

# Examining client perceptions of partnership quality and its dimensions in an IT outsourcing relationship

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## Abstract

*This paper reports on an empirical study of the multidimensionality of partnership quality in IT outsourcing arrangements and the relationships between these dimensions of partnership quality. A two-phase national survey was conducted to collect empirical data to confirm the dimensions of partnership quality in an IT outsourcing arrangement from the client organisation perspective and to identify the significant relationships between these dimensions using a second generation multivariate analysis technique—partial least squares (PLS). The findings from results of the data analyses show that inter-organisational trust, shared business understanding and to a lesser extent, functional and dysfunctional conflict between the client organisation and the outsourcing vendor in an IT outsourcing relationship are the key determinants of partnership quality. The key outcome variable for high partnership quality between the client organisation and the outsourcing vendor in an IT outsourcing relationship is mutual beneficial sharing of risks and benefits. Commitment in an IT outsourcing relationship is confirmed as a multidimensional construct of behaviour commitment and temporal/continuance commitment and was found to be influenced by the other dimensions of partnership quality. The key findings of this study provide support for the notion that Trust and shared business understanding are key drivers in the IT outsourcing partnership style relationship ensuring that the sharing of risks and benefits are realised and conflict is minimised leading to a high quality and ultimately successful partnership between the client organisation and the outsourcing vendor. Furthermore our findings indicate that behavioural commitment to the contractual obligations of an IT outsourcing relationship sustains an ongoing temporal commitment to the partnership between the client organisation and the outsourcing vendor.*

**Keywords:** IT outsourcing relationship, partnership, partnership quality, inter-organisational trust, business understanding, risk and benefit sharing, dysfunctional and functional conflict, behavioural and temporal commitment

## Introduction

IT outsourcing is basically a business to business inter-organisational relationship between the client organisation who purchases IT services from the vendor organisation. IT outsourcing can be classified into various forms including onshore domestic outsourcing and offshore global outsourcing (Chakrabarty 2007). In this study we focus primarily on onshore domestic outsourcing when examining the partnership in an IT outsourcing relationship. Previous research noted that the business relationship between the client organisation and outsourcing vendor has become increasingly a partnership, rather than a buyer and supplier transactional relationship (Cheon, Grover & Teng 1995; Ye & Agarwal 2003). Indeed recent

research has found that successfully managing the ongoing relationship in an IT outsourcing arrangement is highly reliant on a partnership being developed between the client and vendor organisation (Hussin, Ismail, Suhaimi & Karim 2006; Fleming & Low 2007).

A willingness to undertake client-vendor partnerships and alliances has become a prime reason for outsourcing given that partnerships and alliances have become fundamental for business growth (Drucker 1995; McFarlan & Nolan 1995). Not surprisingly, there is an increased emphasis on the importance of the quality of partnership between the client organisation and the IT outsourcing vendor for successful IT outsourcing activities (Lee & Kim 1999; eGlobal-CIO 2003; Hajiyev 2004; Lum 2004; Hussin et al. 2006; Fleming & Low 2007). Organisations have realised the limitations of legal contracts and have sought more flexible and productive relationships which are based on mutual trust (Lee & Kim 2005; Fleming & Low 2007). Partnership in an IT outsourcing relationship is desirable for a number of reasons. Firstly, regardless of the complexity of an outsourcing relationship, it is difficult to write complete contracts to cover every eventuality. Second, there is considerable investment in assets which are specific to an outsourcing relationship. A partnership has continuity mechanisms built-in which protect and promote further investment by each party. In an ongoing and long term outsourcing relationship between a client organisation and outsourcing vendor, a partnership provides a mechanism for sustaining such a relationship (Kleeper Jones 1998; Sun, Lin & Sun 2002). However, there has been little empirical research which has critically examined partnership quality and its dimensions in the IT outsourcing relationship between the client organisation and the outsourcing vendor.

In this research we focus on the psychological dimensions of partnership quality in the IT outsourcing relationship because previous research has shown the psychological dimensions are the key determinants of partnership quality (Lee & Kim 1999; 2005; Fleming & Low 2007). The measurement and relationships between the psychological dimensions of partnership quality have not been critically examined in subsequent research until the research of Lum (2004), who argued that conflict in the context of an outsourcing relationship should be separated into two separate dimensions—dysfunctional conflict and functional conflict—and included additional item measures from the existing literature for each dimension of partnership quality. This research builds on the research of Lee and Kim (1999, 2005; Hussin et al. 2006; Fleming & Low 2007) by critically examining the relationships between six dimensions of partnership quality for IT outsourcing relationships between a client organisation and its main IT outsourcing vendor.

The structure of this paper is as follows. First, we define and discuss the multidimensional nature of partnership quality and provide a rationale for the inclusion of functional conflict in its measurement. Then the research questions, model and (propositions) hypotheses tested in this study are stated. The research method employed to collect data to provide answers and insights into the research questions is described and justified. Next, the results of the data analysis are presented and discussed in relation to the research questions. Finally, the conclusions and implications of this research are discussed. The limitations of this study are acknowledged and suggestions for future research in this area are made.

### **Partnership quality**

The Webster dictionary defines partnership as: ‘a relationship resembling a legal partnership and usually **involving close cooperation between parties having specified and joint rights and responsibilities**’. The partnership relationship between businesses has been studied extensively in the management literature. For example, the marketing discipline has

examined inter-firm cooperation (Ring & Van de Ven 1994), partnering between manufacturers and distributors (Anderson & Narus 1990), manufacturers and sales agents (Anderson & Weitz 1989), buyers and sellers (Dwyer, Schurr & Oh 1987), as well as auditors and clients (Levinthal & Fichman 1988). Empirical studies on the relationship or the partnership between IT outsourcing vendor and client started to emerge around 1997 in the United States, Europe and Asia (McFarlan & Nolan 1995; Grover, Cheon & Teng 1996; Saunders, Gebelt & Hu 1997; Lee & Kim 1999; Kern & Willcocks 2000; Lee 2001). More recently Hussin et al (2006) and Fleming and Low (2007) identified the importance of partnership to the success of an IT outsourcing relationship.

A partnership can evolve through a progression of transactional exchanges with increasing trust and commitment to an on-going relationship between business partners (Klepper 1995). The partnership-style relationship differs from the transactional-style relationship in the sense that it requires risk and benefit sharing between both parties (Henderson 1990; McNamara 2001). The partnership-style relationship is viewed as a series of changes, although a range of mechanisms also need to be established in order to monitor and execute its operations (Henderson 1990). In a partnership, every member of the relationship ‘walk together and...pick each other up’ (McKeen & Smith 2001, p. 3). All parties should keep in mind what the partnership is trying to accomplish (McKeen & Smith 2001). This will enable vendors to leverage their experience and knowledge toward meeting the client’s business requirements (McNamara 2001). Table 1 compares the purely transactional relationship perspective with the partnership relationship perspective in an IT outsourcing relationship.

**Table 1 A comparison of transactional and partnership style relationships in IT outsourcing arrangements**

<b>Largely Transactional-style</b>	<b>Largely Partnership-style</b>
<ul style="list-style-type: none"> <li>• Driven by client’s self-interest (largely a ‘we-versus-them’ mindset)</li> <li>• Shaped by a hierarchical relationship</li> <li>• Dictated by a win-lose strategy</li> <li>• No incentives to work together</li> <li>• Includes a lot of finger-pointing back and forth</li> </ul>	<ul style="list-style-type: none"> <li>• Organisations begin to realise the strategic advantage of not just owning IT, but in using it in specific ways</li> <li>• Managers tend to be more interested in the impacts of IT on efficiency and effectiveness, rather than in the technical superiority of their organisational IT infrastructure</li> <li>• As the extent and scope of IT outsourcing projects increase, outsourcing vendors begin to take on management responsibility and risk, eventually joining clients as stakeholders in the process</li> <li>• This stage is driven or characterised by mutual trust, rather than the pursuit of self-interest</li> <li>• Organisations recognise that the mutual-exchange relationship in the long term is a win-win for them, and competitive advantage is to be gained through developing and sustaining high-quality partnerships</li> </ul>

Adapted by Lum 2004 from: Lee et al. (2003); Pfannenstein & Tsai (2004)

The most significant element in an IT outsourcing partnership is that the profit motive is shared between both the client and vendor (Henderson 1990; Beaumont & Sohal 2004). If one’s profit is maximised at another’s expense, that is not a partnership (Lacity & Hirschheim 1993; Saunders, Gebelt & Hu 1997). In other words, all parties in a partnership should be allowed to gain profitability at the same time (McNamara 2001). The largely transactional style or hard based approach to managing an IT outsourcing relationship allows the relationship to be established within a contractual framework to govern the ensuing largely partnership style or soft based relationship hence the importance in gaining a better understanding of an outsourcing relationship as a partnership (Lum 2004; Fleming & Low 2007).

We use the following definition and dimensions of partnership quality for this research. Partnership quality refers to *'how well the outcome of a partnership delivered matches the participants' expectations'* (Lee & Kim 1999, p. 34). We propose that inter-organisational trust, business understanding, benefit and risk share, conflict and commitment are key dimensions of partnership quality in an IT outsourcing relationship (Lee & Kim 1999; Kumar, Scheer & Steenkamp 1995; Lee & Kim 2005; Hussin et al. 2006; Fleming & Low 2007).

### **Inter-organisational Trust**

Trust is the key concept that distinguishes between a transactional-style and a partnership-style relationship in IT outsourcing (Lee 2001; Fleming & Low 2007). Trust evolves through mutually satisfying interactions between exchange partners and increasing confidence in the relationship (Lee 2001; Fleming & Low 2007). Partners are more likely to undertake high-risk and coordinated behaviours when trust exists (Pruitt 1981).

