

The Service Paradox in Business-to-Business Markets

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Abstract

Service quality in consumer markets has been widely discussed, while little attention has been paid to service quality issues in industrial markets despite its well recognized importance in this area (Cunningham and Roberts 1974, Singh 1990, Holmlund and Kock 1995). Researchers have called for a close investigation of service quality in business-to-business markets (Zolkiewski and Lewis 2003, Parasuraman 1998). The overall objective for research project is to explore whether service quality dimensions and models developed in consumer markets are applicable in business-to-business markets, and the similarities and differences between these (if differences exist). Firstly, previous studies of service quality in business-to-business markets are reviewed. Then, research questions are raised relating to the gaps identified in the literature. Possible methodologies for this study are then discussed.

Introduction

It has been recognized that services and industrial activities are interdependent and intertwined (Quinn, Baruch and Paquette, 1988) and they have been acknowledged as important in supplementing core offerings as well as being a major component of transaction in industrial contexts (Crosby, Evans and Cowles, 1990). Services are also considered as one of the most vital factors for choosing suppliers (Holmlund and Kock, 1995) and part of industrial buyers' full economic value of purchasing (Rose, 1965). Moreover, services have a great influence on satisfaction creation and play a major role in revitalizing a company (Chumpitaz and Paparoidamis, 2004). Manufacturers can be more successful by exploiting the manufacturing-services interface (Quinn et al., 1988). However, a service paradox has been found in manufacturing companies where 'substantial investment in extending the service business leads to increased service offerings and higher costs, but does not generate the expected correspondingly higher returns' (Gebauer, Fleisch and Friedli 2005, p. 14). Companies fail to make the most benefits out of the service function (Morris and Davis 1992). Manufacturers are not clear either about what services their customers really need or the cost of providing these services (Anderson and Narus 1995). Industrial marketers need to learn how to value, sell, deliver and bill services (Oliva and Kallenberg 2003). It is important that this paradox is investigated in order to provide academic and managerial insight into what is a crucial element given the increasing importance of services in a business-to-business context.

There are a number of avenues which this investigation could take as despite a growing interest in business-to-business services (e.g. Halinen (1994), Axelsson and Wynstra (2000), van der Valk, Wynstra and Axelsson (2005)) the majority of extant research focuses on relationships or networks (see for instance Håkansson (1982) and Ford (2002)). To inform this debate, a useful point of reference is the plethora of work which has been undertaken in consumer services and in the spirit espoused by Araujo and Spring (2006) we seek to integrate work from this area into the business-to-business context.

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In academic research, the importance of service quality in business-to-business markets has been recognized since the early 1970's (Cunningham and Roberts, 1974), and there is growing academic attention focused on service components in industrial markets due to the development of services marketing (Upah, Berry and Shostack, 1983). However, service quality has been under-researched in this area compared to its wide investigation in consumer markets (Moore and Schlegelmilch 1994, Axelsson and Wynstra 2000, Mehta and Durvasula 1998), because issues discussed in business-to-business marketing have focused on industrial goods (Jackson and Cooper 1988, Reid and Plank 2004) and interaction, relationships and networks (Håkansson, 1982, Anderson and Narus, 1995, Ford, 2002). It is also possible that because complex relationships involve a multitude of interaction episodes, which by their very nature involve a mix of product and service exchanges, the consideration of service as a separate entity has been neglected. Homburg and Garbe (1999) have noted the paucity of industrial services models. Further, the application and performance of service quality models (which were developed in consumer markets) in an industrial setting has been neglected (Moore and Schlegelmilch, 1994).

Researchers have called for more investigation into service issues in industrial markets (e.g. Homburg and Garbe 1999, Moore and Schlegelmilch 1994, Parasuraman 1998, Zolkiewski and Lewis 2003, Mehta and Durvasula 1998, Jayawardhena, Souchon, Farrell and Glanville 2007). Research agendas have been proposed (e.g. Moore and Schlegelmilch 1994; Parasuraman, 1998), including assessing different members' service quality perceptions in an organisation, modifying the methodology used in consumer markets to identify industrial service quality determinants, investigating the different customer characteristics' (e.g. company size) impact on the determinants of service quality, and developing techniques for measuring service quality in industrial markets (Moore and Schlegelmilch 1994).

