ENGENDERING TRUST IN THE CONSTRUCTION SUPPLY CHAIN

Nicola Naismith[1], Andrew D.F. Price[2], Andrew R.J. Dainty[3], Alan Bryman[4], Kay Greasley[5] and Robby Soetanto[6].

[1]*Department of Built and Natural Environment, Glasgow Caledonian University, Glasgow, UK*
[2]*Department of Civil and Building Engineering, Loughborough University, Leicestershire, UK*
[3]*Department of Civil and Building Engineering, Loughborough University, Leicestershire, UK*
[4]*Management Centre, University of Leicester, Leicestershire, UK*
[5]*Department of Health Sciences, University of Leicester, Leicestershire, UK*
[6]*Department of Civil and Building Engineering, Loughborough University, Leicestershire, UK*

Abstract

Project success is dependent upon the effective management of people and at the heart of this process is trust. It is often claimed that the construction industry has low levels of trust and numerous reports globally have challenged the industry to address its poor performance on people management and cultural issues. The industry has a long-standing reputation for being adversarial, demonstrated by poor relationships between the client, main contractor and subcontractors, which in turn leads to numerous problems including poor project performance, cost control and poor long-term relationships between the parties involved. These problems are attributed primarily to a lack of harmonisation between contracting parties. This paper investigates the perceptions of trust within the supply chains of partnering projects. It explores the contextual issues surrounding the projects, focusing on the relationship between the partnering method of procurement and the levels of trust that exist within supply chains. This qualitative case study based research provides insights into the multifaceted nature of trust, the difficulty of defining the concept and its evolution through the duration of the project. The paper concludes that trust is an essential element for effective supply chain relationships and can be engendered through teamwork, leadership and the ultimate empowerment of the supply chain. It would appear on the basis of this research that trust can be realised within construction supply chains where partnering principles are a priority.

Keywords: Supply chain relationships, trust, partnering, case study.

INTRODUCTION

The construction industry has a long-standing reputation for being adversarial, demonstrated by poor relationships between the client, main contractor and subcontractors, which in turn lead to numerous problems including poor project performance, cost control

and poor long-term relationships between the parties involved (Murray and Langford, 2003). These problems can be attributed to a lack of harmonisation between contracting parties. A major thrust of the Latham review (Latham, 1994) has been the attempt to re-build trust in the construction industry by advocating partnering at project level, and by encouraging the re-structuring and realignment of the existing client, contractor, sub-contractor, supplier and consultant institutions. It is maintained that processes such as partnering can reduce costs within the construction process. Wood and McDermott (1999) suggested that partnering is advocated as the institutional form of co-operative behaviour. Although the relationship between the adoption of partnering and the creation of harmonious relationships is not yet clear, the principles underpinning partnering often involve the client empowering the contractor within the project. This fundamentally changes the nature of relationships within construction project supply chains.

Wood et al (2001) and Brenkert's (1998) both suggest the importance of trust in business relationships. They also suggested that trust reduces transaction costs, facilitates the sharing of sensitive information and permits joint projects of various kinds, as well as providing a basis for expanding moral relations in business. This is consistent with Fukuyama's (1995) view that transaction costs can be lowered by trust and social capital, although he was applying this concept to nations. Latham (1993) also signalled the importance of lack of trust in the construction industry. This study examines the reality of trust as perceived by senior managers working within construction supply chains. A qualitative approach was adopted for this study employing in-depth interviews on three major construction projects. The findings reveal the ways in which trust develops, the barriers to trust and the redevelopment of trust when it breaks down within the contextual situation of construction supply chains. The findings contribute towards the establishment of a multi-component conceptualisation of the trust cycle.

Background: the concept of trust

The study of 'trust' is not a new phenomenon and has been important for some time (e.g. Gambetta, 1988; and Coleman, 1990). In recent years, it has become a major focus of the organisational literature and research, including the nature, causes and consequences of trust (Hosmer, 1995; Kramer, 1999; Shaw, 1997; and Rousseau et al, 1998). Costa (2003) suggested that this interest in trust is partly due to the changes over last two decades in the way that organisations operate. Greater emphasis is given to interpersonal and group dynamics at the workplace, where trust is seen as one of the essential elements. In the absence of trust, no one will risk moving first and all members will sacrifice the benefits from collaboration and co-operation in a pursuit to increase effectiveness.