The predictability of a partner's behaviour could be the biggest concern of organisations entering a partnership (Gulati 1995). Apart from a detailed contract, trust serves as an alternative control mechanism for making the partners' behaviours predictable (Bradach & Eccles 1989; Gulati 1995). Several previous studies have found that inter-organisational trust is incrementally built with ongoing interactions between organisations (Good 1988; Ring & Van de Ven 1989; Ganesan 1994). This is because organisations and their partners learn about and understand each other while developing trust around norms of equity (Shapiro, Sheppard & Cheraskin 1992; Ganesan 1994). Prior experience with a partner can also mitigate the perception of expected opportunistic behaviour by the partner (Schurr & Ozanne 1985; Parkhe 1993; Ganesan 1994). However, trust is difficult to observe and measure because it has a taken-for-granted nature and is closely linked to fundamental social norms and customs (Gulati 1995). Once trust is established, organisations will learn that coordinated and joint efforts with partners can lead to outcomes that exceed what the organisation would achieve if it acted solely in its own best interests (Anderson & Narus 1990).

An organisation is willing to rely on a trustworthy partner who is believed to perform actions that will result in positive outcomes, not to act opportunistically or bring detrimental impacts to the organisation (Bradach & Eccles 1989; Gulati 1995). Moorman, Deshpande and Zaltman (1993) emphasised that if one perceives a partner to be trustworthy but is unwilling to rely on that partner, trust is limited. Trust is an essential ingredient in cooperation and agreement (Blau 1964; Deutsch 1973; Pruitt 1981). It plays a significant role in the development of long-term inter-organisational relationships and in facilitating an exchange relationship, because it leads to constructive dialogue and cooperative problem-solving (Pruitt 1981; Morgan & Hunt 1994; DiRomualdo & Gurbaxani 1998; Lee 2001).

Trust is postulated to be the cornerstone of a partnership because the relationships characterised by trust are highly-valued when each party desires to commit itself to such relationships (Hrebiniak 1974; Spekman 1988; Morgan & Hunt 1994). Trust is necessary for the perception of a fair division of the pie of resources between partners (Ganesan 1994). In other words, lack of trust could be the biggest stumbling block to the success of a partnership (Sherman & Sookdeo 1992). In the study by McLellan, Marcolin and Beamish (1995), a senior bank executive emphasised trust is a precursor to the outsourcing of their IT functions.

Trust is defined by Lee and Kim (1999, p. 36) as 'the degree of confidence and willingness between partners'. However, the definition given by Moorman, Deshpande and Zaltman (1993, p. 82) is deemed to be clearer and hence adopted for this study: 'a willingness to rely

on an exchange partner in whom one has confidence'. We define the inter-organisational trust that a client organisation has in an outsourcing relationship with a vendor as the perceived credibility and benevolence (Gutierrez, Cillan & Iquierodo 2004). The credibility and benevolence of the outsourcing vendor are indicators of trustworthiness and translate into the overall trust that a client organisation has in the outsourcing vendor.

**Proposition 1:** Inter-organisational Trust is the key driver in a partnership type relationship between a client organisation and an outsourcing vendor and impacts positively on (a) shared business understanding, (b) functional conflict, and (c) behavioural commitment in the outsourcing relationship.

### **Shared Business Understanding**

Most successful partnerships have a shared vision (Konsynski & McFarlan 1990). If the divergences of interest among partners are to be overcome, a shared understanding of the specific benefits and risks of collaboration is necessary (Konsynski & McFarlan 1990). Recent research emphasises the importance of a shared understanding of the business domain knowledge and key business processes between IT and line managers (Ray, Muhanna & Barney 2007). Inter-organisational trust plays a key role in achieving this shared business understanding in an IT outsourcing partnership style relationship

Inter-organisational conflict can be reduced when there is a shared vision between partners, while the problems of opportunistic behaviours can be mitigated (Kogut 2000). Furthermore, a jointly developed vision helps to create an identity and clarify the common goals of a partnership, making the goals exciting and explicit (Kogut 2000; Quinn 2000). In a partnership, cultural compatibility is vital (Fitzgerald & Willcocks 1994; McFarlan & Nolan 1995; Kern 1997). Success can hardly be achieved if the partners are from fundamentally different domains and bring different perspectives (Hancox & Hackney 2000). Culture collisions often occur because organisations do not have specific business insights or the same culture as their partners (McKeen & Smith 2001). For a successful inter-organisational partnership, the cultures and operating styles of both organisations must be compatible (DiRomualdo & Gurbaxani 1998). In addition, both parties must develop mutual understanding of their business processes and identify critical aspects of the IT outsourcing partnership, including the roles played by each other in the relationship (Ring & Van de Ven 1994; DiRomualdo & Gurbaxani 1998; Lee & Kim 1999; Bull Group 2002).

Shared values and objectives inform all stages of the partnership development process (Klepper 1995). When shared values and objectives exist, partners are more motivated to share knowledge with each other in order to achieve the common goals of the partnership (Ye & Agarwal 2003). A shared platform of ethical principles can also contribute to the effectiveness of a partnership (Quinn 2000; McKeen & Smith 2001). Without an understanding of each other's business issues to a desirable level, both the outsourcing client and vendor may find that they can hardly resolve the inevitable differences and disputes that arise throughout their relationship (Klepper 1995).

Lee and Kim (1999, p. 36) defined business understanding as the 'degree of understanding of behaviours, goals and policies between partners'. After reviewing the indicators that reflect business understanding in the relevant literature, it was found that partners should better understand each other in a wider range of business issues—rather than just behaviours, goals and policies (DiRomualdo & Gurbaxani 1998; Hancox & Hackney 2000; Quinn 2000). Hence, business understanding in this study is defined as the degree of comprehension of

business issues between partners. The business issues include each other's vision, goals, culture, business processes, roles, values, objectives and ethical principles.

**Proposition 2:** A high level of shared understanding of the key business issues in an IT outsourcing relationship between a client organisation and an outsourcing vendor will positively influence functional conflict.

### **Mutual benefits—sharing risks and benefits in the outsourcing relationship**

The mutual benefits are obtained from the sharing of benefits and risks in the outsourcing relationship. Benefit and risk sharing refers to the 'degree of articulation and agreement on benefit and risk between partners' (Lee & Kim 1999, p. 36). It is said to be one of the characteristics of a partnership. A partnership is '...based upon mutual trust, openness, shared risk, and shared rewards...' according to the definition by Lambert, Emmelnainz and Gardner (1999, p. 166). This dimension of partnership quality is correlated with the contractual agreement, which serves as a framework that provides normative guidelines within which the cooperation between partners proceeds (Llewellyn 1931; Gulati 1995). Previous literature stressed the importance of managing a formal and strict contract as a governance structure for an outsourcing relationship (Lacity & Hirschheim 1993; McKeen & Smith 2001). However, it is almost impossible for a contract to completely and accurately indicate every real working relationship (Llewellyn 1931; Clark 1992). 'The mere specification of contracts represents a significant expense' (Clark, Zmud & McCray 1995, p. 233). Hence, the significance of a flexible contract and trust that can exceed or override the importance of a contract between the IT outsourcing vendor and client has been highlighted in previous literature (Fitzgerald & Willcocks 1994; Clark, Zmud & McCray 1995; Harrison & St. John 1996). Harrison and St. John (1996) claimed that the formalisation and monitoring of contractual agreements can result in conflict and distrust. A rigorous or flexible contract can be suitable for the different partnerships formed between IT outsourcing clients and vendors, depending on how the contract is administered.

This study is interested in measuring mutual benefits—in other words, the sharing of well-specified risks and benefits in a partnership style IT outsourcing relationship. To date, there is still much dissatisfaction with partnerships in general, especially regarding the equitable sharing of costs and benefits (Briggs 1996). Effective partnerships require explicit articulation and agreement upon the benefits accrued by each member of the partnership (Henderson 1990; Saunders, Gebelt & Hu 1997). An outsourcing deal can only be successful if both client and vendor benefit, or when the interests of both parties are addressed (Willis 2004). A conventional outsourcing contract for simple commodity transactions and services is insufficient in IT outsourcing (DiRomualdo & Gurbaxani 1998). A client should negotiate an agreement on the basis of a realistic and attainable win-win scenario with its vendor (Willis 2004). In an outsourcing relationship, the vendor should be able to make sustainable profit, whilst the client should also be able to achieve the negotiated cost reductions and quality service delivery in the relationship (Willis 2004).

However, apart from the benefits gained from IT outsourcing, the risks that might arise from the uncertainties in IT outsourcing should also be taken into account by partners. Partnerships enable both IT outsourcing client and vendor to pool risks, therefore, they should have an increased willingness to take risks (Henderson 1990). An outsourcing contract between partners must emphasise both shared benefits and risks tied to tangible business results (DiRomualdo & Gurbaxani 1998; McNamara 2001). Because of the benefits and risks

associated with commercial exploitation of IT, the issues of sharing and control are unique in IT outsourcing relationships (DiRomualdo & Gurbaxani 1998). For an IT outsourcing venture to succeed there must be adequate incentives for each party to share not only the benefits, but also the costs and risks over the course of the relationship (DiRomualdo & Gurbaxani 1998; McNamara 2003). A full risk and reward sharing contract is necessary, especially in situations of high uncertainty such as that in IT outsourcing (Fitzgerald & Willcocks 1994). Different types of benefit and risk sharing contracts apply in different circumstances (DiRomualdo & Gurbaxani 1998). For example, organisations wanting cost-effective IT-enabled business solutions that require an understanding of their business should enter into partnership arrangements that give their vendor the incentive to learn about their business, while still maintaining the competitive pressures on the vendor (DiRomualdo & Gurbaxani 1998).