This project responds to these research needs, and explores service quality issues in business-to-business markets. The remainder of the paper is structured as follows: firstly we define what we mean by service in a business-to-business context, we then provide a review of the key studies related to the topic, identifying the gaps and formulating research questions accordingly. Our proposed research methodology is then presented and some tentative conclusions drawn.

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Literature Review

Service Classification

The definition and domain of service in business-to-business markets needs to be clarified further in order to frame this research and while a great deal of attention has been paid to the classification of consumer services this has not been the case for industrial services (Boyt and Harvey, 1997). Different terms for services in industrial markets have been used in the literature, including business-to-business services, business services, professional services and industrial services, lacking a clear conceptualization of different types of services (Homburg and Garbe, 1999). An additional complexity arises from the recent contentions that service characteristics, particularly inseparability, intangibility, heterogeneity and perishability are not peculiar to services (Lovelock and Gummesson, 2004), that there is heterogeneity across services (Araujo and Spring, 2006) and a call for a move to a service-centric logic (cf. product-centric) of marketing (Vargo and Lusch, 2004). Thus a new definition of services is needed in which non-transfer of ownership is given more prominence (Lovelock and Gummesson, 2004). Araujo and Spring (2006) believe that Hill's (1977, 1999) work provides a useful framework here in that services cannot have property rights attached to them nor can they be exist except in the context of the relationship between the service user and the service provider.

The difference between services and service has also to be considered, although it has been argued that in industrial markets, service is not limited to an interaction with the product itself, but anything that increases the value of the product to buyers (Singh, 1990). Cunningham and Roberts (1974) divided services into two categories: (1) service which is central to the transaction and is being sold, such as transport services and industrial cleaning services, and (2) service supplied in conjunction with the product which is central to the transaction. This classification is supported by Parasuraman (1998) using terms 'services' and 'service' to distinguish pure service provided to customers from service as a supplement accompanying either the tangible or intangible core offering. Reid and Plank (2004) also acknowledged the classification of industrial services into pure service and service augmenting the core product.

Service augmenting the core offerings is increasing in business-to-business markets and has been found to have greater influence in creating satisfaction than the actual core offering (Chumpitaz and Papparoidamis, 2004). Reid and Plank (2004, p. 88) support this argument and highlight that 'organizational buyers are generally perceived as being much more concerned with the service aspects of the products they buy than the typical consumer'. Despite the importance, the early investigation of service in business-to-business markets has been found to be mostly focusing on professional services with little research in industrial marketing of 'other services' (Grönroos, 1979). Service supplementing the central product of the transaction needs to be investigated. However, it has been suggested that the importance of service from the customers' perspective varies due to the difference of whether the core offering is tangible or intangible. Service may be considered to be of lower importance when the core offering is concrete than when it is intangible (Parasuraman, 1998). Research in both these two areas is

fragmented (Reid and Plank 2004). Therefore, research that investigates both tangible and intangible core offerings in business markets is needed.

Consumer services research provides an extensive discussion of service quality and its measurement¹, see Zolkiewski and Lewis (2003) for some insight into this. Lewis (1993) provides a useful summary of the issues surrounding the measurement of service quality in a consumer context. She highlights the centrality of the service encounter (which could be seen as a parallel to the interaction episode in the interaction approach, Håkansson, 1982) and the difference between measuring service quality, where expectations are seen as desires and/or wants and satisfaction, which is 'the difference between predicted service and perceived service' (Lewis, 1993, p. 4); satisfaction is also subject to decay over time. The discussion of service quality in a business-to-business context is relatively sparse, however, the following section reviews the literature to date and highlights the gaps in this literature.