Trust as a phenomenon

Trust has been defined in a number of ways and is supported by a large literature base. Yet its nature and definition remain somewhat ambiguous overall (Swan et al, 2002)**.** It has been described as: multidimensional in nature (Sako, 1992; Ganesan, 1994; and McAllister, 1995) , a multifaceted social phenomenon (Fukuyama, 1995; and Misztal, 1996) , and as an attitude (Luhmann, 1979; and Flores and Solomon, 1998). Another common understanding is that trust and co-operation are closely and positively related, so that trust can also be regarded as a social lubricant (Gambetta, 1988)**.** Given these dimensions, the definition developed by Wood and McDermott (1999) appears appropriate, namely:

'a willingness to rely on the actions of others, to be dependent upon them, and thus be vulnerable to their actions'.

Most authors agree that the notion of risk is central to the concept of trust. According to Luhmann (1988), trust is a solution for specific problems of risk in relations between actors, because it is an attitude that allows for risk-taking. If actors choose one course of action in preference to alternatives, in spite of the possibility of being disappointed by the action of others, they define the situation as one of trust. Gould-Williams (2003) concurs with Luhmann (1979) and proposes that trust is essentially a dichotomous concept consisting of distinct interpersonal and systems components. Tyler and Degoey (1996) argued that conceptualisations of trust should embrace various forms of social trust.

In addition to the notion of risk, an extensive list of qualities of trust can be seen from the literature. Kumar (1996) listed dependability, honesty, interdependence, openness and fairness as key qualities, whereas Clark and Payne (1997) proposed integrity, competence, consistent fairness, openness and respect shown. Some commonality between these views was described by Morgan and Hunt (1994), who list consistency, competence, honesty, benevolence and fairness as key qualities of trust.

Developing the issue of trust further, Swan et al (2002) outlined a number of key issues regarding perceptions of trust as a concept within construction. These include the need for honest communications supported by actions and behaviours, successfully achieving the outcomes assigned to complete the project, and external factors to the project also play an important role in construction. The final issue is that of perceptions and intention. Here, trust is built upon previous experience where expectations of one party being met by another, which supports previous work by Higginson (1998), Brenkert (1998), Flores and Solomon (1998) and Husted (1998).

The importance of relationships and experience has also received attention within the literature. According to Williams (2000), trust is built throughout relationships in which many repeats of experiences will impact future exchange relationships. Experience is

considered to be the main driver of trust. The trust event or game will occur many times in a relationship during the course of a construction project. Each current game will be impacted by past events and events in other relationships (Smith and Laage-Hellman, 1992). In addition, this will be impacted by factors connected to project status, organisational issues and individual contexts (Wood and McDermott, 1999). Bijlsma and Koopman (2003) confirmed that trust is influenced by past experiences and chances of future interactions. Expectations of others' beneficial actions will be enhanced by prior experiences of such behaviour. If others live up to prior expectations, then this will further positive expectations in the future, enhance the level of trust and promote a willingness to cooperate (Lewicki and Bunker, 1996).

A final significant factor identified in the development of trust is that of reputation (Gambetta, 1988; Nootboom, 1992; and Ganesan, 1994). Without a reputation for trustworthiness, possible partners are unlikely to enter into the first steps of a partnership. Research by Swan et al (1999) confirms that a partner with a 'good' reputation is more likely to be trusted.

Benefits of Trust

The idea that trust has many benefits at individual, team and organisational levels has been, and continues to be, an important issue. There is an acknowledgement that trust in the workplace is a critical factor leading to enhanced organisational performance. As a norm, 'high commitment' HR practices are expected to communicate to employees the extent to which organisations trust them as well as communicate that the organisation is trustworthy. This encourages employees to take a chance on behalf of the organisation without fearing exploitation (Gould-Williams, 2003).

Trust is often perceived to be a source of increased efficiency and effectiveness (Zand, 1972; Culbert and McDonough, 1986; Golembiewski and McConkie, 1975). Tyler et al (1996) stated that trust is a key to organisational performance because it enables voluntary cooperation. This form of cooperation becomes increasingly important when command and control styles of management are no longer effective. As work has become more centred around intellectual labour and the operation of inter-dependent teams, management can no longer control everything. Cooperation and trust are important conditions in such a work environment (Bijlsma et al, 2003) as illustrated by many construction projects.

The benefits of trust are wide ranging in nature, trust is often perceived to be the lubricant that facilitates the operation of organisations (Bennis and Nanus, 1985), and an integrative mechanism creating and sustaining social systems (Barber, 1983**;** Blau, 1964**).** Trust has been associated with a willingness to take a chance on behalf of the organisation without fearing exploitation (Eddy, 1981), with the psychological contract (Sparrow, 1998) and with reduced conflict (Swan et al, 2002).

