confirmed by our results (*H2*, $p < 0.001$; *H3*, $p < 0.001$). Support was also found for *H4*, that commitment significantly impacts integration ($p < 0.001$). The results indicated that organisational compatibility significantly affects trust and commitment (*H5a*, $p < 0.001$; *H5b*, $p < 0.01$). Notably, fundamental indirect effects by means of trust emerged and should be taken into account in the discussion. No significant association between compatibility and integration, however, was found and *H5c* was rejected. Similarly, personal experience was not found to significantly affect trust or integration, *H6a* and *H6c* were rejected. Experience only influenced commitment on a significant level (*H6b*; $p < 0.001$).

Model re-specification

The conceptual model was re-specified with the aim of achieving a more parsimonious model. Several authors have commented on the unlikelihood of a conceptual model providing the most parsimonious account of the data, requiring a re-specification (Hoyle and Panter, 1995). Importantly, model re-specification is not confirmatory but exploratory in nature (Byrne, 2001), requiring a cross-validation with a second, independent sample in the future.

Following the elimination of paths with non-significant *t*-values, modification indexes and expected parameter changes indicated the potential of adding a path between organisational compatibility and personal experience. The identified path is likely to relate to the influence of group dynamics on employment procedures and individuals' behaviour. A substantial body of research has dealt with the concept of person-organisation-fit (Billsberry *et al.*, 2005) and person-group-fit (Werbel and Johnson, 2001). Given that people are selected into, and remain in, a group depending on their match to the group (Werbel and Johnson, 2001), it is likely that values and norms are shared among group

Table II Results of path analysis and hypotheses testing

Hypothesis	Independent variable	Dependent variable	Standardised effects Direct	Standardised effects Total	Critical ratio	Support
H1a	Trust	Satisfaction	0.355	0.636	6.610***	Yes
H1b	Commitment	Satisfaction	0.275	0.353	5.358***	Yes
H1c	Integration	Satisfaction	0.337	0.337	6.497***	Yes
H1d	Trust	Intention to renew	0.082	0.358	1.131	No
H1e	Commitment	Intention to renew	0.483	0.513	6.997***	Yes
H1f	Integration	Intention to renew	0.130	0.130	1.869	No
H2	Trust	Integration	0.369	0.472	5.134***	Yes
H3	Trust	Commitment	0.445	0.445	6.750***	Yes
H4	Commitment	Integration	0.231	0.231	3.360***	Yes
H5a	Organ. compatibility	Trust	0.552	0.552	9.511***	Yes
H5b	Organ. compatibility	Commitment	0.193	0.439	2.920**	Yes
H5c	Organ. compatibility	Integration	0.125	0.430	1.880	No
H6a	Personal experience	Trust	0.107	0.017	0.301	No
H6b	Personal experience	Commitment	0.208	0.216	3.784***	Yes
H6c	Personal experience	Integration	0.094	0.150	1.671	No

Notes: $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$; Results are based on Bootstrap = 500, 95 per cent confidence level

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members. A high level of organisational compatibility signals a strong similarity in terms of goals, objectives and operating philosophies at the group level.

Given the different backgrounds or partners in a UIR, a high level of compatibility may thus relate to certain closeness with the other environment. For example, if a research group has similar objectives as the firm, it probably places a high relevance on practical application and is likely to attract researchers that take pleasure in dealing with industry. Likewise, if the business unit shares aspirations with the university partner, individuals are likely to be interested in, and involved with, academic research. Given this explanation, the path was added to the re-specified model, provided in Figure 2.

A good fit of the model to the data was established based on only slight modifications, leading to a non-significant χ^2 ($p > 0.05$), an RMSEA value (= 0.051) close to 0.05, as well as other fit indexes indicating a high degree of goodness-of-fit (χ^2/df = 1.531, GFI = 0.983, AGFI = 0.942, TLI = 0.982, CFI = 0.993, NFI = 0.980). Also, the CAIC value improved from 154.494 to 138.902, indicating greater parsimony. Following the call to report on tre-specification in terms of predicted and "discovered" paths (Hoyle and Panter, 1995), Table III shows the remaining original and added paths. During the process of re-specification, the link between compatibility and integration, shown as insignificant in the conceptual model, emerged as significant ($p < 0.05$). Compatibility is likely to ease understanding and empathy among partners (Johnson and Cullen, 1996) and appears to enable and facilitate integration of both parties in the relationship.

Multi-group analysis

Our analysis focused on a single sample, using the combined data set of university and industry responses. Hence, a multi-group analysis was deemed valuable to identify whether the final model replicated well for each sub-sample. By means of a chi-square difference ($\Delta\chi^2$) test, we tested whether values of model parameters varied across groups (Kline, 2005)[1]. The results showed non-significant $\Delta\chi^2$ ($p > 0.05$) for the models constraining regression weights and residuals. Hence, invariance was established across the university and industry groups (Byrne, 2001). On this basis, it can be assumed that the re-specified model replicates well across the university and the industry group (Diamantopoulos and Siguaw, 2000).

Discussion

The RM literature has highlighted the interactivity and emotional content of relationships (Harker, 1999), underlining the importance of trust, commitment and communication/integration, for relationship success. Trust was confirmed as the strongest predictor of satisfaction, validating the significant focus of the marketing and UIR literature on this concept (Morgan and Hunt, 1994; Irwin *et al.*, 1998). The high uncertainty and risk inherent to research and research collaborations (Harman and Sherwell, 2002) may explain the significance of trust as a key driver of UIRs. The building of close, trusting relationships reduces perceived risk (Bendapudi and Berry, 1997), and also offers flexibility in operations and information exchange, providing a basis for research and discovery. Given the impact of trust on satisfaction, the lack of a significant link between trust and intention to renew was surprising and contrasts previous RM literature (Ganesan, 1994). Since neither trust nor satisfaction was shown to influence intention to renew, it would appear that decisions about the future do not necessarily depend on the affective conditions in the relationship. In line with the literature (Jap and Ganesan, 2000), our results showed commitment as consistently influencing satisfaction. The most prominent effect of commitment in the relationship, however, emerged in relation to intention to renew: commitment was the only fundamentally influential predictor of renewal.