Service Quality in Business-to-Business Markets

It is difficult to find consensus amongst researchers into business-to-business service quality. The following reviews illustrate a number of different perspectives as to the nature of service quality. These include:

- Research that illustrates the different facets of service
- Research that has adopted the Parasuraman, Zeithaml and Berry (1985, 1988) categorization of consumer service quality dimensions as the basis of their investigation
- Research that is derived from and extends the Grönroos (1984) dichotomy of functional and technical dimensions of service.
- Other approaches, such as that taken by Woo and Ennew (2005) that is derived from the interaction approach.

Facets of Business-to-Business Service Quality

Probably due to the maturity of the professional service field, the early investigation of service in business-to-business markets has been found mostly in professional services. Several articles about professional services were published in top journals during 1960s and 1970s (e.g. Wittreich 1966; Turner 1969; Kotler and Connor 1977; Gummesson 1978). They suggested that buying and selling professional services are different from buying and selling goods. Professional service quality is a subjective measure. Gummesson (1978) identified various important components for professional services, including four necessary components such as specialist know-how, individual professionals, way of operating, and solution. In addition, there are another four selective components: other resources and attributes, diagnosis, problem and goal formulation, implementation of a solution, and the result of the implemented solution.

Cunningham and Roberts (1974) interviewed executives at 13 buying points in the pump industry and 12 buying points in the valve industry. They identified 13 different facets of a total service required by industrial buyers, among which seven are found to be of extreme importance. These seven criteria are 'delivery reliability', 'test facilities', 'technical advice', 'replacement guarantee', 'willingness to manufacture a wide range', 'ease of contact' and 'prompt quotations', 'sales representation' and 'after sales service'. Four criteria were of little or no significance in the opinion of the vast majority of buyers. These four items are 'discount structure on list prices', 'extended credit facilitates', 'pattern (or die) design service', and 'provision of machining facilities'.

Banting (1976) replicated Cunningham and Roberts's (1974) study in a Canadian environment in order to make a comparison with the UK study. Differences were found between the UK and Canadian data with respect to the relative importance of service components. Within the Canadian set, pump and valve manufacturers appear to be differentiable by their service expectations, where valve manufactures are interested in provision of technical advice, ease of contact and replacement guarantees, while pump manufactures are concerned about discount and after-sales service.

¹ It is beyond the scope of this paper to provide an extensive review of this material.

Parasuraman and Zeithaml (1983) investigated services offered by commercial marketing research firms from both suppliers' and clients' points of view. The results suggested that suppliers and clients disagree upon the overall rankings of the importance of ten factors (i.e. research firm's reputation, quality of research, usefulness of research results, understanding client's problem, qualifications of key employees, personality of key employees, price of research services, referral by satisfied clients, personal solicitations, and research firm's advertising). For example, 'understanding the client's problem' and 'usefulness of research results' which are perceived to be most critical by the client group, are ranked lower by the supplier group. This illustrates one of the critical differences between understanding service quality from a business-to-business perspective and a consumer perspective; the complexity of the buying and using groups in business-to-business contexts (see Turnbull (1999) for a discussion of the different roles in the buying centre).

Qualls and Rosa (1995) believe that quality perceptions vary across different functional areas. They assessed engineering, purchasing, manufacturing and corporate management personnel's evaluations of their semiconductor suppliers. They identified six factors used to assess suppliers, including technological leadership, providing competitive advantage, being responsive to day-to-day issues, distribution services, technical resources and expertise, and sensitivities to operational concerns. The results showed that the importance of these factors varied across functional areas. Technological leadership, providing competitive advantage, and being responsive to day-to-day issues were found to be universally important across functional areas. Interestingly, distribution services were found to be important only to purchasing personnel, but not other disciplines. Technical resources and expertise were the two most important criteria for engineers, while sensitivity to operational concerns was more critical to manufacturing than to other groups. Qualls and Rosa (1995, p. 363) further pointed out that buyers have different levels of expectations for each supplier, and that '...buyers emphasize different dimensions of quality depending on whether the supplier is most or least preferred.'