Mistrust

Concurrent with the importance of trusting relationships, is a growing concern regarding the levels of distrust and violations of trust within organisational contexts (Giacalone and Greenberg, 1997; Lewicki and Bunker, 1996). The process of developing trust is achievable only when the emotions associated with it are understood. For example, the presence of a lack in confidence, combined with the feeling of suspicion, unconfirmed track record of consistency, negative behaviours and an inability to keep promises are all barriers to creating and sustaining trust. A lack of trust can lead to a variety of dysfunctional outcomes such as cynicism, low motivation, low commitment and a lack of confidence in the organisation (Kanter and Mirvis, 1989**;** Carnevale and Wechsler, 1992).

Trust in project-based environments

Munns (1995) argued that many studies of trust have been carried out in the context of permanent relationships and organisational settings. These allow individuals to develop impressions of others which can be tested over an extended period of time. Construction projects have certain characteristics which do not permit such long-term impressions to be developed as easily. These characteristics were described as the personnel, the project and the organisation. Each project is unique, hence the organisation is often temporary, and, as a result, there can be a lack of commitment between the client and the project-team members in terms of developing people-building skills. The personnel who work on construction projects are often employed on a temporary basis. Consequently, they can lack the motivation to participate in the long-term success of the project. The development of long-term stable relationships within construction projects is therefore a complex issue.

METHOD

The methods that underlie previous studies into trust have been dominated by quantititative research, (e.g. Munns, 1996), with a move towards more qualitative studies in recent times. By adopting a qualitative, longitudinal multiple-case study, it was possible to gain richer insights than through a questionnaire-based survey. Semi-structured interviews were conducted with senior managers from three major construction projects. Four organisations were sampled from each project supply chain totalling 12 one-hour interviews. The three construction engineering projects represent a useful set of contextual contrasts in terms of financial value, nature of work, contractual arrangements and procurement routes. They were purposively selected to explore partnering as a primary motive and to provide a variety of projects and contexts to allow analytic generalisation from the case studies. A brief outline of each project and its supply chain profile has been presented below. The

organisations selected within each project represented key members of the individual partnering arrangement. The lines within figures 1, 2 and 3 demonstrate the hierarchy within the project team and lines of communication between the interviewees.

- Project A was a two year, £60 million construction project. The project was an 'alliance' contract which involved numerous sub-contractors. The supply chain comprised a set of preferred sub-contractors. Located geographically in Cheshire, within the UK. Twelve key sub-contractors were involved throughout the design and construction process. The contract included a 'shared risk pot' whereby all the alliance parties agreed to a fixed price, with shared risk regarding financial savings and no payment for variations.

Figure 1 insert here

- Project B was a two year, £21 million refurbishment project. The project was part of a rolling contract and numerous sub-contactors are employed. Located geographically in Cumbria, within the UK. The partnering aspect of this project was between the client and the managing contractor.

Figure 2 insert here

- Project C was a five year, £12 million redevelopment project. There was a partnering arrangement between the client, main contractor and consultants. Further sub-contractors were employed on this project. Located geographically in Greater Manchester, within the UK.

Figure 3 insert here

As the interviews were semi-structured, they were neither a completely open conversation nor were they highly structured (Kvale, 1996). The interviews followed suggested themes and questions which were formed from the literature, focusing around the respondents' conception of trust, how they get others to trust them and how trust develops. Levels of trust were examined at three points in time during the construction projects. The first investigation was at the commencement of the project, the two other time points occurred subsequently during the project duration. The interviews provided a current perspective on relationships within the industry and particularly the level of trust that exists within partnering projects.

The analytical process was designed to explore thoroughly and reflect the participants' perceptions of trust. All of the interviews were audio recorded and transcribed and then openly and axially coded (Strauss and Corbin, 1990) using the NVivo qualitative analysis package. This enabled the content of the transcripts to be analysed allowing the commonalities and differences that existed between each interviewee within the supply chain organisations to emerge. The dominant themes are summarised below. It forms part of a wider study, which aims to explore empowerment within the supply chain in order to improve project performance.

RESULTS

Perceptions of Trust

The supply chain managers' perceptions of trust within the supply chains of three individual partnering projects varied within each project and between the projects. This is consistent with the literature and confirms that the meaning of trust is both difficult to define and subsequently difficult to rate. Along with the typical definitions described earlier in the literature, a number of interesting issues surrounding the definition of trust came to light and suggest that trust is multi-facetted in nature. These included: the nature of trust is time based; and relationships require a level of confidence and reciprocity. Where these factors are in place trust contributes to the avoidance or diffusion of confrontation.