The third and final relationship characteristic, integration, was also shown to significantly affect satisfaction. Its importance stems from the relevance of knowledge transfer in research-oriented relationships, complicated by the obstacles and misunderstandings arising from different cultures and backgrounds (Cyert and Goodman, 1997). Considering the total perceived quality model, which originated in the Nordic

Figure 2 The re-specified model

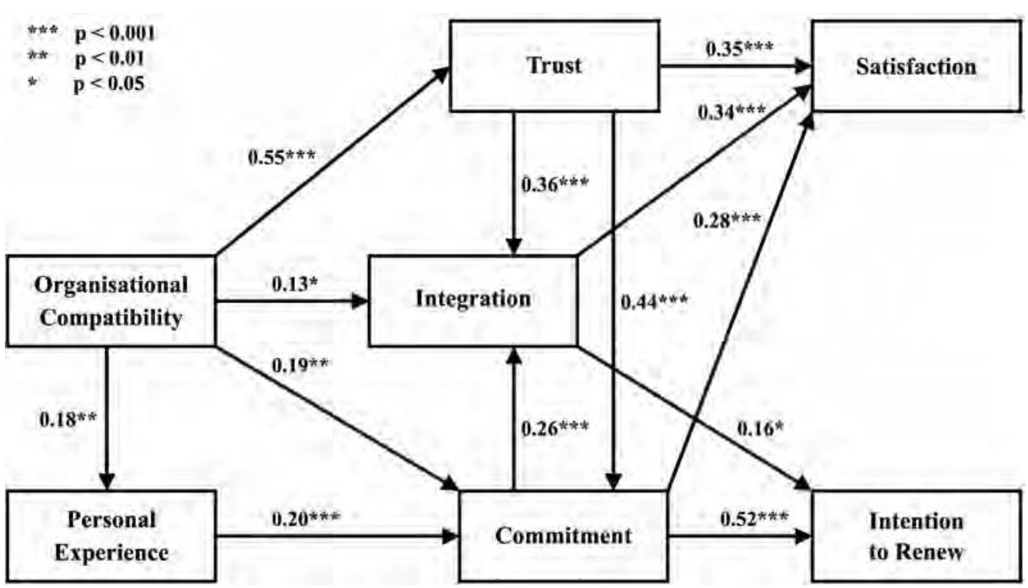

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Table III The final paths of the re-specified model

Hypothesis	Independent variable	Dependent variable	Standardised effects Direct	Total	Critical ratio
H1a	Trust	Satisfaction	0.352	0.633	6.566***
H1b	Commitment	Satisfaction	0.277	0.365	5.384***
H1c	Integration	Satisfaction	0.338	0.338	6.508***
H1e	Commitment	Intention to renew	0.517	0.559	8.036***
H1f	Integration	Intention to renew	0.162	0.162	2.519*
H2	Trust	Integration	0.355	0.469	4.985***
H3	Trust	Commitment	0.439	0.439	6.751***
H4	Commitment	Integration	0.260	0.260	3.872***
H5a	Organ. compatibility	Trust	0.555	0.555	9.564***
H5c	Organ. compatibility	Commitment	0.190	0.471	2.881**
H5c	Organ. compatibility	Integration	0.133	0.452	1.991*
H6b	Personal experience	Commitment	0.205	0.205	3.722***
Add	Organ. compatibility	Personal experience	0.182	0.182	2.660**

Notes: $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$; Results are based on Bootstrap = 500, 95 per cent confidence level

School of Services, integration enables a research group to develop a relationship outcome that meets industry needs, in turn enhancing technical quality (i.e. the actual outcome) (Grönroos, 1984). Moreover, integration ensures the transfer of knowledge that industry staff needs to utilise the technology within the organisation (Plewa *et al.*, 2005). Besides enhancing technical quality, integration improves the perceived functional quality, and thus the interaction process used to receive technical quality (Grönroos, 1984) by increasing the shared meaning and understanding between the groups. On the other hand, integration had little impact on intention to renew. This is consistent with Anderson and Weitz's (1989) results, suggesting that communication, or integration, support the present relationship but is of little or no consequence for long-term planning.

The influence of trust on commitment and integration was established in the data, confirming previous research (e.g. Moorman *et al.*, 1992; Morgan and Hunt, 1994). Universities and industry entities operate in different environments, suggesting a high level of unfamiliarity and uncertainty in a developing UIR. The development of trust reduces perceived risk and encourages partners to commit and freely interact and share information. Support was also found for *H4*, that commitment significantly impacts integration ($p < 0.001$). Devoting time and effort to maintain a relationship is likely to motivate active involvement in the process. Given the sparse attention given to this link in the literature, the positive path coefficient of 0.231 we found may warrant increased focus in this area.

Our results demonstrated the strong and significant influence of organisational compatibility on trust, confirming the alliance literature (Sarkar *et al.*, 2001). A high level of organisational compatibility is likely to facilitate understanding and empathy (Johnson and Cullen, 1996), in turn facilitating trust. Conversely, a lack of compatibility, or the clash of dissimilar organisational cultures, can lead to discomfort and hostility among groups (Chatterje *et al.*, 1992) and inhibit the development of trust. The interrelationships between compatibility and the remaining relationship characteristics further highlighted this strong association. While only weak direct effects of compatibility on commitment and integration were shown, strong total effects by means of an indirect effect through trust emerged. The results also showed compatibility to positively influence the construct of personal experience.

Surprisingly, our results showed a surprisingly weak influence of personal experience on UIRs: the only significant link emerged for commitment. These findings may relate to the construct of experience, which does not reflect the actual behaviour exhibited by the individual in a specific relationship. If championship behaviour is missing, a person's ability and willingness is insufficient to affect the development of trust or the active integration in the relationship. However, personal experience in UIRs may positively relate to the expectation of relationship continuity and the relationship investment, which does not require active championship behaviour. Hence, the link between experience and commitment may be justified.