**Proposition 3:** The extent to which the risks and benefits are mutually beneficially shared between the client organisation and outsourcing vendor in an IT sourcing relationship will be positively influenced by the level of shared business understanding.

### **Conflict—Dysfunctional and Functional**

Disagreements or conflicts always occur in relational exchanges (Dwyer, Schurr & Oh 1987). Conflict is defined by Lee and Kim (1999, p. 36) as the ‘degree of incompatibility of activities, resource share, and goals between partners’. In the organisational behaviour area, conflict is defined as ‘a process that begins when one party perceives that another party has negatively affected, or is about to negatively affect, something that the first party cares about’ (Huczynski & Buchanan 2001, p. 770; Robbins et al. 2001, p. 4). Robbins et al. (2001) recognised that there has been a transition in conflict thinking. The traditional view (1930s to 1940s) argued that all conflict is harmful and must be avoided (Robbins et al. 2001). The human relations view (1940s to mid-1970s) perceived conflict as a natural occurrence in all groups and organisations (Robbins et al. 2001). Thus, inevitable conflict need not be negative but, rather, has the potential to positively impact on group performance (Robbins et al. 2001). The most recent perspective, the interactionist view, proposes that conflict can be not only a positive force, but is necessary for a group to perform effectively (Robbins et al. 2001). This builds on the view established much earlier by Assael (1969) that inter-organisational conflict can be high in situations where functional interdependence is high. An IT outsourcing relationship exemplifies a situation where there is high functional interdependence between the client organisation and the outsourcing vendor and, hence, the potential for high levels of conflict. Assael (1969) also argued that conflict can be constructive or destructive in an inter-organisational relationship. So too can conflict be potentially constructive or destructive in an IT outsourcing relationship. In this research we use the terms functional and dysfunctional interchangeably for constructive and destructive conflict.

### **Functional and Dysfunctional Conflict**

Basically, two major types of conflict have been identified: functional conflict that supports organisational goals and improves performance; and dysfunctional conflict which has the opposite effect (Huczynski & Buchanan 2001; Robbins et al. 2001). The frequency, intensity and duration of disagreements are said to affect the overall level of conflict in a working partnership (Anderson & Narus 1990). Up to a certain level, conflict is productive; beyond this level, conflict becomes counter-productive (Schroder, Yussuf & Mavondo 2000). Previous IT outsourcing studies that examined conflict have always looked at conflict as being dysfunctional and destructive to the IT outsourcing relationship (Lee & Kim 1999; Lee

2001; Sun, Lin & Sun 2002). However, several studies from marketing and logistics examined the constructive and positive view of conflict in business to business interorganisational relationships and emphasised that the two different dimensions of conflict should not be overlooked (Amason 1996; Wong et al. 1999; Schroder, Yussuf & Mavondo 2000). Amason (1996) claimed that conflict should at least be recognised as two distinct, but related, forms (dysfunctional and functional). It is inappropriate to address one dimension of conflict while ignoring the other (Amason 1996). Dysfunctional conflict is affective, emotive, focused on interpersonal or intergroup disputes, and destructive for the interorganisational relationship; and while functional conflict is cognitive, it tends to be task based and potentially constructive for the interorganisational relationship (Amason & Schweiger 1994; Amason 1996; Rispens, Greer & Jehn 2007).

Inter-organisational conflict may occur due to the incompatibility of activities or resources allocation, and different styles, goals or cultures between partners (Lee & Kim 1999; Wong et al. 1999). When conflict arises, the hostility and bitterness resulting from disagreements not being resolved amicably can lead to pathological consequences such as resentment, tension, anxiety, retarding of communication, reduction in cohesiveness, or even relationship dissolution (Hellriegel, Slocum & Woodman 1992; Morgan & Hunt 1994; Robbins et al. 2001). In such situations, dysfunctional conflict is said to have occurred. We define dysfunctional conflict as the emotional and negative focus arising from incompatibilities or disputes in the interorganisational relationship (Amason 1996; Massey & Dawes 2007).

However, when disputes are resolved amicably, such disagreements can be referred to as functional conflict (Robbins et al. 2001). Functional conflict can prevent stagnancy, stimulate interest and curiosity, further the creation of new ideas, improve the quality of decisions, and provide a 'medium through which problems can be aired and solutions arrived at' (Deutsch 1973, p. 19; Robbins et al. 2001). Functional conflict, therefore, may increase the productivity in a relationship and can be viewed as 'just another part of doing business' (Anderson & Narus 1990, p. 45; Hellriegel, Slocum & Woodman 1992). Trust, communication and past cooperative behaviours lead to the perception that conflict can be functional and constructive for a partnership (Deutsch 1969; Anderson & Narus 1990; Morgan & Hunt 1994). Therefore, problems can then be discussed openly without the fear of malevolent actions by partners (Morgan & Hunt 1994). Organisations in successful partnerships would have acknowledged that disagreements cannot be avoided in a relationship (Anderson & Weitz 1989). Rather than allowing conflict to negatively affect their relationship, partnering organisations develop mediating mechanisms to defuse and settle their differences (Anderson & Weitz 1989). We define functional conflict as the constructive challenging of differences in ideas, beliefs and assumptions to achieve common task orientated objectives in an inter-organisational relationship while maintaining respect for each party's viewpoint, even when there is disagreement (Amason 1996; Massey & Dawes 2007).

**Proposition 4:** Functional conflict will have a negative impact on dysfunctional conflict in an IT outsourcing relationship.

**Proposition 5:** Functional conflict will have a positive impact on the mutual beneficial sharing of risks and benefits in an IT outsourcing relationship.

**Proposition 6:** Dysfunctional conflict will have a negative impact on the mutual beneficial sharing of risks and benefits between the client organisation and outsourcing vendor to the IT outsourcing relationship.

## **Behavioural and Temporal Commitment**

When the exchange partners believe that an ongoing relationship is important and worth working on, the relationship will warrant maximum effort from the partners in maintaining it (Moorman, Deshpande & Zaltman 1993). In the services relationship marketing area, Berry and Parasuraman (1991, p. 139) claimed that 'relationships are built on the foundation of mutual commitment'. Commitment among the members of a partnership is a major contributor to the belief that the relationship would be sustained (Henderson 1990). Mutual commitment can result in the exchange partners working together to increase mutual profitability (Anderson & Weitz 1992). Trust has been found to be the major determinant of a relationship commitment (Achrol & Ravi 1991; Morgan & Hunt 1994). Mistrust decreases commitment in a relationship and shifts the transaction to one of more direct short-term exchanges (McDonald 1981). When a partner delivers superior benefits, it will be highly valued (Morgan & Hunt 1994). Organisations will commit themselves to maintain and retain the relationships with such partners because commitment is identified as a key to achieving valuable outcomes (Morgan & Hunt 1994). When partners are committed to and are willing to maintain a relationship, this will encourage ongoing value-adding contributions to the relationship (McKeen & Smith 2001). Therefore, we believe that commitment is central to the success of relational exchanges (Morgan & Hunt 1994) such as partnership in outsourcing relationships.

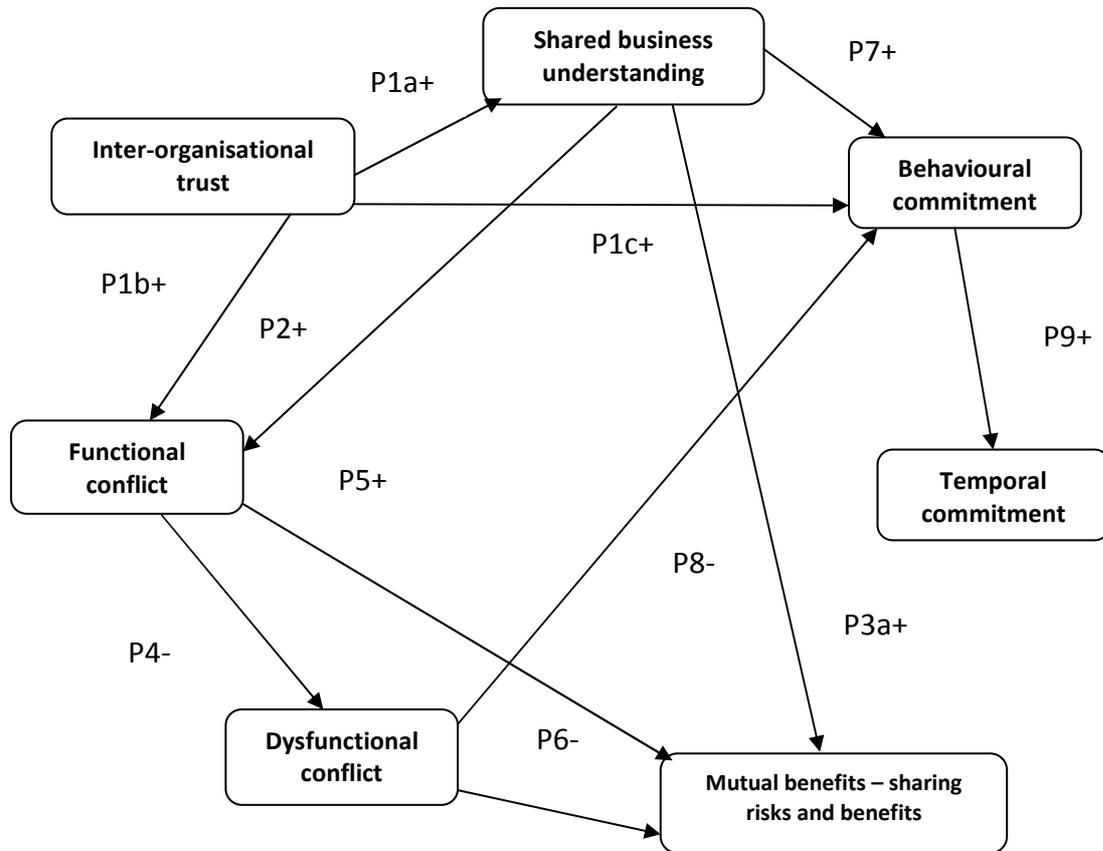
Lee and Kim (1999, p. 36) defined commitment as the 'degree of the pledge to relationship continuity between partners'. Dwyer, Schurr and Oh (1987) and Klepper (1995) further emphasised that the pledge can be in either an implicit or explicit form. Commitment is considered to be multidimensional and consisting of affective, behavioural and temporal dimensions (Guitierrez et al, 2004). Lee and Kim (1999) only considered the temporal dimension of commitment. For this research we are interested in the behavioural and temporal dimensions of commitment as affective commitment is difficult to measure at the inter-organisational level. Behavioural commitment indicates the repetition of actions such as meeting pre-specified contractual obligations which drive the desire to continue the outsourcing relationship resulting temporal commitment (Guitierrez et al, 2004). Behavioural commitment refers to the true current behaviour, promises and sacrifices in the outsourcing relationship, while temporal commitment refers to intention of future commitment to the outsourcing relationship.