'Trust is a gradual thing, it's not immediate.' (Project A, electrical and interior design contractor, contracts manager)

'Because trust is not a commodity, you can't buy and sell it, you've got to prove it really…' (Project C, mechanical and electrical subcontractor, managing director)

'Trust is reciprocal, people need to be confident in the relationship.' (Project C, main contractor, alliance negotiator and quality manager)

Existing Levels of Trust

Perceptions of the existing levels of trust were similar across all three construction supply chains on each occasion that interviews were conducted. Variations in the level of trust between the supply chain organisations were confirmed at the start of each project. The level of trust was dependant upon the actual organisations involved. Trust was lower where

new companies were involved, or where organisations had been in conflict previously. Trust levels were particularly high between members that have worked together on previous projects and where a good level of trust has already been established. Trust levels were described as improving with each wave of interviewing, as they had developed over time. A number of organisations suggested that the levels of trust were much higher than they previously experienced during projects using traditional procurement routes, although within each project organisations outlined isolated situations where a lack of trust had occurred, barriers to trust existed and where measured had been undertaken to rebuild trust.

The Process of Developing Trust within the Supply Chain

Trust relations had developed well over the duration of the projects and a high level of trust existed during the project generally, although on occasion a lack of trust was experienced within the projects. Trust and its development are dependant upon several contextual factors. The influencing contextual factors articulated by the supply chain members were wide ranging in nature. Factors included: the need for high standards of communication, combined with individual and organisational consultation and empowerment; reciprocal honesty; and openness. All of these factors contribute to the development of confidence by the parties when combined with meeting realistic and achievable project outputs. Trust is an evolving process; it is not automatic in nature and develops through interaction and appreciating other people and their situation. All of these factors are interrelated and aid the development of trust as a relationship subsequently contributing to the success of projects

When honesty and openness are reciprocal, the process of developing trust can begin. Where this is combined with a level of confidence in the other supply chain members, the level of trust can be developed further.

'I think you earn trust. I think as soon as you take away the old fashioned traditional contractual stuff, where you start writing letters, you start making claims, all that lot, as

soon as they see you're the sort of person who will help out, then the trust builds.' (Project C, main contractor, alliance negotiator and quality manager)

'Confidence builds trust. … But ultimately I think it just comes down to the personalities involved. If they're straight, honest people you stand a chance.' (Project B, general contractor, contracts manager)

In order for the development of trust to continue, high standards of communication between the supply chain members need to take place which includes both contribution by the members and consultation between the members to engender trust.

'developing trust is a continuous presence, being there at most of the meetings, so that you grow with the project, because if you flip in and out of the project, it's difficult to build up any rapport of any sort.' (Project A, electrical and interior design contractor, contracts manager)

'It's regular attendance of meetings and people buying into the desire for the project to succeed as a whole, rather than as an individual member.' (Project B, managing contractor, project manager)

'You know, just interaction between people. It's a development isn't it? It's not something you consciously set out to do….' (Project B, general contractor, contracts manager)

In addition to the above factors, setting and achieving consistent and realistic project targets and outputs is required to develop trust within the construction project supply chains. Where targets were not realistic and achievable, parties often became de-motivated, frustrated and distrustful. Project performance is thus important to engender trust and trust is important to aiding successful project performance.

'To deliver what you say you're gonna do when you do it. To come up with the goods and to appreciate other people's problems as well as your own. you develop trust ...' (Project C, specialist glazing subcontractor, managing director)

'If you find through the experience of working together that you both come up with the goods, then that's how your trust builds in a stronger way.' (Project B, managing contractor, project manager))

All parties confirmed that trust evolves over time through working with other supply chain members, but does not develop automatically as a consequence of long-term relationships. A predisposition to trust can occur where trust has been successfully engendered through previous project experiences.

'Trust always develops over time…I can't see how you could do trust any other way.' (Project A, steelwork contractor, contracts manager)

'By being honest and spending enough time together. Time is very, very important. Being honest in its own right'.(Project C, architects practice (clients consultant), associate director)

'You judge a contractor by the behaviour of his people on site. trust develops over time within an alliance. It's wariness, at the beginning….' (Project A, client's representative and managing contractor, project manager)

Rebuilding trust

The adversarial nature of construction projects implies that conflict is often commonplace within construction project supply chains. Conflict can often result in a breakdown of trust relations. To expand understanding of the fragility of the trust relationship, interviewees were asked how trust within the supply chain can be rebuilt if it has been broken. A number of common themes emerged across the organisations within all three projects and supported the factors raised as essential to the development of trust within construction project supply chains. These included a combination of open and honest communication and time. Although all parties were confident that trust can often be rebuilt, its success will also depend upon the causes of the mistrust. Where the level of mistrust is very high, the removal of personalities from the project can aid the situation to allow trust to re-develop between the supply chain members.