Chakraborty, Srivastava and Marshall (2007) supported Qualls and Rosa (1995), finding that people from different functional areas of an organisation attach different degrees of importance to what the suppliers are offering. 'Commercial aspects' were considered as more important for people in purchasing, management and finance/accounting, while 'product related information' were more important for people in engineering, maintenance and production. However, reliability was shown to be the most important driver of satisfaction for all members in a buying centre.

Donaldson (1994) examined the dimensions of service that buyers value in choosing a specific supplier. In his research, services are expressed as four distinctive aspects. First, service is seen as a measure of quality relating to the overall competence of a supplier which includes quality of product information, importance of technical advice, product guarantees, after-sales service, quality of support personnel and the importance of new technology; the second factor refers to the adaptability and responsiveness of a supplier to customers' needs which includes importance of flexibility, market information, competence combined with ease of contact and responsiveness; the third aspect refers to the delivery performance of a supplier which includes time from order to delivery, delivery reliability, the importance of available information and accuracy of transactions. The fourth factor refers to credit and discount. Donaldson (1994) further pointed out that the relative importance of service dimensions will be situation specific.

Kyj (1987) investigated the use of customer service as a competitive weapon in six different industries: silicate, concrete, heating oil, industrial gas, rubber, and agricultural products. His findings supported Donaldson (1994) that firms in different industries assigned great importance to different customer service attributes.

Zolkiewski et al (forthcoming) conducted interviews within the UK's largest provider of fire protection, safety systems and specialist control technology engineering company, its subcontractors and customers. Their dyadic investigation indicated no clear consensus on which dimensions of service are applicable in a business-to-business context. No agreement was achieved by both parties in a relationship on which dimensions of service quality are important. Therefore, Zolkiewski et al

(forthcoming) pointed out that some components are generalizable across different industries while some are specific to the context in which they are operating. In addition, five new factors were discovered in their research, including suppliers' experience in customers' industries, lack of disruption, peace of mind, performance of subcontractors, and problem handling. Zolkiewski et al (forthcoming) advocated investigation across different industries to generalize findings to a wider context, and further, how the service quality components connect to other factors such as trust, commitment, customer profitability and retention.

The diversity of views discussed above show the lack of consensus relating to service in a business-to-business context (see **Error! Reference source not found.**). This is further illustrated in the discussions relating to the service dimensions that are applicable in a business-to-business context, as illustrated in the following sections.

Research Derived From Parasuraman, Zeithaml and Berry (1985, 1988)

Some of the research into service quality in a business-to-business context has used the Parasuraman, Zeithaml and Berry (1985, 1988) classification of service quality dimensions (tangibles, reliability, responsiveness, assurance and empathy found in the SERVQUAL model) as the driver for their investigations. The researchers that have adopted this approach are discussed below.

Powers (1988) examined the components of service quality in an industrial context and classified the elements of quality in two aspects: the time dimensions of quality and the tangible versus intangible dimensions of quality. According to Powers (1988), the time dimensions of quality include search quality (aspects that customer can perceive prior to the purchase such as provided information), experience quality (post-purchase evaluation of the product) and credence quality (the overall credibility of the product offer). By separating tangible and intangible elements, Powers (1988) adopted the five elements of quality from Parasuraman, Zeithaml and Berry (1985), including tangibles, reliability, responsiveness, assurance and empathy. He also suggested that customers' requirements of each of each of the components of service quality may be different, indicating a relative importance of quality components.