It may also be that experience is more relevant for relationship initiation than for its maintenance and enhancement. It was suggested that personal experience, and the reputation of an academic regarding previous or current relationships, serves as a foundation for trust in the UIR initiation stage (Plewa *et al.*, 2005). Industry entities seek academics with previous engagement in UIRs, as these individuals were believed to understand the business environment and to appreciate industry needs and requirements (Plewa *et al.*, 2005).

Managerial implications

A number of managerial implications arise, relevant to parties involved in, or aiming to encourage, successful UIRs and other relationships uniting partners from differing environments, specifically in a service context. Before dealing with individual implications arising from the discussion, a general focus towards relationships should be established. Developing any interactive, trusting and long-lasting relationship is not possible if the organisational structure, culture or senior management oppose the idea of relationship building. Hence, management aiming at developing UIRs should be confident of their groups' ability

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and willingness towards building relationships with the other environment.

Uncertainty is inherent to research and increased by confidentiality concerns when collaborating with another party embedded in an unfamiliar environment (Harman and Sherwell, 2002), implying a need for trust. This has a number of direct managerial implications. First, as trust develops over time (Knowledge Commercialisation Australasia, 2003), UIR development requires a long-term focus. Furthermore, industry entities appear to approach, and collaborate with, those research groups and academics that had previously demonstrated their ability to build relationships with industry entities (Plewa *et al.*, 2005). A research group may thus position itself based on previous relationship experience. Following the attraction of a potential partner, trust should then be allowed to first develop through small-scale undertakings rather than directly considering high-risk projects.

Compatibility of organisational cultures strongly related to trust and was seen to also influence commitment and integration. As it can be achieved by means of matching goals, objectives and operating philosophies, the deliberate consideration of these factors is required in the relationship initiation phase and should be repeated continuously, as goals change with the parties' environments and circumstances. Furthermore, structures and processes for knowledge dissemination between partners need to be established to encourage integration.

Our results clearly indicate that groups aiming at the long-term continuation of a relationship should focus primarily on increasing levels of commitment. Besides valuing the relationship, they have to actively contribute to maintaining the relationship in order to achieve an ongoing affiliation. As the time and financial effort provided to a specific relationship may depend on the overall university or corporate strategy, processes should be put in place to determine the relationships that the organisation wants to retain and to empower groups to contribute to these relationships in their best possible way. Table IV outlines implications for relationships, and specifically UIR management.

Conclusion, limitations and future research

Combining the areas of RM technology transfer created a unique opportunity for this research and may provide a foundation for further development of UIR research. However, while this research contributes to marketing theory and practice, its results should be interpreted with caution in view of its limitations.

First, this research focused on Australian universities and companies to eliminate national culture issues. Thus, the generalisability of our findings to other countries may be limited. Second, based on the restricted number of UIRs in Australia, cross-sectional data was used, incorporating a range of industry types. Relationships differ between faculties, departments and even research groups but the limited number of respondents did not allow a more differentiated analysis. Importantly, while respondents are likely to report on positive relationships, suggesting a potential systematic bias in terms of the dependent variable satisfaction (Hewett *et al.*, 2002), our satisfaction ratings ranging from 1 to 7 suggest a good cross-section of current UIRs in Australia.

Given the importance of UIRs in marketplaces around the world and a large number of relationships failing (Cyert and Goodman, 1997), further research in this area is clearly warranted. While this paper offers a starting point, future research is required to verify and extend its findings. Primarily, more research is required on UIRs and other

Table IV Managerial implications

Relationship management	Specifically related to UIR management
Implement an organisational structure and culture that support the building of relationships	Create an organisational culture supportive of relationships Hire people passionate about, and experienced in, both environments to ease relationship development Offer staff training, mentoring, support and appropriate incentive systems Every relationship is different: ensure different handling and be dedicated to what you do Aim at, and work towards, creating value for customers and partners
Foster the development of trust in the relationship	Start slowly with small, low-risk projects to allow trust to develop over time Position a research group by means of UIR success stories Discuss goals, objectives and leadership styles of all partners in the relationship continuously throughout the relationship to ensure understanding and to enhance the level of compatibility Allow an extensive amount of time, training and rewards to overcome unfamiliarity and potential prejudices Portray consistency and honesty to allow trust to develop
Encourage integration of all involved parties	Develop an organisational culture and group mechanisms that enable and encourage staff to engage in dialogues, become involved, and participate in the process Foster intra- and inter-group multi-dimensional knowledge diffusion Foster informal communication, staff exchange and mixed teams Encourage personal networking of academics and industry staff
Develop high levels of commitment to achieve relationship continuity	Value, and actively contribute to, the relationship in order to achieve continuity Develop corporate strategies empowering groups to contribute to the relationships the organisation wants to retain Continuously aim at understanding each party's expectations and intentions regarding relationship continuity Hold not only formal discussions but also informal events and functions to develop a common understanding and shared experiences

business-to-business relationships spanning dissimilar organisational environments and cultures, examining individual relationships as well as networks. Particularly, given the exploratory nature of the re-specified model, future studies should validate our findings by testing our model with an independent sample. Considering the relevance of individuals suggested in the services, RM and technology transfer literature, the weak influence of experience on UIRs also deserves further enquiry. Considering the interrelationship between experience and trust identified in earlier studies (Feller *et al.*, 2004), a comprehensive analysis of several characteristics of individuals should be conducted. Furthermore, following earlier discussion, the influence of experience on the initiation of UIRs should be tested.

Note

1 The significance of a $\Delta\chi^2$ is analysed with degrees of freedom equal to the differences in degrees of freedom (Δdf) between models (Byrne, 1994). Hence, the χ^2 and df of the baseline model are compared to the χ^2 and df of the remaining models to identify significant $\Delta\chi^2$. The estimation of the baseline model showed a satisfactory fit (insignificant χ^2 [$p > 0.05$], df = 16, χ^2/df = 1.415, RMSEA = 0.045, GFI = 0.970, AGFI = 0.895, TLI = 0.972, CFI = 0.989, NFI = 0.966). Using the group analysis feature in AMOS 5, parameters were then constrained and the model re-estimated.