'It's very hard, at times…It's a case, you've got to put together justification and deliver what you say, and again it's back to being open and honest.' (Project B, Client's representative)

'Often I think it does come down to individual personalities and, you work on projects where one person gets removed and the whole thing takes off.' (Project C, specialist glazing subcontractor, managing director)

Barriers to Trust

Previous research has identified a number of possible barriers to trust. During this research, three main issues emerged as important inhibitors of trust within construction project supply chains: the lack of knowledge of the parties involved regarding the procurement process; the inequality that exists throughout the supply chain; and past experiences.

All construction projects have contextual factors that could inhibit the development of trust relations. For example, poor historical relations and past experiences within the industry

leave supply chain members feeling uncertain, anxious and even distrustful of any new procurement method until they have at least developed a working knowledge, experienced the process and had a successful outcome.

…'*the biggest barrier in the supply chain, is the fact that people have historically had bad experiences and are not willing to trust you until you've gone through the process, and you can demonstrate to them that you are trusting them and that you're not going to turn round and punish them unjustly. After you've done the first job together, it becomes much easier….' (Project C, architects practice (client's consultant), associate director)*

…'*if you're in a sub-contract position, you're always made aware that you may get clobbered. So you may be a little bit cautious, you know. (Project B, access and scaffolding subcontractor, quantity surveyor)*

The inequality between members that exists throughout the supply chain was also an important issue at a number of levels within the supply chain. Supply chain members recognised the difficulties surrounding ensuring that all members adopt the partnering or alliancing principles. This may be due to commercial reasons related directly to the current project or wider organisational factors outside the project where conflicts occur. This inequality can be seen specifically where supply chain members subcontract parts of their project responsibilities to other organisations.

'there's always a chance I think the further down the supply chain you go the less influence you have and the less influence is being given. You can't rely on suppliers to pass on the full culture to the sub supplier and him to pass it on to the next one.' (Project B, general contractor, contracts manager)

The Interrelationship between Trust and Procurement and Supply Chain Relationships

The importance of contextual factors should not be overlooked when examining the nature and implications of trust as a phenomenon for the functioning of supply chain teams and organisations. Contextual factors include the life cycle of the team and the degree of familiarity between team members. For example, Costa (2003) suggests that in teams that are created for a specific project and exist for a fixed period of time (such as project teams), individual members will have the tendency to identify more with the product being created than with their colleagues.

Focusing particularly on the relationship between the partnering method of procurement and the levels of trust that exist within the UK construction sector supply chains, the importance of trust to the success of each specific project was very frequently commented upon. Trust was also described as essential for successful partnering or alliancing methods of procurement.

..*'trust's a key determiner of a successful alliance' (Project B, clients representative)*

… *'the alliance doesn't really work if somebody is not to be trusted. The whole thing revolves around trusting the other members of the alliance and people being open about what it is they're doing. If they've got problems they need to share those problems, so that the whole of the alliance can resolve it'…(Project A, steelwork contractor, contracts manager)*

At the same time, supply chain members confirmed that trust levels were much higher within their projects as compared to traditional procurement routes and that the project procurement routes offer the opportunity for trust to be engendered. In addition to the

higher levels of trust, supply chain relationships were described as being very strong across all three projects. A high level of harmonisation existed between contracting parties.

'So, I think it's an important thing and I think there's a lot more trust than you'll find on a standard sort of contract.' (Project C, specialist glazing subcontractor, managing director)

'It is yeah, you're under a lot more pressure to .. you know, for the good of the team, and the level of reciprocation by others varies.' (Project A, Building / civil engineering contractor, managing director)

'I think it's good. I think I think that whatever else, I think the people understand that there's a common objective.' (Project C, mechanical and electrical subcontractor, managing director)

Discussion

The research discussed in this paper has investigated the perceptions of trust within the supply chain of partnering projects and the contextual issues surrounding the project, focusing particularly on the relationship between the partnering method of procurement and the levels of trust that exist within the UK construction sector supply chains. The findings are consistent with the literature regarding the fundamental features of trust and its multi-facetted nature (Fukuyama, 1995; Misztal, 1996). It is clear that trust issues arise at many different levels within an individual supply chain and vary across projects. There are many factors that can impact trust, including procurement systems, organisational factors (Liu and Fellows, 1999) , psychological issues (Cummings and Bromiley, 1996) and macroeconomic factors, which can all influence relationships in construction project teams (Swan et al, 2001) and are confirmed by the findings. The findings also suggest that trust develops over

time and that trust leads to a long-term orientation to a relationship (Ganesan, 1994; Morgan and Hunt, 1994).