**Proposition 7:** Shared business understanding will positively influence behavioural commitment of the client organisation and the outsourcing vendor to an IT outsourcing relationship.

**Proposition 8:** Dysfunctional conflict will negatively influence the behavioural commitment of the client organisation and the outsourcing vendor to an IT outsourcing relationship.

**Proposition 9:** Strong behavioural commitment to an IT outsourcing relationship will positively influence temporal commitment of the client organisation and the outsourcing vendor to continue in an IT outsourcing relationship.

**Figure 1 Proposed research model of partnership quality in an IT outsourcing relationship**



**Research questions**

RQ1 What are the key determinant factors in partnership quality of an IT outsourcing relationship?

RQ2 What are the key relationships between dimensions of partnership quality of an IT outsourcing relationship?

These general research questions provided the focus for the proposed research model, the measurement model and the testing of the propositions for each dimension of partnership quality in IT outsourcing relationships.

**Methodology**

This research adopted a positivist approach and used a cross sectional mail survey to collect empirical data to investigate and provide answers to the research questions and to seek support for the propositions developed in this study. A quantitative survey questionnaire instrument was used to collect empirical data to validate measurement of partnership quality and to test relationships in the structural model for partnership quality.

**Measurement and Data Collection**

Measurement items for each of the six dimensions of partnership quality in context of an IT outsourcing relationship were adopted or adapted from existing measures, except for a small number of items which were drawn from textbooks (Lum 2004). Adopting or adapting previously tested empirical measurement items maximises the validity and reliability of a measurement instrument (Straub 1989). Table 2 shows the sources from which the measurement items were adopted or adapted. The measurement items for partnership quality were pretested to ensure the face validity and content validity was adequate. From a Faculty of Business thirty-four academics who have extensive research and practical industry experience in management and IT completed the pretest of the measurement items. Based on the results of the pretest, any measurement items which were deemed to be misrepresentative, repetitive or ambiguous were removed and some statements were reworded and reordered. A pilot study of the complete survey instrument was conducted with four senior IT executives (three current CIOs and one with previous experience as CIO) who were knowledgeable and experienced in IT outsourcing relationships between client organisations and outsourcing vendors (Lum 2004). A few minor adjustments were made to the questionnaire based on comments from these four senior IT executives prior to the first stage of this survey being conducted.

**Table 2 The sources from which the partnership quality measure items were adopted and/or adapted**

Construct	Dimension	Adopted and/or Adapted From
Partnership Quality	Trust – credibility and benevolence	(Ganesan 1994; Knemeyer, Corsi & Murphy 2003; Lee & Kim 1999; Moorman, Deshpande & Zaltman 1993; Morgan & Hunt 1994; Rotter 1967; Sabherwal 1999; Schroder, Yussuf & Mavondo 2000; Wong et al. 1999)
	Shared Business Understanding	(DiRomualdo, A. & Gurbaxani 1998; Hancox & Hackney 2000; Lee & Kim 1999; Quinn 2000)
	Mutual Benefits - Benefit and Risk Sharing	(DiRomualdo, A. & Gurbaxani 1998; Konsynski & McFarlan 1990; Lee & Kim 1999; Ring & Van de Ven 1994)
	Dysfunctional Conflict	(Amason 1996; Robbins et al. 2001; Wong et al. 1999)
	Functional Conflict	(Anderson & Narus 1990; Hellriegel, Slocum & Woodman 1992; Morgan & Hunt 1994; Robbins et al. 2001; Wong et al. 1999)
	Commitment – Behavioral and Temporal	(Blau 1964; Dwyer, Schurr & Oh 1987; Klepper 1995; Lee & Kim 1999; Morgan & Hunt 1994)

(Source: developed by Lum 2004)

### Sample

A sample of 500 organisations and a sample of 1800 organisations was randomly selected from the *Business Who's Who of Australia* database on the basis that the organisation had an identifiable senior IT executive. Hence the overall sample for this study was 2300. A senior IT executive was deemed to be the most appropriate person to answer a broad range of questions about partnership quality between the client organisation and the outsourcing vendor in the IT outsourcing relationship from the client organisation perspective. This research used a two-stage survey to collect empirical data to test the measurement model for partnership quality and to seek support for proposed relationships in the structural model. The survey was conducted in two stages in 2004 and 2005, similar to the approach used by Shi, Kunnsthur & Ragu-Nathan (2005) and a sample size of 131 usable responses was achieved. Table 3 presents a summary of the administration of the survey and response rate.

**Table 3 Summary of responses after first mail and follow-up mail out completed**

<b>Response details</b>	<b>Phase 1 &amp; Phase 2 survey numbers in total</b>
Total questionnaires sent	2300
Total responses received from two mail outs	390
Undeliverable questionnaires (invalid address or address left organisation)	300
Unusable responses (not outsourcing IT)	259
Useable responses (outsourcing IT to some degree)	131
Response rate	22%

The response rate was calculated using Zikmund's (1997) and de Vaus' (2002) formula where response rate is calculated by dividing the number of questionnaires returned by the sample size which has been adjusted to exclude the unusable and unreachable questionnaires. Chi square tests was used to determine if there were any differences between the respondent organisations who are outsourcing IT and the respondent organisations who are not outsourcing IT based on organisation demographics. The results of the Chi square tests confirmed that the two groups are not significantly different and, therefore, it was assumed that there was no response bias in the responses of the organisations who are outsourcing IT. The overall response rate, although low, was considered to be acceptable and comparable to other notable studies on IT outsourcing (Grover et al. 1996; Seddon et al. 2000; Rouse et al. 2001) because once the sample was adjusted to account for the large percentage of organisations that do not participate in IT outsourcing or the targeted respondents who were not reachable (ineligibles), the response rate was estimated to be 22 percent. The external validity of this study was enhanced through randomly sampling from a real life population (Business Who's Who of Australia database) and targeting an appropriate respondent, ensuring a reasonable response rate through follow up mail outs of the survey and ensuring there was no response bias in the usable responses (Zikmund 2003; King & He 2007).

### **Results of the data analysis**

First we present the demographics and descriptive data regarding the respondent organisations and their most significant and current IT outsourcing relationship. The data presented in these tables provides some indication of the characteristics of the respondent organisations and the extent and type of relationship which exists with their main IT outsourcing provider.

Table 4 represents the distribution of the respondent organisations across industry sectors and indicates a wide range of industries represented in the survey data.

**Table 4 Distribution of the respondent organisations by industry sector**

Industry Sector	Frequency	Percentage	Cumulative percentage
Manufacturing	22	16.79%	16.79%
Retail trade	15	11.45%	28.24%
Finance & insurance	14	10.69%	38.93%
Government admin & defence	13	9.92%	48.85%
Wholesale trade	11	8.40%	57.25%
Other	9	6.87%	64.12%
Health & community services	8	6.11%	70.23%
Construction	7	5.34%	75.57%
Transport & storage	7	5.34%	80.91%
Property and business services	6	4.58%	85.49%
Mining	4	3.05%	88.54%
Agriculture, forestry & fishing	3	2.29%	90.83%
Electricity, gas and water supply	3	2.29%	93.12%
Accommodation, cafes & restaurants	2	1.53%	94.65%
Education	2	1.53%	96.18%
Personal & other services	2	1.53%	97.71%
Communication services	2	1.53%	99.24%
Cultural & recreational services	1	0.76%	100%

Size of respondent organisations was captured in terms of number of employees and annual revenue. Responses to the survey were relatively evenly distributed across small, medium and large organisations as indicated by number of employees and annual sales revenue. Tables 5 and 6 indicate that a good cross section of different sized organisations is represented in the survey data. Previous studies have focused on large organisations which outsource their IT function (Seddon et al. 2000; Rouse et al. 2001; Goles & Chin 2005) however increasingly outsourcing of selected IT functions has become a common practice for small to medium organisations as well.