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Appendix

Table AI The final items

Variable	Items used
Trust	We trust this research group/business unit to consider our best interests
	This research group/business unit can be counted on to act with integrity
	We feel this research group/business unit has been on our side
Commitment	We expect to work with this research group/business unit for some time
	We are quite willing to make long-term ($\geq$5 years) investment in our relationship to this research group/business unit
	The relationship with this research group/business unit deserves our business unit's/research group's effort to maintain
Integration	The degree of integration between us and the research group/business unit is high during the entire research process
	The research is stimulated by frequent interactions between us and the research group/business unit and our cross-functional team effort
Satisfaction	The research group/business unit carried out its responsibilities and commitments with respect to the relationship so far, meeting my expectations
	Our relationship with them has been productive
	The time and effort we spent in the relationship has been worthwhile
Compatibility	Our goals and objectives are consistent with those of the research group/business unit
	Our senior staff and the senior staff of the research group/business unit have similar operating philosophies
	The goals of our groups are consistent and compatible
Experience	I am often involved in relationships between my business unit/research group and university/industry
	I have a good understanding of a university's/industry's requirements and way of working
	I have well-developed contacts with people from a university/industry background

Table AII Reliability and validity scores

Construct		No. items	α	p_η	AVE	Highest λ^2
Trust		3				
	Overall		0.888	0.892	0.735	0.6084
	Industry		0.879	0.894	0.744	0.4290
	University		0.904	0.898	0.746	0.7293
Commitment		3				
	Overall		0.790	0.802	0.578	0.591
	Industry		0.849	0.866	0.691	0.618
	University		0.774	0.794	0.565	0.543
Integration		2				
	Overall		0.851	0.858	0.5837	0.584
	Industry		0.844	0.862	0.5285	0.529
	University		0.857	0.86	0.6178	0.618
Satisfaction		3				
	Overall		0.925	0.9536	0.728	0.608
	Industry		0.937	0.9378	0.834	0.618
	University		0.919	0.9235	0.802	0.729
O. Compatibility		3				
	Overall		0.817	0.8160	0.597	0.421
	Industry		0.821	0.8181	0.601	0.389
	University		0.819	0.8206	0.605	0.450
P. Experience		3				
	Overall		0.873	0.8781	0.708	0.114
	Industry		0.811	0.8196	0.606	0.249
	University		0.904	0.9094	0.772	0.086

About the authors

Carolin Plewa is a Lecturer at the University of Adelaide. After a German Diploma in Business Administration, Carolin won a scholarship to undertake a PhD at the University of Adelaide, which she completed in 2006, examining the relationships between universities and industry partners, their characteristics and success factors. She has presented her results at a number of international conferences, and published several journal articles papers based on her early findings. In 2003, she was the runner up for the Best Doctorate Proposal of the Australian and New Zealand Marketing Academy. Her main research interest lies in the areas of relationship marketing, business-to-business and science marketing. Carolin Plewa is the corresponding author and can be contacted at: carolin.plewa @adelaide.edu.au

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Executive summary and implications for managers and executives

This summary has been provided to allow managers and executives a rapid appreciation of the content of the issue. Those with a particular interest in the topic covered may then read the issue in toto *to take advantage of the more comprehensive description of the research undertaken and its results to get the full benefit of the material present.*

Keep things simple are three words with have served product manufacturers well in the past. Keeping things simple can not only help save time and money by cutting down on the complexity of design and manufacture, it can also help the customer use the product effectively – and it is easier to repair if something goes wrong.

The only drawback is when a competitor comes up with something not just far more complex, but far more desirable because of the extra things it can do, or can do better. Trying to balance the desires of cutting costs by reducing complexity and providing a sophisticated yet easy-to-operate product for the end-user is a demand service providers also face.

Internet and other twentieth and twenty-fist century technologies have seen a dramatic increase in the reliance of businesses on services based on information and communication technology (ICT). The enormity of the task of managing, storing and organizing essential information has been admirably met by breakthroughs in ICT systems for customer relationship management, supply chain management and enterprise resource planning.

The way those services are produced and marketed, however, has become increasingly important in two major ways. First, rapid technological innovation has led to a significant increase in the complexity of ICT services, influencing the design and production processes, and customer interface. Second, the customer expectations have become more demanding. Reliability is taken for granted and customization is needed to differentiate from competitors.

From an ICT service provider's point-of-view, this creates many concerns with regard to service development, marketing, and implementation. Development becomes more difficult, as the variety of different software technologies concerning the actual service increases, and marketing and selling become more challenging, as the customers' requirements are more and more unique.

If a service provider cannot manage this complexity it will lead to increasing production costs, systems failures, and to customer dissatisfaction and defection. Consequently, service design is a critical phase in addressing this complexity.

In "Service packaging: Key to successful provisioning of ICT business solutions", Mika Hyötyläinen and Kristian Möller, use a case study of a large Finnish ICT company to describe how three service design and development methods – service industrialization, tangibilization and service blueprinting – can be used to reduce the complexity of ICT business services.

Industrialization of services applies techniques found in manufacturing, and focuses more on the activities that are required in producing the service – and how they could be re-engineered – than on the performer of those activities. In human-intensive activities, hard, soft and hybrid technologies should be used to systematically industrialize services. Hard technology refers to replacing human activity through a technology-based processes – as in the ATM and internet banking services. Soft technology refers to rationalizing and specialization of the human activities involved in services, as well as repacking or modularizing them (as in the modularized service and maintenance packages offered by the ICT providers for, e.g. corporate telephony services), and hybrid is a combination of hard and soft technologies.

Tangibilization of the intangible promises inherent in the provision of most services provide reassurance to prospective customers about services which cannot be pre-tested.

Service blueprinting comprises four steps. First, the service process should be broken down into steps and sequences. Second, the potential failure points (where the performer is seen to have too much discretion) should be isolated. Third, a suitable timeframe for service should be established. Fourth, the service should be analyzed to identify possible changes of unprofitable sequences or timeframes.