It is clear that all levels of the supply chains appreciate the need to trust as vital to the way project teams need to work. The interviewees indicated that trust is an essential component of a successful project, even though it is not easily earned.

Although the three projects differ, there are some notable similarities. For example, all of the organisations felt trust relations had developed well over the duration of the projects and a high level of trust existed during the project generally. Where a lack of trust was experienced within the projects it was attributed to either the isolated relationships within the supply chains, the project context or the power balance between the supply chain organisations. For example, within project A, some of the individual relationships between staff members in the main contractor and key sub-contractors had undermined the success of the project. This was remedied by a request from the managing contractor for a change in the personnel within one of the supply chain organisations. Within projects A and C the subcontractors within the supply chain believed that the smaller organisation within the supply chain had less power than the larger organisations as their financial control could influence team decisions. In contrast, within project B a lack of trust was attributed to the structural relationships defined by the project procurement approach rather than to the personalities and power relations of those involved. These examples reveal individualised nature of supply chain relations which appear defined through an interplay of structural and cultural factors.

Emerging themes from the research include the barriers to trust in supply chain relationships, the development of trust and the factors surrounding the rebuilding of trust once it has been broken. These have been summarised within the cycle shown in Figure 4, which shows that trust develops over time and is dependant upon a wide variety of factors

ranging from honesty, empowerment and interaction. As trust develops over a period of time, project outputs and targets are met and this achievement reinforces the level of trust that has been developed. As a consequence the numerous barriers to engendering trust are eroded and confidence within the supply chain develops. Avoiding any barriers to trust and rebuilding trust where necessary are essential, as conflict is commonplace within the construction industry due to the level of risk and nature of the environment.

Figure 4 insert here

Recommendations suggested by the respondents for reducing the barriers to trust in the supply chain include a number of measures such as improving the selection process for partnering organisations selected, i.e. using organisations that are not at conflict with each other outside the project context within the business environment. A further recommendation would be to reduce the level of subcontracted work packages that occur internally within the agreed project work packages for the projects, thereby reducing the levels of inexperience and inequality that exist within the supply chain. A final recommendation is to ensure that the selected partnering organisations empower their employees to make decisions regarding the project. Respondents confirmed that a breakdown in relationships between the supply chain organisations often occurs where individuals have weak decision making powers regarding the project. This can be exacerbated by miscommunication between the individual organisations' project representative and the organisations' expectations.

Recommendations regarding the rebuilding of trust once it has been broken include open and honest communication as critical. Time plays an important role as trust can only be rebuilt after a period of time has elapsed. Where distrust is acute the only solution to aid open and honest communications may be the removal of personnel from the project.

Conclusions

The research has revealed the crucial importance of trust within supply chains as a key determinant of the success of construction projects. Partnering and alliancing were upheld as the preferred procurement route by all parties, as they facilitate opportunities to engender trust and rebuild trust when the situation arises.

It is clear from the research that achieving high levels of trust is possible within the construction industry, even though the current structures, systems and relationships may present barriers to relational development. These barriers can be overcome in a number of ways to reduce uncertainty, anxiety and frustration apparent in the industry. Key factors for construction project success in relation to trust are high standards of communication, honesty, reciprocity and achievable objectives, supporting the research of Swan et al (2002). These issues warrant further study to develop understanding of trust as a concept.

The research has provided insights into issues of trust relations as part of the management of supply chain relations within construction projects. It has provided a cross case comparison of trust issues within a number of project contexts. By examining the factors contributing to trust, these findings form part of a wider study and contribute to the exploration of empowerment within construction projects in order to improve project performance. Developing and maintaining trust relations is beneficial to firms when trying to reconcile their differences within the often problematic project context provided by the industry.

References

Anderson, J.C. and Narus, J.A. (1991) Partnering as a Focused Market Strategy. *California Management Review*, Vol. 33 (3), Spring, pp. 95-113.

Barber, B. (1983) *The Logic and Limits of Trust*. New Brunswick, NJ: Rutgers University Press.

Bennett, J. and Jayes, S. (1998) *The Seven Pillars of Partnering*. London: Thomas Telford.

Bennis, W.G. and Nanus, B. (1985) *Leaders: The Strategy for Taking Charge*. New York: Harper and Row.