Many researchers (e.g. Brensinger and Lambert 1990; Bienstock, Mentzer and Bird 1997; Mehta and Durvasula 1998; Peterson, Gregory and Munch, 2005) have simply replicated the use of the Parasuraman, Zeithaml and Berry (1985) dimensions in an industrial context. Not unsurprisingly there is no consensus amongst their results. Peterson, Gregory and Munch (2005) found that 'responsiveness' was the most important dimensions than any others, even the 'reliability' dimension. Their findings also indicated the homogeneity of service quality dimensions from customer perceptions in the high-technology repair service setting. However, employing SERVQUAL instrument in the shipping industry, Mehta and Durvasula (1998, p. 52) found that 'service quality in business-to-business industry has the additional dimension of the corporate interaction applying to the customer not just the supplier.' Bienstock, Mentzer and Bird (1997) criticised SERVQUAL's dimensions as primarily process dimensions, not adequately capturing the service quality construct. Instead, they proposed Physical Distribution Service Quality (PDSQ) as an alternative which is more suited to an industrial context. Physical Distribution Service Quality (PDSQ) focuses on the technical or outcome dimensions such as timeliness, availability and condition rather than Parasuraman, Zeithaml and Berry's (1985) process dimensions.

Although the importance of tangibles, reliability, responsiveness, assurance and empathy have been widely accepted and adopted in services marketing, the generalisability of Parasuraman, Zeithaml and Berry's (1985) service quality dimensions has been questioned both in consumer markets (Babakus and Boller 1992, Buttle 1996) and industrial markets (Moore and Schlegelmilch 1994). Further, whether the five dimensions could be applied to different levels of an organizational hierarchy remains unclear (Moore and Schlegelmilch 1994). The value of deriving actionable plans from the five dimensions in an industrial setting has also been questioned (Brensinger 1990).

Research Derived from Grönroos (1984)

Grönroos (1984) views perceived service as a result of a consumer's view of a bundle of service dimensions, including both technical (what the customer gets) and functional (how the customer gets it) parts. Although Moore and Schlegelmilch (1994) questioned the applicability of Grönroos' (1984) service quality dimensions in industrial service companies, Szmigin (1993, p. 9) acknowledged Grönroos' (1984) service quality model and claimed that 'the Grönroos dual aspect of technical and functional quality is particularly well suited to act as a framework for the study of business service relationships', but criticized the use of terms 'functional' and 'technical' as difficult to differentiate. Instead, Szmigin (1993) advocated using the terms 'hard' and 'soft' instead of 'technical' and 'functional'. At the same time, Szmigin (1993, p. 9) introduced a third quality component 'outcome quality' and differentiated outcome quality from the other two dimensions as it 'cannot be controlled by the companies in the relationship'. Szmigin (1993) supported Powers (1988), emphasizing that different businesses include different factors in hard quality, soft quality and outcome quality; this illustrates the difficulty of finding a consensus about appropriate service quality dimensions in business-to-business services. Moreover, Szmigin (1993) highlighted that customers' requirements for hard and soft quality change over time and a long-term relationship depends on the understanding and managing of the changes.

Homburg and Garbe (1999) conceptualized a triangular service quality model in the industrial context by adapting from Donabedian's (1980) research in health care services. Their conceptualisation is an extension of the model suggested by Grönroos (1984), adding a third quality dimension 'structural quality' which is '...related to the technical qualification of the service technicians as well as their availability.' (Homburg and Garbe 1999, p. 10). The other two dimensions are: process-related quality which refers to the activities between service providers and customers, and outcome-related quality which is the result of the service delivery. Homburg and Garbe (1999) believed that the triangular model is the most appropriate one for services quality in an industrial setting.

Other Approaches

Arnaud (1987) in Michel et al (2003) grouped four dimensions of service quality: institutional, technical, relational and functional. He believed that the elements of the institutional dimensions are linked to communication and image. The technical dimension refers to the core of the service offering, namely, technical solution. The relational dimension maintains the credibility for a long period. The functional dimension highlights the added value of the customer service. The four dimensions are related to each other, and can reinforce or weaken each other. The institutional dimension is the result of the other three dimensions.