With key business services becoming difficult to manage in the case-study company, and complexity identified as the core problem, a project targeted aimed at reducing that complexity was launched, concentrating on business process networking (BPN) services in the managed services portfolio.

When the core problem was examined further it was found that the large variety in every aspect of the services led to increased complexity that in turn led to challenges concerning service quality, cost structure, and customizability. As alternative actions were identified to reduce the variety, it was recognized that the complexity challenge could be approached from various perspectives – customer need, technology, process, system etc.

In the end it was decided that the project would concentrate on developing a framework that encompasses both the customer need perspective as well as the technology perspective. Industrialization, service blueprinting and tangibilization were identified as suitable methods to do this. From the customers point of view, it was seen that the about ten services under the old BPN concept should be integrated and regrouped into one BPN service.

Mika Hyötyläinen and Kristian Möller say:

> In many customer and sales oriented service companies the managers in charge of the service production are usually the last ones to learn about new particular solutions that has especially been sold and promised for one customer. Because of this lack of internal communication and coordination between service marketing, design and production many managers working in the ICT services production are struggling with complex solutions that have been designed and developed to perfectly match a specific customer need, as understood by a salesman, without any concern of their runtime management.

Reducing and streamlining customer service offering does not necessarily mean less customer satisfaction. On the contrary, a service producer can cut down the number of offered service products and functions, but fulfill the same real and differentiated customer needs. By achieving better transparency between the unique customer needs and the implemented modular service offer, which allows reduced delivery time and improves functionality, customer

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satisfaction can actually be improved while simultaneously reducing service production costs.

An antecedent of improving customer satisfaction is to assess customer service. Within consumer service markets the collection of customer feedback appears to have become integral to the service process itself, yet less explicit attention seems to have been given to the issue in business-to-business marketing.

As there is no consensus what information to collect, who to collect it from and when and how to collect it, Judy Zolkiewski, Barbara Lewis, Fang Yuan and Jing Yuan, in their piece "An assessment of customer service in business-to-business relationships," use an in-depth pilot case study of a leading UK provider of fire protection and safety systems whose service interactions range from a four-hour service visit to a hotel or retail outlet, to the complete installation of a multi-million pound fire protection system.

The company identifies service quality as a key performance indicator in their desire to maintain market leadership, but customers and suppliers appear to have some similar, and some different, perceptions and understanding of service quality, and some different expectations. Managers need to be aware of components that might be generalized across industries and those which are specific to their own.

Communication, installation, invoice accuracy/clarity of written material, price and responsiveness were customer service/satisfaction factors identified by both seller and buyer respondents.

Problems with internal communication often related to messages not being passed to the person they were intended for, or left for someone who was on leave, resulting in customers' queries not being dealt with. Managers must be aware of the significance of the role of internal communication in service quality and ensure that procedures are in place to ensure it is effective.

A factor identified by buyer respondents was complaint handling with a quarter of customers interviewed being dissatisfied with the procedures in place. A factor identified by seller respondents was the efficiency of office personnel, with an engineer noting: "Speaking to some customers, the problem seems to lie more in the office rather than out in the field. It seems that in a lot of cases, they are not happy with the people in the office rather than the engineers."

The majority of customers discussed product performance – a problematic area for an industry that sells products the customer hopes they will never use. "How do you know if your fire-prevention and fire-fighting systems work effectively unless you have a fire?" The experience of a customer whose building was saved by an effective sprinkler system was subsequently a major factor in a purchasing decision.

Judy Zolkiewski *et al.* advise managers to recognize the dynamic nature of service quality and the role of both provider and user and make sure they develop strategies that cater for this complexity, e.g. by ensuring that employees are aware of the factors that their customers deem to be significant in service quality and how these requirements may change over time.

Managers need to find mechanisms for collecting perceptions about service quality both internally and externally (including perceptions from their wider network, such as subcontractors). Instead of using measures of service quality and satisfaction that have been transferred from consumer markets, managers need to take time to consider the most appropriate method of gaining feedback on aspects of quality in the context of the industries in which they operate.

Technical expertise and experience of a customer's business/industry may well provide a company with competitive advantage and bring them repeat business. Managers should ensure that they utilize the experience of their employees to the full in this context.

Personnel should be empowered and given appropriate technical training to enable them to solve problems before they escalate and become sources of real dissatisfaction.

The concept of "minimum disruption" as a dimension of service quality also has wide-ranging implications. Once managers are aware that such a factor is of central importance to customers, they should be able to offer solutions that explicitly focus on this aspect of their service. It can also be suggested that this notion does not just apply to aspects such as installation; it may well apply in maintenance and other consultancy visits, even in the context of making sales appointments to visit a customer.

Managers must also be aware of the influence of other actors in the network, e.g. the requirements that insurance companies place upon purchasers and that the selling company needs to have the expertise to implement. They also need to be aware of the impact that subcontractors may have on customer perceptions of service quality. In this context, it may well be pertinent to suggest that managers consider including performance indicators that relate to service quality in any contracts they set up with subcontractors.

Customers need to receive accurate, appropriate and timely information about products and services. Employee skills, including knowledge, courtesy and understanding of customer requirements, should be high priority in the recruitment and development of all employees (both front and back office).

When considering employee skills in a business-to-business service market context, employers need to be aware of the huge shifts in emphasis and operation that have taken place in personal selling and sales management. Salespeople were once selected merely on their ability to sell products and services. What's needed these days is consultative selling from problem solvers rather than persuaders.

There is a move from the use of charisma and aggressiveness, to customer understanding and the ability to provide high levels of customer service. Sales organizations should seek salespeople who can adapt their communications based on customers' needs and wants.

In "The shift in sales organizations in business-to-business services markets," Professor Arun Sharma traces the evolution of sales organizations and the changing business world they face. When business-to-business sales organizations initially emerged, salespeople sold a product in a specific location and were experts in explaining product attributes and functionality. As some firms' customers became national in scope, national account management sales forces were created, providing higher levels of service to important customers. In addition some firms recognized that some functions could be automated – order and payment through mail systems, for instance.

In the initial stages of services selling and sales management, the typical product sales force organization was used. But it became clear that selling services posed

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special challenges. Salespeople needed to use unique sales strategies as business customers perceived a higher level of variability and uncertainty when buying services.