**Table 5 Organisation size in terms of number of employees**

Number of Employees	Frequency	Percentage
< 50	16	12.21%
50 to < 100	20	15.27%
100 to < 300	36	27.48%
300 to < 1,000	33	25.19%
1,000 to < 3,000	21	16.03%
3,000 to < 10,000	4	3.05%
10,000 and above	1	0.76%
	<b>131</b>	<b>100.00%</b>

**Table 6 Organisation size in terms of annual sales revenue**

Annual Sales Revenue	Frequency	Percentage
< \$5 million	12	9.16%
\$5 million to < \$10 million	13	9.92%
\$10 million to < \$30 million	35	26.72%
\$30 million to < \$100 million	25	19.08%
\$100 million to < \$300 million	25	19.08%
\$300 million to < \$1 billion	8	6.11%
\$1 billion and above	9	6.87%
Unanswered	4	3.05%
	<b>131</b>	<b>100.00%</b>

It would be difficult to imply that a partnership style relationship exists between the respondent organisations and their main outsourcing vendor if the duration of the relation was very recent. For the vast majority of the respondent organisations (more than 90 percent in total), the length of the IT outsourcing relationship with their main outsourcing vendor was at least 1 year and, generally more than 3 years, as show in Table 7.

**Table 7 Length of the IT outsourcing relationship for respondent organisations with their main outsourcing vendor**

Length of IT outsourcing relationship	Frequency	Percentage
< 1 year	9	6.87%
1 to < 3 years	35	26.72%
3 to < 5 years	34	25.95%
5 to < 8 years	30	22.90%
8 to < 10 years	5	3.82%
10 years and above	18	13.74%
	<b>131</b>	<b>100.00%</b>

The majority of the respondent organisations were spending 60 percent or less of their total IT expenditure on IT outsourcing and very few of the respondent organisations were outsourcing all of their IT. Table 8 indicates that organisations in general are still selective about the extent and what IT functions are outsourced which is a similar finding to the studies by Hajiyev (2004) and Lum (2004).

**Table 8 Percentage of IT budget spent on IT outsourcing by respondent organisations**

IT budget allocated for IT outsourcing	Frequency	Percentage
< 10%	42	32.06%
10 to < 30%	37	28.24%
30 to < 50%	28	21.37%
50 to < 70%	11	8.40%
70 to < 90%	10	7.63%
90% and above	3	2.29%
	<b>131</b>	<b>100.00%</b>

Table 9 shows that a broad range of IT functions are being outsourced by organisations. Network management application development disaster recovery helpdesk and end user support and software development were outsourced by 30 percent or more of the respondent organisations. This finding is similar to previous studies by Hajiyev (2004), Lum (2004) which found a wide of IT functions are outsourced by organisations.

**Table 9 Types of IT functions outsourced by organisations**

Outsourced IT functions	Frequency	Percentage
Network management	67	51.15%
Applications development	56	42.75%
Disaster discovery	48	36.64%
Helpdesk/end user computer support	43	32.82%
Software development	42	32.06%
Configuration management	39	29.77%
Systems operations	38	29.01%
Systems design and planning	36	27.48%
Data centre management	35	26.72%
Telecommunications management	31	23.66%
E-commerce/business services	24	18.32%
Transaction processing	12	9.16%

Table 10 shows that the majority of the respondent organisations consider their relationship with their main outsourcing vendor to be at least some what partnership in style, while only a small percentage consider the relationship to be purely transactional. This indicates the majority of organisations in this study consider that the management of IT outsourcing relationship extends beyond the contractual obligations into a partnership style relationship.

**Table 10 Type of IT outsourcing relationship with main outsourcing vendor—partnership or transactional**

Style of relationship	Frequency	Percentage
Partnership	91	69.47%
Neutral	24	18.32%
Transactional	16	12.21%
	<b>131</b>	<b>100.00%</b>

Similarly, Table 11 shows that the vast majority of the respondent organisations are at least satisfied with the IT outsourcing relationship with their main outsourcing vendor with less than 10 percent considering their IT outsourcing relationship to be unsuccessful. The demographic data we collected in this study on the length of the IT outsourcing relationship, the style of IT outsourcing relationship and whether the IT outsourcing relationship is successful suggest that a partnership style relationship may be a key determinant to a successful IT outsourcing relationship. Hence further justification for gaining a better understanding partnership in an IT outsourcing relationship.

**Table 11 Overall success of IT outsourcing relationship for respondent organisations with main outsourcing vendor**

Overall Success of IT outsourcing relationship	Frequency	Percentage
Successful	81	61.83%
Satisfactory	38	29.01%
Unsuccessful	12	9.16%
	<b>131</b>	<b>100.00%</b>

### **Testing of research propositions using PLS**

The testing of the proposed relationships between the six dimensions of partnership quality in the research model shown in Figure 1 was conducted using Partial Least Squares (PLS) using the software package Smart PLS (Ringle, Marc/Wende & Will 2005). The sample size of 131 was not large enough for covariance based SEM to be used. PLS is a second generation multivariate analysis technique for testing structural models (Wold 1985). PLS does not require a normal distribution, unlike SEM, and will work with relatively small data sets. As a rule of thumb the minimum sample size for PLS analysis should be 10 times the number of items present in the most complex construct, or 10 times the largest number of independent variables impacting on a dependent variable. In the proposed research model, the most complex construct is inter-organisational trust which has 9 items and the largest number of independent variables which are estimated to impact on a dependent variable (behavioural commitment and mutual benefits of sharing risks and benefits) is 3 (Chin 1998; Gefen, Karahanna & Straub 2000). PLS simultaneously evaluates the measurement model and the theoretical model by assessing the reliability and validity of the theoretical constructs and relationships between those constructs (Barclay, Higgins & Thompson 1995).

Despite this, a PLS model is analysed and interpreted in a rigorous two phase approach: (1) an assessment of the reliability and validity of the measurement model describing the relationship between the latent constructs and their manifest indicators; and (2) an assessment of a structural model describing the relationships between the latent constructs (Barclay et al, 1995). This approach ensures that construct measures are valid and reliable before drawing conclusions about the predictive strength of relationships between the constructs in the theoretical model (Barclay et al, 1995).

### **Assessment of the measurement model for partnership quality in an IT outsourcing relationship**

The measurement model in PLS is assessed for construct validity and reliability and the extent to which the underlying manifest variables accurately reflect and measure their constructs. An assessment of the measurement model evaluates construct validity and the extent to which the underlying manifest variables accurately reflect their constructs. This assessment includes the individual item reliability, construct reliability, average variance extracted (AVE) analysis, and convergent validity and discriminant validity (see Table 12). Additionally, a factor analysis and reliability analysis was conducted in SPSS to further confirm the reliability and validity of each dimension of partnership. The factor analysis and reliability analysis confirmed the dimensions of partnership quality proposed in the research model.

Individual item reliability is considered adequate when an item has a factor loading greater than 0.7 on its intended construct, which implies more shared variance between the construct and its measures than error variance (Carmines & Zeller 1979). Appendix 1 shows the

individual item weights and loadings, all retained items have loadings above the recommended 0.7 (Fornell & Larcker 1981; Chin 1998).

Construct reliability was measured using composite reliability, Cronbach alpha and average variance extracted (AVE). Reliability and convergent validity was interpreted using 0.7 which has been suggested widely as the benchmark for moderate reliability (Nunnally 1978). In this research, all of the constructs demonstrate adequate reliability and convergent validity with values for composite reliability and Cronbach alpha which exceed 0.82, except for the Cronbach alpha score for behavioural commitment which is still acceptable given its closeness to 0.7. AVE measure quantifies the amount of variance that a construct captures from its measurement items (indicators). All of the AVE measures for the latent variables exceed the recommended 0.5 value (Fornell & Larcker 1981). Hence the constructs measured in this study were found to be reliable and can be replicated in further studies involving partnership quality.

**Table 12 Reliability of constructs measuring partnership quality in an IT outsourcing relationship**

	AVE	Composite Reliability	Cronbach Alpha
<b>Behav Com</b>	0.59	0.81	0.68
<b>Dysconf</b>	0.75	0.95	0.93
<b>Funconf</b>	0.59	0.88	0.83
<b>Interorg Trust</b>	0.71	0.95	0.94
<b>Mutual Ben</b>	0.61	0.89	0.84
<b>Shared BU</b>	0.60	0.90	0.87
<b>Temp Com</b>	0.73	0.89	0.82