Woo and Ennew (2005) criticised the limitations of the Nordic and the American school of services marketing for confusing technical and functional dimensions. Instead, they utilized an IMP perspective to conceptualise business-to-business professional services dimensions. They proposed four dimensions of exchange (i.e. product/service exchange, financial exchange, information exchange, and social exchange) in a relationship, and two longer-term aspects of the relationship (cooperation and adaptation) to represent indicators of perceived service quality. Woo and Ennew (2005) believe that the model covers a wide range of activities performed by both buyer and seller where the first four elements are the essentials of encounter-specific interactions and the final two indicators reflect the development and evolution of those interactions. Woo and Ennew (2005) further pointed out that existing service quality studies have addressed some of the six dimensions, for example, product/service exchange and social exchange. While other dimensions such as financial exchange, information exchange, cooperation, and adaptation need to be further investigated in a business-to-business context rather than in a consumer market setting. Woo and Ennew (2005) believe that the IMP perspective is a more robust tool to capture the interactions in a business-to-business context, and provides a foundation to identify service quality dimensions.

Summary

In the limited research that has been undertaken into service quality in business-to-business markets, it has been assumed that service quality dimensions from consumer markets can be applied (Yuan, 2003a, Yuan, 2003b). However, although organisational purchasing behaviour has been suggested to

be similar to consumer buying behaviour (Wilson, 2000), and there are similarities between consumer and industrial services, significant differences do exist (Boyt and Harvey, 1997). Mehta and Durvasula (1998, p. 52) pointed out that 'service encounter is pretty simple in most consumer situations whereas business-to-business service encounters are often long drawn out and complicated...The more people involved, the greater chance there is of service breakdown or relationship problems. Thus, service quality in business-to-business industries has the additional dimension of the corporate interaction applying to the customer not just the supplier.' Further, most of the evidence for customer service considered as an important criterion for vendor selection is obtained from consumer markets while substantial evidence is missing in the industrial marketing context (Moore and Schlegelmilch 1994, Wouters 2001). Whether the key determinants of service quality developed in a consumer setting are equally applicable in an industrial context is a prioritised issue in research (Moore and Schlegelmilch 1994). It is interesting that despite Moore and Schlegelmilch's (1994) call and similar calls from other researchers (e.g. Parasuraman, 1998) research into service quality in a business-to-business context still remains limited. It is interesting to consider why this is the case.

Sheth and Sharma (2006) discuss the surpluses and shortages in business-to-business marketing theory and research; service quality is not mentioned. We would contend that this is because it has become subsumed within the concept of the relationship – perceptions of service quality must have an impact upon the ongoing transactions that may or may not form a relationship and thus service quality should be an important aspect in understanding relationships. However, business-to-business marketing contains discussion of the interaction episodes and relationship atmosphere (Håkansson, 1982), where the interaction episodes could be seen to encompass service encounters which is where service quality perceptions are formed. Issues such as building trust and the role of commitment, power plays and dependence all attract significant research attention. Reid and Plank (2004) provide a useful summary of extant research. Relationship quality does receive research attention, but this a complex construct and as yet has no consensus to its composition (compare Woo and Ennew (2004), Beloucif et al (2004) and Naudé and Buttle (2000) for instance). While Wilson (1995) does include performance satisfaction as an important relationship variable, this is the outcome of a number of factors, some of which will involve service quality. It is also interesting given the ongoing debate within the IMP group about their inability to offer managerial relevance that something such as service quality (which could be argued to provide managerial insight as to the customers' perceptions of the service they receive) is neglected.

Service quality is dependent upon an interactive process; however, there is a shortage of research addressing the service quality construct from a multiple perspective and interactive process (Svensson 2003). 'Collecting perceptions from both sides of a relationship is too often neglected, especially in the extant business-to-business services marketing literature.' (Zolkiewski et al forthcoming, p. 13). Among the few studies which have examined industrial services, even fewer were examined from the organizational buyers' perspective (Jackson, Neidell and Lunsford, 1995), although data collected from both suppliers and customers revealed that 'personnel from both sides of a relationship have different perceptions/understanding of service quality.' (Zolkiewski et al forthcoming, p. 29; Parasuraman and Zeithaml, 1983). Dyadic research assessing both employees' and customers' perceptions in business-to-business service is needed (Jayawardhena et al 2007).