Bijlsma, K. and Koopman, P. (2003) Introduction: Trust within Organisations. *Personnel Review*, Vol. 32 (5), pp. 543-555.

Blau, P.M. (1964) *Exchange and Power in Social Life*. New York: Wiley.

Brenkert, G. (1998) Trust, Business and Business Ethics: An Introduction. *Business Ethic Quarterly*, Vol. 8 (2), pp. 195-203.

Carnevale, D.G. and Wechsler, B. (1992) 'Trust in the Public Sector Individual and Organisational Determinants'. *Administration and Society*, Vol. 23 (4), pp. 471–94.

Clark, M. C. and Payne, R.L. (1997) The Nature and Structure of Workers' Trust in Management. *Journal of Organisational Behaviour*, Vol. 8 (3), pp. 205-224.

Coleman, J.S. (1990) *Foundations of Social Theory*. Belknap Press, Cambridge: MA.

Cook, J. and Wall, T. (1980) 'New Work Attitude Measures of Trust, Organisational Commitment and Personal Need Non-fulfilment'. *Journal of Occupational Psychology***,** Vol. 53, pp. 39–52.

Costa, A. C. (2003) Work team trust and effectiveness**.** *Personnel Review*, Vol. 32 (5), pp. 605-622.

Culbert, S.A. and McDonough, J.J. (1986) 'The Politics of Trust and Organisational Empowerment'. *Public Administration Quarterly*, Vol. 10, pp. 171–88.

Cummings, L.L. and Bromiley, P. (1996) The Organisational Trust Inventory In: Kramer and Tyler (ed) *Trust in Organisations*, pp. 302- 330, Sage Thousand Oaks.

Eddy, W. B. (1981) *Public Organisation Behaviour and Development*. Cambridge, MA: Winthrop Publishers.

Flores, F. and Solomon, R.C. (1998) 'Creating Trust'. *Business Ethics Quarterly***,** Vol. 8 (2), pp.205-232.

Fukuyama, F. (1995) *Trust: The Social Virtues and the Creation of Prosperity*. Harmondsworth: Penguin Books.

Gambetta, D. (ed) (1988) *Trust: making and breaking cooperative relations.* Oxford: Basil Blackwell.

Ganesan, S. (1994) Determinants of long-term orientation in buyer- seller relationships. *Journal of Marketing*. Vol. 58 (April), pp. 1-19.

Gibb, J. (1964) *'Climate for Trust Formation'*. In Bradford, L., Gibb, J. and Benne, K. (eds) T-group Therapy and Laboratory Method, New York: Wiley.

Giacalone, R. and Greenberg, J. (eds) (1997) *Antisocial Behaviour in Organisations*, Thousand Oaks, CA: Sage.

Golembiewski, R.T. and McConkie, M.L. (1975) The Centrality of Interpersonal Trust in Group Processes, In Cooper, C.L. (ed.) *Theories of Group Processes*. New York: Wiley.

Gould –Williams, J. (2003) The importance of HR practices and workplace trust in achieving superior performance: a study of public-sector organisations**.** *International Journal of Human Resource Management,* Vol. 14 (1), February, pp. 28–54.

Higginson, R. (1998) *Establishing Trust in the Construction Industry*. Cambridge: Ridley Hall Foundation.

Hosmer, L.R.T. (1995) Trust: the connecting link between organisational theory and philosophical ethics. *Academy of Management Review*, Vol. 20, pp. 379-403.

Husted, B. W. (1998) The ethical limits of trust in business relations. *Business Ethics Quarterly*, Vol. 8, (2), pp. 233-250.

Kanter, D.L. and Mirvis, P.H. (1989) *The Cynical Americans: Living and Working in an Age of Discontent and Disillusion*. San Francisco: Jossey-Bass.

Kramer, R.M. (1999) Trust and distrust in organisations: emerging perspectives, enduring questions. *Annual Review of Psychology*, Vol. 50, pp. 569-98.

Kumar, N. (1996) The power of trust in manufacturer-retailer relationships. *Harvard Business Review*, Vol. 74 (6), pp. 92-106.

Kvale, S. (1996) *InterViews: An Introduction to Qualitative Research Interviewing.* Thousand Oaks, California: Sage Publications.

Latham, M. (1993) *Trust and Money: Interim report of the Joint Government / Industry Review of Procurement and Contractual arrangements in the United Kingdom Construction Industry*, HMSO.

Latham, M. (1994) *Constructing the Team*. HMSO, London.