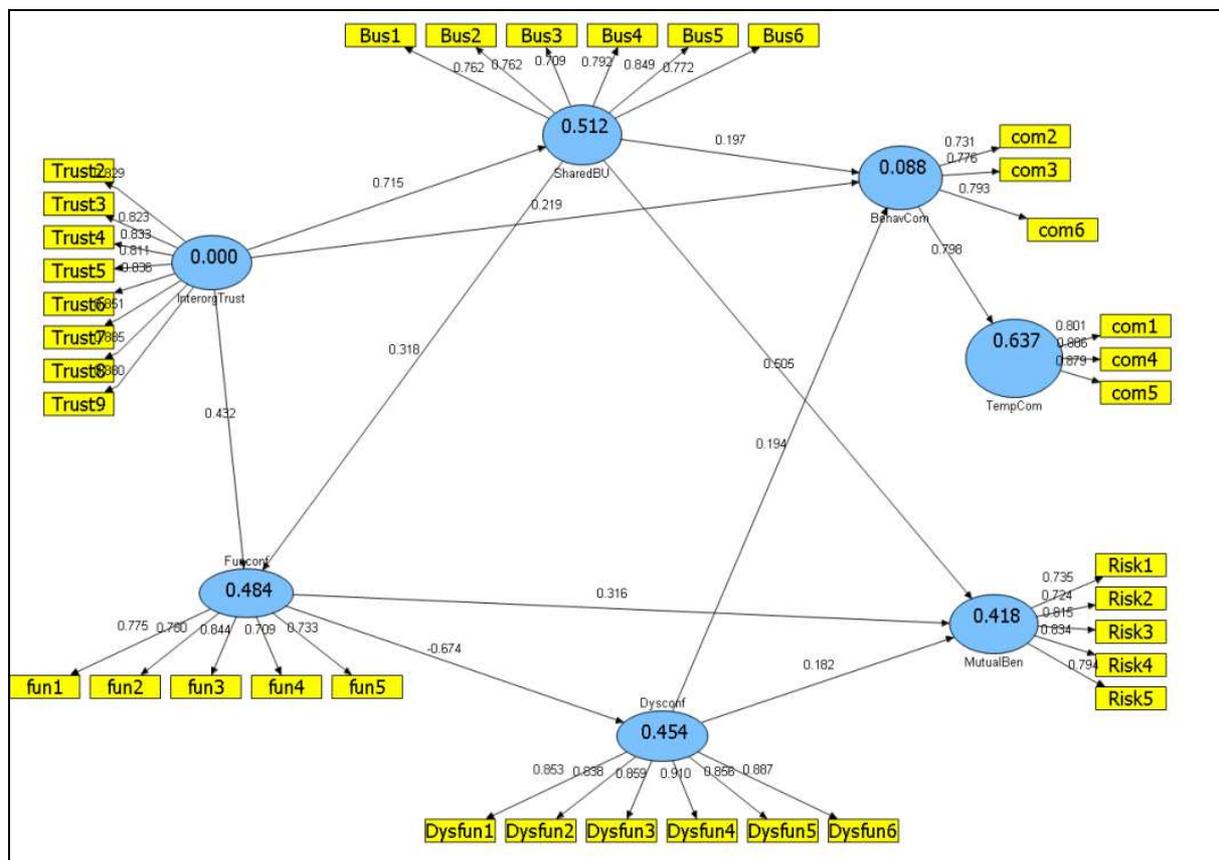
Discriminant validity: to assess discriminant validity, AVE should be greater than the variance shared between the construct and other constructs in the model (squared correlation between two constructs). Adequate discriminant validity is determined by comparing the square root of the AVE value of each construct and its correlation with the other constructs in the model. These AVE values are represented in the diagonal elements of the latent construct correlations table with off diagonal elements in the corresponding rows and columns (Barclay et al. 1995). All of the constructs in the model have square root AVE values which are higher than their corresponding correlation values with the other constructs except for behavioural commitment and temporal commitment which are the two sub dimensions of commitment measured in this study (Table 13). These two sub dimensions of commitment were retained in the proposed research model as correlation was less than as a rule-of-thumb cutoff for this assessment of  $r = 0.85$  (Garson 2009).

**Table 13 Latent construct correlation table with SQRT of AVE values included**

	Behav Com	Dys conf	Fun conf	Interorg Trust	Mutual Ben	Shared BU	Temp Com
BehavCom	<b>(0.77)</b>						
Dysconf	-0.06	<b>(0.87)</b>					
Funconf	0.20	-0.67	<b>(0.77)</b>				
Interorg Trust	0.23	-0.70	0.66	<b>(0.84)</b>			
Mutual Ben	0.08	-0.29	0.51	0.44	<b>(0.78)</b>		
Shared BU	0.26	-0.51	0.63	0.72	0.61	<b>(0.78)</b>	
Temp Com	0.80	-0.13	0.22	0.25	0.09	0.25	<b>(0.86)</b>

The items retained for each factor were determined from the factor loadings and cross loadings produced by PLS (see Appendix 1, Table 17). All items with factor loadings less than 0.6 were dropped from the measurement model after providing further confirmation with factor analysis and reliability analysis conducted in SPSS to determine which items should be retained for each construct. Overall internal validity was established through ensuring that the constructs measuring partnership quality had adequate face and content validity and adequate convergent and discriminant validity.

Figure 2 presents the strength of the relationships in the PLS structural model and the amount variance explained in individual variables in the structural model.



**Figure 2 PLS Structural Model for Partnership Quality in the IT outsourcing relationship**

Table 14 presents the T values of the path coefficients and summarises the results of the proposition testing for the key determinant factors and relationships for partnership quality in the IT outsourcing relationship.

**Table 14 Assessment of the structural model for partnership quality**

Proposition	Predicted relationship	Original Sample (131) $\beta_1$	Sample Mean (500) $\beta_2$	T Statistics ((O/STERR))	Supported
<b>P9</b>	BehavCom -> TempCom	0.80	0.80	29.00***	Yes
<b>P1a</b>	InterorgTrust -> SharedBU	0.72	0.72	18.73***	Yes
<b>P4</b>	Funconf -> Dysconf	-0.67	-0.68	13.19***	Yes
<b>P3</b>	SharedBU -> MutualBen	0.51	0.51	5.96***	Yes
<b>P1b</b>	InterorgTrust -> Funconf	0.43	0.43	4.95***	Yes
<b>P2</b>	SharedBU -> Funconf	0.32	0.32	3.56***	Yes
<b>P5</b>	Funconf -> MutualBen	0.32	0.33	3.31***	Yes
<b>P6</b>	Dysconf -> MutualBen	0.18	0.19	1.95*	Yes
<b>P8</b>	Dysconf -> BehavCom	0.19	0.19	1.73*	Yes
<b>P1c</b>	InterorgTrust -> BehavCom	0.22	0.21	1.67*	Yes
<b>P7</b>	SharedBU -> BehavCom	0.20	0.20	1.66*	Yes

Notes: Inter-organisational trust (InterorgTrust), Shared business understanding (SharedBU), Mutual benefits – shared risks and benefits (MutualBen), Dysfunctional conflict (Dysconf), Functional conflict (Funconf), Behavioural commitment (BehavCom), Temporal commitment (TempCom)

\* denotes significance at 0.05 level - 95% significance level--t value  $\geq$  1.645

\*\* denotes significance at 0.01 level - 99% significance level--t value  $\geq$  1.96

\*\*\* denotes significance at 0.001 level- 99.9% significance level--t value  $\geq$  2.57

Table 14 reports the standardized beta 1 parameter which is based on the total sample, and the standardized Beta 2 parameter which is obtained from bootstrap simulation of 500. Differences between both parameters are low, indicating stable estimates.

Table 15 summarises the Total effects and Direct and Indirect effects the relationships between the constructs in the proposed research model in. This table clearly demonstrates that inter-organisational trust is the key determinant variable in partnership quality of an IT outsourcing relationship both in terms of direct and indirect effects. It is also clearly demonstrates that shared business understanding and to a lesser extent functional conflict are also key determinants of partnership quality in an IT outsourcing relationship in terms of direct effects. It also shows that mutual sharing of risks and benefits is the key outcome variable of partnership quality in an IT outsourcing relationship and that behavioural commitment builds an ongoing temporal commitment to partnership in an IT outsourcing relationship but is not significantly explained by the other variables in partnership quality.

**Table 15 Total effects and direct and indirect effects in proposed research model**

	BehavCom	Dysconf	Funconf	MutualBen	SharedBU	TempCom
Behav Com	0.00	0.00	0.00	0.00	0.00	<b>0.80 (TE) ***</b>
Dysconf	0.19 (TE) NS	0.00	0.00	<b>0.18 (TE) **</b>	0.00	0.16 (TE) NS
Funconf	-0.13 (TE) NS	<b>-0.67 (TE) ***</b>	0.00	<b>0.19 (TE) *</b> <b>0.32 (DE) ***</b> -0.14 (IE) NS	0.00	-0.10 (TE) NS
Interorg Trust	<b>0.27 (TE) **</b> <b>0.22 (DE) **</b> 0.05 (IE) NS	<b>-0.44 (TE) ***</b>	<b>0.66 (TE) ***</b> <b>0.43 (DE) ***</b> <b>0.23 (IE) **</b>	<b>0.49 (TE) ***</b>	<b>0.72 (TE) ***</b>	<b>0.22 (TE) **</b>
Shared BU	0.16 (TE) NS <b>0.20 (DE) *</b> -0.04 (IE) NS	<b>-0.21 (TE) ***</b>	<b>0.32 (TE) ***</b>	<b>0.57 (TE) ***</b> <b>0.51 (DE) ***</b> 0.06 (IE) NS	0.00	0.12 (TE) NS
R square	<b>0.08</b>	<b>0.454</b>	<b>0.484</b>	<b>0.418</b>	<b>0.512</b>	<b>0.637</b>

Notes: Inter-organisational trust (InterorgTrusT), Shared business understanding (SharedBU), Mutual benefits – shared risks and benefits (MutualBEn), Dysfunctional conflict (Dysconf), Functional conflict (Funconf), Behavioural commitment (BehavCom), Temporal commitment (TempCom)

**Total effect (TE); Direct effect = (DE); Indirect effect (IE)**

\* denotes significance at 0.05 level - 95% significance level--t value >= 1.645

\*\* denotes significance at 0.01 level - 99% significance level--t value >= 1.96

\*\*\* denotes significance at 0.001 level- 99.9% significance level--t value >= 2.57

NS denotes Not significant

An overall goodness-of-fit index cannot be reported because the objective of PLS is prediction versus fit. While PLS does not provide an index that is a global validation of a model such as SEM and  $\chi^2$  and related model fit indicators, a goodness of fit index can be calculated for a PLS model. Goodness of Fit (GoF) represents an operational solution for validating the PLS model globally (Guenzi, Georges & Pardo 2009). GoF is determined by calculating the geometric mean of the average communality and average  $R^2$  (Tenenhaus, Vinzi, Chatelin & Lauro 2005). By taking the square root of the product of the variance extracted of all constructs with multiple indicators and the average  $R^2$  value of the endogenous constructs, we can calculate a fit measure ranging between 0 and 1. According to the categorization by Cohen (1988) and using .50 as a cut-off value for communality (Fornell and Larcker 1981), the GoF criteria for small, medium, and large effect sizes are .10, .25, and .36. The blindfolding approach proposed by Wold (1982) was used to calculate the cv-communality and cv-redundancy indexes. The cv-communality index ( $H^2$ ) measures the quality of the measurement model while the cv-redundancy index ( $F^2$ ) measures the quality of the structural model. The mean of the cv-communality indexes can be used to measure the global quality of the measurement model if they are positive for all blocks of variables. The global quality of the structural model can be measured by the mean of the cv-redundancy indexes related to the endogenous blocks if they are all positive. (Guenz, Georges & Pardo 2009).