It has been noted that the marketing literature has stressed the differences between industrial and consumer markets; however, more and more researchers have called for an investigation of the similarities between the two (Fern and Brown 1984, Wilson 2000), or borrowing knowledge from the counter party (Cova and Salle 2003, Singh 1990). 'It is time to develop a research emphasis which asks what are the similarities between organisational and consumer buying behaviour – and between the many other over-polarized dichotomies of marketing theory – rather than what are the differences' (Wilson, 2000, p. 794). For this reason it is proposed to use the extant research into service quality both from a consumer and a business-to-business context to guide this research, but note this is a guide rather than a constraint.

The importance of investigating a question in different industry settings has been stressed by several researchers (e.g. Matthyssens and Vandenbempt, 1998). Some service quality components have been found generalizable across different industries while some are specific to the context in which they are operating (Kyj 1987; Donaldson 1994; Zolkiewski et al forthcoming). It would be interesting to examine the generalisability of service quality dimensions in different industry settings.

Research Questions

The discussion above shows the limited existing research into service quality in a business-to-business context and, within the limited research that exists, the lack of investigation of the concept from a dyadic perspective. A number of important gaps can be identified in the literature; these have been used to derive the research questions.

Firstly, the lack of consensus as to which service quality dimensions can be used to describe service quality (see the variety of approaches discussed above, some derived from Parasuraman, Zeithaml and Berry 1985 and some from Grönroos 1984) along with the need for a dyadic explanation of the concept (Zolkiewski et al, forthcoming). This leads to the following research questions:

1. What are service quality dimensions from the purchasing organizations' perspective?
2. What are service quality dimensions from the selling organizations' perspective?
3. How do these dimensions compare to those that have already been suggested in the extant research (either consumer or business-to-business)?

Within business-to-business markets it is recognized that membership of the buying and selling units is complex, with multiple personnel being involved in service delivery, e.g. Parasuraman and Zeithaml (1983), Turnbull (1999) and these interactions take place over extended time periods (thus the ongoing discussion about relationships rather than simply considering transactions), e.g. Håkansson (1982). Additionally, Powers (1988) introduced the notion of a time dimension as part of service quality.

1. Do different members of the buying and selling centres have different perceptions of service quality dimensions? And if so, what are the implications of this for assessment of service quality dimensions?
2. Does the enduring nature of the exchange relationship (i.e. time) impact upon perceptions of service quality?

With respect to the concern raised by Donaldson (1994) about the context specificity of their findings, the final question is:

1. Are service quality dimensions generalizable across different industries?

Research Contributions

'From the point of view of theory development in services marketing, there is merit in attempting to extend the domain of service quality research from retail or end-use consumer services to an industrial marketing context, as well as the exploration of alternative dimensions for service quality.' (Bienstock, Mentzer, and Bird 1997, p. 31). By exploring the applicability of service quality dimensions from consumer markets to industrial markets, the parallel and transferability of knowledge between the two fields could be drawn, contributing to two areas of knowledge: services marketing and business-to-business marketing.

Managerially, to understand the quality dimensions that customers desire and used to evaluate a supplier's performance is the basic requirement of meeting customers' needs (Qualls and Rosa, 1995). By examining service quality in a business-to-business context, the dimensions of service quality in industrial markets could be identified and the understanding of essential components of industrial service quality would be improved. As 'customers will be more inclined to buy from a supplier that serves them better' (Singh, 1990, p. 197), the comparison between the industrial suppliers' and clients' perceptions of components of service quality would provide business people with some guidance about how to audit their customer service activities and improve their performance, thus helping companies to gain a distinct competitive advantage in the fiercely competitive market.

Research Methodology

There is no ideal, sole method of collecting data (Gill and Johnson, 2002). Qualitative and quantitative research both have a place in academic marketing. (Hanson and Grimmer 2007). Qualitative research is more exploratory in nature, and can help in generating insights and ideas, while quantitative research focuses on structure, large and representative respondent samples: quantitative and qualitative research complement each other (Parasuraman, Grewal and Krishnan, 2004; Gill and Johnson, 2002; Malhotra and Birks, 2000).