In addition, the behaviour of salespeople influenced business customers' perceptions of quality more in a service setting than in a product context. And, in contrast to product selling, service selling needed in-depth knowledge of the customer's processes. The service salespersons needed to understand how their service processes matched the processes and desired outcomes of the buying firm. Therefore, the service salesperson needed to be a customer expert rather than a service or product expert. Additionally, in some cases, the service salesperson was also responsible for implementation of the service – not a requirement for product sellers.

The customer-focused, rather than service-focused, sales organization performed better as both the businesses and sales organizations changed toward a solution- and satisfaction-based service model. The shift toward solution selling has changed the role of a salesperson from a spokesperson for the firm's services to that of a consultant for the buying firm, involving them becoming experts in seeking solutions for the customer firm. Earlier research has suggested that an expected evolution from product selling to solution selling to trusted partner will take place.

As it was being becoming increasingly clear that the traditional product-focused sales force was ill-suited for the service context, traditional product-focused organizations were declining for many reasons. First, the rise of multi-channels, specifically inexpensive and effective channels such as the Internet, was causing firms to re-examine the cost of the traditional sales force. Salesperson costs have risen tenfold in the last five decades, now approaching about 3,000 dollars per order in the US. For example, costs of lead generation and qualifying from an internet site are insignificant when compared to a salesperson performing the same functions. It costs a firm about 500 dollars when a salesperson receives an order, but the same transaction can be accomplished on the internet for less than ten dollars.

Second, buying firms were moving from a focus on attribute-based products and services to solution-based products and services. Increasingly more firms are seeking a pay-per-use model where they pay for the solution service that is used. In this context, the role of the salesperson is changing from that of a service-based expert to a solution- or customer-based expert.

Third, tools such as the internet and e-mail were reducing the need for salespeople to be primary communicators of service attributes. Most business service firms have websites that provide extensive data on their services. Similarly, most firms have downloadable brochures. In addition, technologies were making ordering automatic, with the result that some sales processes, such as order taking, have become less relevant.

Sales organizations are evolving in two distinct directions. First, there is a reduction in salespeople's contact with customers due to enhanced sales automation. Sales automation through communication technologies such as the Internet and telephone has reduced costs and in some cases has enhanced customer satisfaction. Second, due to a solution and customer-based focus, there is an enhancement in the level of customer contact. For the majority of firms there will be an increase in the deployment of customer-focused sales organizations. The role of a salesperson will change from that of a persuasion agent to that of a consultant and implementation agent to the buying firm.

Professor Sharma suggests that customer-salespeople meetings be scheduled to evaluate the performance of the marketing firm. He also notes that, in the era of consultative selling, both evaluation and compensation systems will need to change. Salespeople's incentives need to be based on sales growth, profit growth, and customer satisfaction.

While a solution seller's evolution into a trusted partner can only be good for business, it's worth considering – when we use that word "trust" – exactly what we mean by it. It is also worth considering what other people think "trust" means, bearing in mind different people have different definitions, and for organizations to ask themselves, not just how big a part trust plays in their business, but whether they do anything to foster it, or just "let it happen."

In their "The role of trust in financial services business relationships," Katherine Tyler and Edmund Stanley say trust underpins many variables in the interactions and relationships in service business markets, and is crucial to our understanding of services business-to-business markets – not least in financial services, despite a formidable regulatory system which seeks to protect customers against misplaced trust.

The overwhelming majority of respondents in their study of UK corporate bankers and their clients identified trust as critically important within their bank relationships, a significant number arguing that without trust there could be no relationship, and most saying that a significant failure of trust would lead them to leave a relationship. Only four interviewees, on the client side, believed that other control systems obviated the need for trust.

There was, however, no common understanding of trust. Even managers from the same bank conceptualised trust differently. All considered it to be a means of controlling or limiting risk and there was a general appreciation that trust must be mutual. All the interviewees appreciated the difference between interpersonal, organizational and inter-organizational trust and, in general, interpersonal trust was viewed as more critical to relationship success than inter-organizational trust, and was interpreted more positively.

As most respondents were in long-term relationships, it suggests that there was some mechanism (levels of trust?) sufficient to maintain the exchange relationships that typify the UK business-to-business bank market. However, serious failures of trust were not unknown. Moreover, numerous bank clients were less than completely satisfied, even if this had not led them to rethink their financial services purchasing and switch banks. This dissatisfaction was particularly marked among SMEs.

Within interpersonal relationships, both bankers and their clients commonly saw honesty, integrity, discretion, mutuality, predictability and ability as essential components of perceived partner trustworthiness.

In addition, all clients were concerned with bank manager and bank reliability. The central component of reliability was "doing what was agreed." Trust in partner reliability created a sense of "confidence" and "comfort" and reduced uncertainty. If bankers failed to complete actions as agreed (this applied equally to dispatching a chequebook as providing finance), or worse, promised actions that were subsequently not approved, trust swiftly turned to mistrust. Bankers understood this danger.

Most respondents acknowledged that banks have become increasingly reliable. However, this development has gone hand-in-hand with less well-received changes. Those with a longer experience of bank markets, on both sides, felt the nature of trust in banking had changed significantly. In particular, there has been a reduction in the expression of trusting behaviours by banks, connected to increasing use of technology, a proliferation of paperwork, bank centralization and impersonal call centres, especially in relation to specialist product generation and key decision-making.

Company and bank respondents with experience of "old style" account management, expressed disquiet with this change. An experienced banker said:

> The bank, in it's training programme and certainly the fast-track training programme, trains people to be very good money lenders, but there is a lot further to go in developing bankers.

This quote encapsulated awareness that trust, and by extension "good banking", were products of more than simple service satisfaction. However, only a minority of interviewees (mostly bankers) had considered trust development and maintenance in a sophisticated way, despite the widespread acknowledgement of its importance. A number even argued that there was little they could do to develop trust. Only a minority displayed evidence of having thought about trust in the structured way in which they would consider other important elements of their business practice.