**Table 16 Global fit indexes for the PLS measurement model and structural model**

	<b>R<sup>2</sup></b>	<b>CV-Communality</b>	<b>CV-Redundancy</b>
<b>Behav Com</b>	0.09	0.59	0.05
<b>Dysconf</b>	0.45	0.75	0.27
<b>Funconf</b>	0.48	0.59	0.34
<b>Interorg Trust</b>	N/A	0.71	N/A
<b>Mutual Ben</b>	0.42	0.61	0.25
<b>Shared BU</b>	0.51	0.60	0.30
<b>Temp Com</b>	0.64	0.73	0.46
	<b>Ave R<sup>2</sup> 0.43</b>	<b>Ave CV-Communality 0.66</b>	<b>Ave CV-Redundancy 0.28</b>
<b>Goodness of Fit Index (GoF) 0.53</b>			

Notes: Inter-organisational trust (InterorgTrusT), Shared business understanding (SharedBU), Mutual benefits – shared risks and benefits (MutualBEn), Dysfunctional conflict (Dysconf), Functional conflict (Funconf), Behavioural commitment (BehavCom), Temporal commitment (TempCom)

According to Table 16 an overall large effect size is evident in the proposed research model of partnership quality with GoF index of 0.53. The mean cv-communality index ( $H^2$ ) of 0.66 indicates a large effect size for the measurement model and the mean cv-redundancy index ( $F^2$ ) of 0.28 indicates small effect size for structural model.

### **Discussion of data analysis findings—key drivers and relationships between dimensions of partnership quality in an IT outsourcing relationship**

As outlined previously in this paper we sought to investigate two research questions:

RQ1 what are the key determinant factors in partnership quality of an IT outsourcing relationship; and

RQ2 what are the key relationships between dimensions of partnership quality of an IT outsourcing relationship?

In relation to key determinant factors in partnership quality of an IT outsourcing relationship we found strong support for inter-organisational trust, shared business understanding and functional conflict being the key determinant factors for a positive partnership between the client organisation and outsourcing vendor. Inter-organisational trust is the key driver in a partnership between the client organisation and the outsourcing vendor in an IT outsourcing relationship. Behavioural commitment determines the ongoing temporal commitment to an IT outsourcing relationship, but does not appear to be a strong determinant factor in a partnership quality in IT outsourcing relationships. Functional conflict has a positive impact on partnership in an IT outsourcing relationship and reduces the negative impact of dysfunctional conflict on partnership in an IT outsourcing relationship. In contrast mutual sharing of benefits and risks in an IT outsourcing relationship would appear to be the significant outcome variable of a high level of partnership quality in an IT outsourcing relationship.

In regards to the relationships between the six dimensions of partnership quality we found significant direct and indirect relationships exist between some of the six dimensions of partnership quality as outlined in Figure 2 and summarised in detail in Tables 14 and 15 of the testing of the 11 propositions developed in the proposed research model (see Figure 1).

The relationships identified as significant in the testing of the propositions are now discussed in more detail.

The finding that **inter-organisational trust** has a strong positive influence on shared business understanding in IT outsourcing relationship is supported by the view in the existing literature in that as well as a detailed contract, trust serves as an important control mechanism making partner behaviours predictable (Hoecht & Trott 2006; Lee, Huynh, Chi-Wai & Pi 2003; Bradach & Eccles 1989; Gulati 1995). However, inter-organisational trust is incrementally built as the key parties in a partnership type relationship learn about each other while developing trust around norms of equity (Hoecht & Trott 2006; Lee, Huynh, Chi-Wai & Pi 2003; Shapiro, Sheppard & Cheraskin 1992; Ganesan 1994). The majority of organisations in this study considered their main outsourcing relationship to be at least somewhat partnership style and successful and, for the majority of the organisations, the duration of their main outsourcing relationship was at least 3 years. In such circumstances, inter-organisational trust and shared business understanding between the client organisation and their outsourcing vendor should have been well developed over time.

The finding that **inter-organisational trust** has a positive influence on functional conflict is supported by the view in the existing literature that trust can lead to the perception that conflict can be positive functional and constructive for a partnership if managed appropriately (Deutsch 1969; Anderson & Narus 1990; Morgan & Hunt 1994; Twomey 1995; Panteli & Sockalingam 2005), leading to increased productivity and part of the way business is conducted in a partnership style relationship. Organisations in successful partnerships acknowledge that conflict cannot be avoided and, rather than allowing conflict to negatively affect the relationship, partnering organisations develop mediating mechanisms to diffuse and settle differences (Anderson & Weitz 1989).

**Inter-organisational trust** was also found to have some influence on the behavioural commitment to a partnership style relationship between the client organisation and the outsourcing vendor. This finding is supported by the existing literature which found that relational trust is a major determinant of commitment as mistrust in a relationship results in short term exchanges (Achrol & Ravi 1991; Morgan & Hunt 1994) and a lack of commitment to pre-specified contractual obligations (Guitierrez et al, 2004) such as service level agreements in an IT outsourcing relationship. Therefore, it is unlikely that inter-organisational trust and behavioural commitment to a partnership style relationship will have developed and exist in the face of strong inter-organisational mistrust.

The findings show that **shared business understanding** has a strong positive influence on mutual sharing of benefits and risks between the client organisation and the outsourcing vendor in their main outsourcing relationship. Previous literature found that for there to be an effective mutual sharing of the benefits and risks, a partnership style relationship needs to exist where there are incentives for the outsourcing vendor to gain an understanding of the business of the client organisation (Lee, Huynh, Chi-Wai & Pi 2003; DiRomualdo & Gurbaxani 1998). In other words, for the mutual sharing of benefits and risks of an IT outsourcing relationship to be realised there has to be a partnership where there is a shared understanding of client organisation's core business activities supported and enabled by IT.

The findings that **shared business understanding** has a positive influence on functional conflict is supported by the existing literature (Panteli & Sockalingam 2005; Ray, Muhanna

& Barney 2007). Inter-organisational conflict can be construed in a constructive and positive manner for an IT outsourcing relationship when there is a shared vision between partners mitigating opportunistic behaviours (Kogut 2000). Without a shared understanding of the client organisation's business it will be difficult to avoid the inevitable disagreements and disputes that will arise during the duration of an IT outsourcing relationship (Klepper 1995). In other words, a shared understanding of the business will facilitate constructive behaviours and outcomes in an IT outsourcing relationship when functional conflict arises.

The findings also show that **shared business understanding** had some influence on behavioural commitment to a partnership style relationship between a client organisation and outsourcing vendor. In order for the benefits of behavioural commitment to contractual obligations to be realised there needs to be a shared business understanding. Partners in an IT outsourcing relationship need to understand each other in a wide range of business issues, including each other's vision, goals, culture, business processes, roles, objectives and ethical principles (DiRomualdo & Gurbaxani 1998; Hanox & Hackney 2000; Lum 2004).

The findings show that **functional conflict** has a strong influence on dysfunctional conflict and a moderate indirect influence on mutual sharing of benefits and risks in a partner style relationship between the client organisation and the outsourcing vendor. Existing literature notes that functional conflict and dysfunctional conflict are two distinct but related forms of conflict (Amason 1996; Panteli & Sockalingam 2005). By resolving disputes arising between the client organisation and outsourcing vendor amicably through mediating mechanisms, functional conflict can significantly reduce the harmful effects of dysfunctional conflict on an IT outsourcing relationship (Anderson & Weitz 1989). As a result, a partnership style relationship is more likely where constructive challenging of ideas, beliefs and assumptions facilitates the achievement of task oriented objectives while maintaining respect for each party's viewpoint if a disagreement arises (Amason 1996; Massey & Dawes 2007). Furthermore, functional or constructive conflict is more likely to lead to a productive relationship between the client organisation and the outsourcing vendor where there is a sharing of risks and benefits resulting in mutual benefit to both parties (Anderson & Narus 1990; Hellriegel, Slocum & Woodman 1992).

Interestingly, the findings also show somewhat counterproductively that **dysfunctional conflict** has a slight positive influence on mutual sharing of benefits and risks and behavioural commitment in a partnership style relationship between the client organisation and the outsourcing vendor. We believe that these relationships are explained because functional conflict exerts a much stronger influence in our model of partnership quality. Hence, overall if conflict is managed in a constructive and functional manner this will lead to improved outcomes in a partnership style IT outsourcing relationship such as improved mutual benefits for both parties and increased behavioural commitment to pre-existing contractual agreements.