Academic marketing has tended to have a quantitative orientation (Gemunden 1997, Hanson and Grimmer 2005). Previous studies into business-to-business service quality demonstrate more quantitative and mixed methods than purely qualitative approaches in addressing service issues in industrial markets (see Table 1 and Table 2 below). It has been argued that objective measures for services are straightforward, unambiguous and have high face validity (Sharp, Page and Dawes 2000). However, ‘...the marketing discipline to a large extent is dealing with research efforts based on and connected to human behaviour, human perception and/or human phenomenon’ (Svensson 2006, p. 1162). Quantitative research methods fail to generalize constructs, associations or relationships which are dynamic and unstable over time and across contexts (Svensson 2006). Moreover, ‘...business is not a science...’, but full of innovation, creativity and people involvement (Arias and Acebron 2001, p. 20). Identifying the subjective components of service quality which would satisfy customers may be more managerially helpful than finding the objective measure of quality (Szmigin, 1993). Recent thinking suggests that subjective and interpretive marketing research methods need to be adopted in a business-to-business context instead of the objective and rational scientific approach (Arias and Acebron, 2001).

Table 1 Quantitative and Mixed Methods Used

Quantitative Approach	Mixed Approach
<ul style="list-style-type: none"> • Willett and Stephenson (1969) • Parasuraman and Zeithaml (1983) • Kyj (1987) • Kohli (1989) • Brensinger and Lambert (1990) • Jackson, Neidell and Lunsford (1995) • Lapierre and Deslandes (1996) • Mehta and Durvasula (1998) • Homburg and Garbe (1999) • Hansen and Bush (1999) • Chakraborty, Srivastava and Marshall (2007) 	<ul style="list-style-type: none"> • Cunningham and Roberts (1974) • Benting (1976) • Donaldson (1994) • Qualls and Rosa (1995) • Anderson and Narus (1995) • Hansen, Swan and Powers (1996) • Bienstcok, Mentzer and Bird (1997) • Patterson, Johnson and Spreng (1997) • Brady and Cronin (2001) • Wouters (2001) • Stanley and Wisner (2002) • Oliva and Kallenbert (2003) • Chumpitaz and Paparoidamis (2004) • Woo and Ennew (2005) • Jayawardhena, Souchon, Farrell and Glanville (2007)

Table 2 Qualitative Methods Used

Qualitative Approach		
In-depth Interviews and Focus Groups	Case Studies	Experiment

<ul style="list-style-type: none"> • Parasuraman, Zeithaml and Berry (1985) • Matthyssens and Vandenbempt (1998) • Homburg and Garbe (1999) • Mathieu (2001) 	<ul style="list-style-type: none"> • Gummesson (1978) • Singh (1990) • Gebauer and Friedli (2005) • Van der Valk, Wynstra and Axelsson (2005) • Brax (2005) • Zolkiewski, Lewis, Yuan and Yuan (forthcoming) 	<ul style="list-style-type: none"> • Crow and Lindquist (1982) • Cardozo and Cagely (1971)
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This research aims to describe the complexity and gain insights to produce some understanding of service issues in business-to-business market. The investigator has no control over these events. As the research is exploratory in nature, a qualitative approach is to be adopted. Case studies have been chosen for the project as they are suitable for understanding complex social phenomena, retaining the holistic and meaningful characteristics of real-life events (Yin, 2003, Hartley, 2004). Case studies have the advantage of using multiple sources of evidence (Yin 2003). Various sources would be used to address the research questions.

Conclusions

Study of service quality in a business-to-business context has been under-researched and does not provide a coherent set of theories to assist with its understanding. This may well be due to the complex nature of interactions that take place, meaning that simplistic measures do not provide meaningful results. Nonetheless an understanding of service quality issues in business-to-business markets provides an opportunity for concrete managerial insight and suggestions to be developed.

This research proposes to investigate multiple dyadic perspectives of service quality in different contexts with a view to providing a more holistic understanding of the phenomenon and bringing business-to-business service quality to the attention of academics and managers.

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