Bankers and their clients would be well advised to gain an understanding of trust, and provide key people, who build external relationships, with an insight into the role of trust in customer service and relationship building and maintenance in services business-to-business markets.

Katherine Tyler and Edmund Stanley say:

> Although trust is foundational to establishing relationships at a personal, organizational and inter-organizational level and an essential element of customer service and service quality, banks and bankers have no explicit strategy or staff guidelines for developing trust. The banks have no generally-recognised and accepted definitions of trust, trusting behaviours, or how trust should be operationalised. As an important underpinning element of customer service, service quality and relationship building and maintenance, trust should be developed explicitly, strategically and consciously through the adoption of behaviours likely to encourage trusting.

Trust is not the only concept with which marketers and practitioners have to grapple with differing definitions and a complex array of views relating to antecedents and consequences. If people have to put their trust in trust to create and maintain profitable business-to-businesses arrangements, what value should they put on value?

Various accolades have been bestowed on the concept of product and service providers giving "value" to customers, including "value is what every marketer should be all about", "value is the basic foundation for everything we do in marketing" and the equally unequivocal view that "in business markets, the value of a product offering in a given application can be thought of as the cornerstone of marketing strategy."

But what is the functional relationship between value, satisfaction and intention to repurchase?

In their "A re-examination of the relationship between value, satisfaction and intention in business services" Graham Whittaker, Lesley Ledden and Stavros P. Kalafatis contribute to the relatively sparse literature dealing with that question, and add to the debate regarding conceptualisations and operationalisations of value within a professional service domain.

Their research framework includes the following six consumption values:

1. Functional value is related to the perceived performance or utility of the product or service, i.e. an offering's ability to fulfil the function that it has been created to provide, as well as the benefits associated with owning it. This dimension is particularly associated with extrinsic attributes.
2. Epistemic value refers to benefits derived through an offering's ability to arouse curiosity, provide novelty or satisfy a desire for knowledge. The inclusion of this dimension is based on the fact that many professional services (e.g. consultancy, training, etc.) are specifically designed to improve the skill and knowledge base of the client organization.
3. Emotional value accounts for benefits obtained from an offering's ability to arouse feelings and/or affective states.
4. Social value represents the benefits derived through inter-personal/group interactions and, together with emotional value, this dimension is considered to account for relational benefits.
5. Image represents benefits derived from being associated with a business partner that enjoys high market status. This dimension is closely related to the reputation of the service supplier and can be considered to act as a risk-reducing mechanism.
6. Price/quality value represents an evaluation of functional aspects of value relative to the give aspects of the consumption experience. More specifically its accounts for customers' perceptions of the service they receive in exchange for what they give in terms of payment/sacrifice.

Concluding that value is a higher order formative measure that includes both benefits (get) and sacrifices (give), Whittaker *et al.* say:

> The results support the conceptualisation of emotional, functional, epistemic, price/quality, social and image as collectively comprising perceived value in a business service domain. This in turn implies that in order to engender perceptions of value, providers of business services should consider their actions in terms four main customer perceptions.

These are:

- outcome directed perceptions (i.e. value related to the very purpose of the business service on offer and the resultant service knowledge);
- relationship building perceptions (i.e. value related to inter-personal interactions and development of trust);
- atmosphere related perceptions (i.e. value related to feelings and risk reduction safeguards generated through association with a specific service provider); and
- sacrifices related perceptions (i.e. whether the experience merited the financial and other associated costs incurred as part of the service experience).

Mapping their offering against the above and identifying specific actions designed to account for these facets of value are obvious ways that providers of business services can enhance customer perceptions. The authors say:

> Until further research allows us to be more confident in our recommendations we suggest that although our results indicate that emphasis should be placed on actions that enhance perceptions of social, epistemic and price/quality values, the other identified dimensions of value (i.e. emotional, functional and image) should not be overlooked.

Their observed weak impact of satisfaction on re-purchase intention leads the authors to suggest that, although service providers could improve customer retention by attempting to increase their level of satisfaction, their efforts will be more effective if focused on demonstrating the way that the service provided has helped their customers to achieve their goals. In other words, that emphasis should be placed on goal-based rather than consequence-based satisfaction.

Customers can be a pretty strange bunch of people when it comes to satisfying their needs and encouraging them to stay loyal. To take an example, if a customer sees an improvement in the visual aspect of packaging their overall satisfaction with the product can increase significantly. However, a drop in its visual aspect might have little impact on their overall satisfaction.

Another example is that a drop in reliability can significantly lower a customer's satisfaction with a service provider, but an equivalent increase in service reliability might have little impact on that customer's satisfaction.

Strange lot, indeed. But they are not just whims on the part of individual customers. There is a logic to it, and the asymmetric effects which service quality creates need to be better understood. So too does the importance of considering customer segments separately. Failure to consider the differences between customer groups may lead to managers getting misleading information, and result in the firm trying to optimize performance on the wrong attribute for a given segment.

In "Segment differences in the asymmetric effects of service quality on business customer relationships" Simona Stan, Kenneth R. Evans, Charles M. Wood and Jeffrey L. Stinson study satisfaction and relationship continuance intentions of business customers of advertising services, proposing a model of service quality consisting of: service outcome (results for the client's business), technical quality (e.g. reliability of technical service delivery) and functional quality (e.g. reps' responsiveness, empathy and assurance).

They found that, along the service dimensions-satisfaction-retention chain, there are significant negative asymmetric effects. More importantly, perhaps, there were significant differences across different customer segments.

Large accounts were primarily concerned with getting results from advertising. Negative asymmetry means that if large accounts experience a loss in advertising results, their overall satisfaction will be impacted more than if they experience a similar gain. Service outcome had a similar effect on relationship continuance intentions.

However, this effect is completely mediated by overall satisfaction. This means that delivering a consistently high level of advertising results to large accounts is critical for keeping them satisfied, which in turn determines their level of loyalty to the service provider. In contrast, it seems that small accounts are not as influenced by the service outcome.