Given that contractual obligations such as pre-specified service level agreements which must be met, it is not surprising that the key determining variables in a partnership style relationship (inter-organisational trust, business understanding and functional conflict) have little direct contribution and impact on behavioural commitment of the client organisation and the outsourcing vendor. However, the finding that **behavioural commitment** has a strong positive influence on temporal commitment in a partnership style relationship between the client organisation and the outsourcing vendor is supported by the existing literature (Gundlach, Achrol & Mentzer 1994; Gutiérrez et al 2004). The repetition of interactions

implicit in behavioural commitment to the obligations of pre-specified service level agreements of an IT outsourcing relationship can drive the desire to continue the relationship and improved temporal commitment – ongoing commitment to the IT outsourcing relationship (Gundlach, Achrol & Mentzer 1994). Indeed, we see commitment as a multidimensional construct and an ongoing process which will be enhanced by high partnership quality in an IT outsourcing relationship.

In our research we found two key outcome variables in the perceived partnership quality of an IT outsourcing relationship, namely, temporal commitment and mutual sharing of risks and benefits. **Temporal commitment** is an outcome variable in a partnership style relationship between the client organisation and the outsourcing vendor, but is largely predicted by the degree of behavioural commitment to the partnership as discussed previously in this section. Behavioural commitment which driven by meeting contractual obligations in turn through a partnership style IT outsourcing relationship reinforces a temporal and ongoing commitment to the IT outsourcing relationship between the client organisation and outsourcing vendor. **Mutual benefits - sharing of risks and benefits** is the prominent outcome variable in a partnership style relationship between the client and outsourcing vendor and is influenced directly and indirectly by all of the dimensions of partnership quality except for behavioural and temporal commitment as discussed previously in this section. Functional conflict, dysfunctional conflict, shared business understanding (directly) and inter-organisational trust (indirectly) have the most impact on mutual sharing of risks and benefits. Inter-organisational Trust and a shared business understanding between the client organisation and outsourcing vendor will determine the degree to which there is a sharing of the risks and benefits and conflict will play a moderating role on the mutual benefits gained from sharing the risks and benefits in an IT outsourcing relationship (Davenport & Prusak 1998; Peterson & Behfar 2003; Panteli & Sockalingam 2005; Ray, Muhanna & Barney 2007).

### **Limitations and future research**

As with all research our study has its limitations. The number of usable responses while acceptable for running PLS variance based SEM did not allow us to run co-variance based SEM. Co-variance based SEM is a more widely accepted multivariate statistical technique to validate the measurement model and structural model proposed for partnership quality in the IT outsourcing relationship. In this research we looked at partnership quality in the IT outsourcing relationship only from the perception of the client organisation and the senior IT executive responsible for managing the IT outsourcing relationship. Further research should also consider partnership quality from other key stakeholders in the client organisation and from the perception of the IT outsourcing vendor in order to provide a more balanced viewpoint. In this research we focused on partnership quality in IT outsourcing relationship future work should look at partnership quality in IT outsourcing in off shoring relationships and insourcing relationships as we believe partnership quality will be critical to the success of these types of relationships. But currently there is dearth of empirical research regarding IT off shoring and IT outsourcing relationship. Furthermore an international study where the investigation of the impact of partnership on the IT outsourcing relationship is replicated in a number of countries will increase external validity and reliability of this research.

### **Conclusions and implications**

In this research we tested the relationships between the key determinant and outcome factors of partnership quality in an IT outsourcing relationship. The model tested built upon and extended previous research on partnership quality in an IT outsourcing relationship. In

particular, the measurement of conflict was extended to acknowledge the multidimensional nature of conflict to include functional and dysfunctional dimensions and the multidimensional nature of commitment was acknowledged in the form of behavioural and temporal commitment. The model was tested using a second generation multivariate statistical technique—partial least squares.

The measurement model for partnership quality was confirmed as being reliable and valid after some minor adjustment to the proposed research model through dropping of individual items with low factor loadings. The findings from the results of the data analysis show that the key determinant factors and drivers for a quality partnership between the client organisation and the outsourcing vendor are inter-organisational trust and shared business understanding. These constructs positively influence functional conflict and mutual benefits of sharing risks and benefits and significantly contribute to the quality of partnership between a client organisation and outsourcing vendor. To a lesser extent, functional conflict and dysfunctional conflict influence the quality of a partnership between the client organisation and the outsourcing vendor. We also found that the key outcome variable in a quality partnership between a client organisation and the outsourcing vendor was the mutual of sharing of both the risks and benefits of an IT outsourcing relationship. However, inter-organisational trust, shared business understanding and functional and dysfunctional conflict contributed little to directly explaining the current behavioural commitment and temporal ongoing commitment to the IT outsourcing relationship because of pre-specified contractual obligations such as service level agreements. Additionally, the demographic variables in this research supported the view that a high quality partnership between the client organisation and the outsourcing vendor is also perceived to be a key aspect in a successful IT outsourcing relationship, although this relationship was not empirically tested and reported on in this paper.

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## Appendix 1

Table 17 Factor Structure Matrix of Loadings and Cross-Loadings

	Behav Com	Dysconf	Funconf	Interorg Trust	Mutual Ben	Shared BU	Temp Com
<b>Bus1</b>	0.20	-0.38	0.46	0.56	0.41	<b>0.76</b>	0.06
<b>Bus2</b>	0.22	-0.26	0.38	0.48	0.38	<b>0.76</b>	0.21
<b>Bus3</b>	0.17	-0.52	0.58	0.63	0.42	<b>0.71</b>	0.25
<b>Bus4</b>	0.19	-0.42	0.51	0.54	0.57	<b>0.79</b>	0.22
<b>Bus5</b>	0.24	-0.46	0.53	0.63	0.59	<b>0.85</b>	0.27
<b>Bus6</b>	0.16	-0.27	0.40	0.45	0.43	<b>0.77</b>	0.12
<b>Dysfun1</b>	-0.10	<b>0.85</b>	-0.54	-0.66	-0.21	-0.43	-0.14
<b>Dysfun2</b>	0.00	<b>0.84</b>	-0.60	-0.59	-0.27	-0.40	-0.07
<b>Dysfun3</b>	-0.03	<b>0.86</b>	-0.55	-0.56	-0.29	-0.46	-0.10
<b>Dysfun4</b>	-0.08	<b>0.91</b>	-0.62	-0.65	-0.23	-0.45	-0.17
<b>Dysfun5</b>	0.00	<b>0.86</b>	-0.56	-0.56	-0.27	-0.42	-0.08
<b>Dysfun6</b>	-0.09	<b>0.89</b>	-0.63	-0.62	-0.24	-0.49	-0.13
<b>Risk1</b>	0.04	-0.19	0.38	0.32	<b>0.73</b>	0.50	0.14
<b>Risk2</b>	0.00	-0.20	0.41	0.35	<b>0.72</b>	0.44	-0.03
<b>Risk3</b>	0.08	-0.16	0.37	0.24	<b>0.82</b>	0.41	0.04
<b>Risk4</b>	0.10	-0.25	0.35	0.40	<b>0.83</b>	0.48	0.13
<b>Risk5</b>	0.08	-0.31	0.47	0.40	<b>0.79</b>	0.53	0.05
<b>Trust2</b>	0.14	-0.56	0.57	<b>0.83</b>	0.39	0.62	0.14
<b>Trust3</b>	0.15	-0.61	0.65	<b>0.82</b>	0.43	0.59	0.22
<b>Trust4</b>	0.22	-0.60	0.53	<b>0.83</b>	0.34	0.54	0.28
<b>Trust5</b>	0.17	-0.55	0.48	<b>0.81</b>	0.28	0.56	0.21
<b>Trust6</b>	0.26	-0.58	0.49	<b>0.84</b>	0.33	0.60	0.23
<b>Trust7</b>	0.14	-0.56	0.49	<b>0.85</b>	0.36	0.62	0.20
<b>Trust8</b>	0.23	-0.59	0.59	<b>0.89</b>	0.35	0.62	0.23
<b>Trust9</b>	0.21	-0.64	0.62	<b>0.88</b>	0.47	0.66	0.18
<b>Com1</b>	0.58	-0.09	0.10	0.16	0.11	0.19	<b>0.80</b>
<b>Com2</b>	<b>0.73</b>	0.06	0.07	0.08	0.09	0.17	0.44
<b>Com3</b>	<b>0.78</b>	0.03	0.07	0.10	-0.03	0.18	0.46
<b>Com4</b>	0.73	-0.13	0.25	0.24	0.05	0.25	<b>0.89</b>
<b>Com5</b>	0.73	-0.11	0.19	0.23	0.08	0.20	<b>0.88</b>
<b>Com6</b>	0.79	-0.15	0.24	0.27	0.10	0.22	<b>0.81</b>
<b>Fun1</b>	0.22	-0.66	<b>0.77</b>	0.64	0.37	0.53	0.20
<b>Fun2</b>	0.13	-0.41	<b>0.78</b>	0.39	0.44	0.42	0.17
<b>Fun3</b>	0.13	-0.60	<b>0.84</b>	0.64	0.44	0.61	0.16
<b>Fun4</b>	0.16	-0.37	<b>0.71</b>	0.37	0.33	0.42	0.19
<b>Fun5</b>	0.10	-0.48	<b>0.73</b>	0.41	0.38	0.38	0.10