In contrast, reliability, which is the technical service quality dimension, has a significant positive direct impact on small accounts' relationship continuance intentions with a negative asymmetric effect. This effect is not mediated by customers' overall satisfaction. In fact, reliability seems not to play a significant role in determining satisfaction. Instead, it has an additional effect on relationship continuance intentions, after the effect of overall satisfaction has been accounted for. Interestingly, reliability has no significant effect in the case of large accounts. This means that, for small accounts, satisfaction and relationship continuance intentions are at least partially determined by different aspects of service quality. While overall satisfaction remains the most important factor in retaining all type of customers, small customers tend to be particularly sensitive to reliability issues, which act as a utility preserving factor, when considering repurchasing from the same service provider.

Functional service quality seems to have a significant effect on small accounts but not on large accounts. More specifically, small customers' overall satisfaction is positively impacted by reps' assurance and empathy. While assurance seems to have a symmetrical effect, empathy seems to have a fairly strong negative asymmetry that suggests that small accounts tend to view reps' understanding and caring behavior as an important utility preserving factor.

The same pattern of effects is displayed for relationship continuance intentions. However, the effects of both assurance and empathy on relationship continuance intentions are completely mediated by overall satisfaction. This means that, while large accounts seem to be less sensitive to the quality of reps' interaction, small accounts' satisfaction and, in turn, repurchase intentions, are significantly determined by reps' assuring and nurturing behavior.

As in the case of account size, new and mature accounts do not differ in terms of service quality perceptions, satisfaction or relationship continuance intentions. However, important differences are found in the impact of service quality. Customers with mature relationships may be accustomed to receiving a certain level of results from the advertising services provider and therefore are only slightly affected by perceptions of service outcome. In contrast, new customers seem to be particularly sensitive to the service outcome.

The reliability of the service provision process seems to be a significant factor in retaining the new customers. Among customers with similar levels of overall satisfaction with the service provider, new customers are more likely to end the relationship when receiving lower than average service reliability, than they are likely to continue the relationship when they receive higher than average service reliability.

Functional quality seems to be important, although in different ways, for both newer and mature accounts. In the case of mature accounts, empathy is the only service quality dimension which has a significant impact on customers' satisfaction and intentions to continue the relationship with the service provider. In contrast, for newer accounts, all dimensions of service quality play a role in customers' satisfaction and retention.

Managers should invest resources in improving low performance in the service quality dimensions with strongest impact on customer satisfaction and highest negative asymmetry. Delivering results through the service outcome is the dominant factor in satisfying and retaining large accounts.

Given that keeping the customer satisfied, and eager to continue with a relationship, entails understanding different types of customers and the different values they put on service outcomes, what of the complexity of relationships spanning fundamentally different organisational environments and corporate cultures, each having different motives and expectations – i.e. business and university?

Given the increasing need of organisations for innovation in competitive, fast-moving marketplaces around the world, research customers provide a highly-relevant services business market.

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Research services are anchored in vast pools of knowledge, capabilities and facilities and may take on a number of forms due to the diversity of research areas and methods accumulated at universities. They all encompass one characteristic, namely the need for a close interaction between the research providers and customers to enable the transfer of knowledge and research, indicating a need for a relational approach.

In "Key drivers of university-industry relationships: the role of organisational compatibility and personal experience" Carolin Plewa and Pascale Quester investigate research-oriented university-industry relationships (UIRs). They warn, however, that:

> Developing any interactive, trusting and long-lasting relationship is not possible if the organisational structure, culture or senior management oppose the idea of relationship building. Hence, management aiming at developing UIRs should be confident of their groups' ability and willingness towards building relationships with the other environment.

Given the different benefits sought by both parties, the concept of satisfaction was deemed a valuable measure of relationship success, enabling the analysis of an overall impression of success gained by both partners, reflecting their respective expectations and performance perceptions.

Universities are believed to benefit primarily in economic terms, including financial support for future research, plus the benefits of seeing their basic research results applied to industry problems. Organisations generally want to acquire technology and knowledge, and also gain access to the talented people they might encounter during the relationship.

Unsurprisingly, matters of confidentiality arise when collaborating on matters of research and technology with another party, especially when entering an unfamiliar environment. Consequently, the implicit need for trust. However, trust is considered in the study, not as an actual behaviour, but as an underlying psychological condition based on the overall relationship.

As uncertainty is inherent to research and increased by confidentiality concerns, trust is essential for the collaboration. As time is needed for trust to develop, it follows that university-industry relationship development requires a long-term focus.

Trust was confirmed as the strongest predictor of satisfaction. The building of close, trusting relationships reduces perceived risk and also offers flexibility in operations and information exchange, providing a basis for research and discovery. Given the impact of trust on satisfaction, the study results' lack of a significant link between trust and intention to renew was surprising. Since neither trust nor satisfaction was shown to influence intention to renew, it would appear that decisions about the future do not necessarily depend on the affective conditions in the relationship.

Industry groups appear to approach, and collaborate with, those research groups and academics that had previously demonstrated their ability to build relationships with industry. A research group may, therefore, position itself based on previous relationship experience.

Following the attraction of a potential partner, trust should then be allowed to first develop through small-scale undertakings rather than directly considering high-risk projects.

Compatibility of organisational cultures strongly related to trust and was seen to also influence commitment and integration. As it can be achieved by means of matching goals, objectives and operating philosophies, the deliberate consideration of these factors is required in the relationship initiation phase and should be repeated continuously, as goals change with the parties' environments and circumstances. Furthermore, structures and processes for knowledge dissemination between partners need to be established to encourage integration.

The authors comment:

> Our results clearly indicate that groups aiming at the long-term continuation of a relationship should focus primarily on increasing levels of commitment. Besides valuing the relationship, they have to actively contribute to maintaining the relationship in order to achieve an ongoing affiliation.

As the time and financial effort provided to a specific relationship may depend on the overall university or corporate strategy, processes should be put in place to determine the relationships that the organisation wants to retain and to empower groups to contribute to these relationships in their best possible way.

(A précis of the special issue "Business to business services: multiple markets and multi-disciplinary perspectives for the twenty-first century". Supplied by Marketing Consultants for Emerald.)