Lewicki, R.J. and Bunker, B.B. (1996) Developing and maintaining trust in work relationships, in Kramer, R.M. and Tyler, T.R. (Eds), *Trust in Organisations: Frontiers of Theory and Research*, Sage, Thousand Oaks, Ca, pp. 114-39.

Liu, A. and Fellows, R. (1999) Cultural issues in McDermott and Rowlinson (ed) *Procurement Systems* : A guide to Best Practice in Construction, pp. 139-162, E & FN Spon London.

Loosemore, M., Dainty, A., and Lingard, H. (2003) *Human resource management in construction projects, strategic and operational approaches*, London: Spon Press.

Luhmann, N. (1979) *Trust and Power*. New York: Wiley.

Luhmann, N (1988) 'Familiarity, confidence, trust: Problems and alternatives', in Gambetta, D. (ed) (1988) *Trust: making and breaking cooperative relations*: pp. 94-108 Oxford: Basil Blackwell.

McAllister, D. J. (1995) Affect and cognition based trust as a foundation for interpersonal cooperation in organisations. *Academy of Management Review,* Vol. 38 (1), pp. 24-59.

Mayer, R.C., Davis, J.H., and Schoorman, F.D. (1995) An Integrative Model of Organisational Trust. *Academy of Management Review,* Vol. 20 (3), pp. 709–34.

Misztal, B. A. (1996) *Trust in Modern Societies.* Cambridge: The Polity Press.

Morgan, R. M. and Hunt, S. (1994) The commitment- trust theory of relationship marketing. *Journal of Marketing,* Vol. 58, July: pp. 20-38.

Moorman, C., Zaltman, G., and Desande, R. (1992) Relationships between providers and users of market research: the dynamics of trust within and between organisations. *Journal of Marketing Research*, Vol. 29, August: pp. 314-329.

Moorman, C. Deshande, R. Zaltman, G. (1993) Factors affecting trust in market research relationships. *Journal of Marketing,* Vol 57 (January): pp. 81-101.

Murray, M. and Langford, D. (2003) *Construction Reports 1944-98*. Oxford: Blackwell Science Ltd.

Munns, A.K. (1996) Measuring mutual confidence in UK construction projects. *Journal of Management in Engineering*, 12(1), 26-33.

Nooteboom, B. (1992) Marketing, Reciprocity and Ethics. *Business Ethics: a European Review*, Vol. 1 (2), pp. 110-116.

RfP (2000) *"Commitment to People "Our Biggest Asset", Report of the Rethinking Construction working group on Respect for People*, available on line: www.rethinkingconstruction.org

Rousseau, M.T., Stikin, S.B., Burt, S.B. and Carmerer, C. (1998) Not so different after all: A cross-discipline view of trust. *Academy of Management Review*, Vol. 23 (3), pp. 393-404.

Sako, M. (1992) *Prices, Quality and Trust: Interfirm Relations in Britain and Japan*. Cambridge, Cambridge University Press.

Shaw, R.B. (1997) *Trust in the Balance*. Jossey-Bass Publications, San Francisco: CA.

Smith, P.C. and Laage-Hellman, J. (1992) Small Group Analysis in Industrial Networks, (ed) Axelsson, B. Easton, G. Industrial Networks: A new view of reality, Routledge.

Smyth, H.J. and Thompson, N.J. (1999) Partnering and the Conditions of Trust (ed) Bowen, P; Handle, R.*CIB W55 and W65 Joint Triennial Symposium:* Customer Satisfaction: A Focus for Research and Practice.

Sparrow, P. (1998) 'New Organisational Forms, Processes, Jobs and Psychological Contracts'. In Sparrow, P. and Marchington, M. (eds) *Human Resource Management: The New Agenda*. London: Prentice Hall.

Strauss, A. and Corbin, J. (1990) *Basics of Qualitative Research*. Sage: Newbury Park.

Swan, J.E., Trawick, I. F., and Silva, D. W. (1985) How Industrial Salespeople Gain Customer Trust. *Industrial Marketing Management*, Vol. 14, pp. 203-211.

Swan, W., Wood, G., McDermott, P., Cooper, R., (2002) Trust in Construction: Conception of Trust in Project Relationships. *Proceedings of W92 Conference*, Trinidad and Tobago.

Tyler, T. and Degoey, P. (1996) Trust in organisational authorities, the influence of motive attributions on willingness to accept decisions, in Kramer, R.M. and Tyler, T.R. (Eds),*Trust in Organisations: Frontiers of Theory and Research*, Sage, London, pp. 331-57.

Williams, B. (2000) *Formal structures and Social reality*, in Gambetta, Diego (ed.) Trust: Making and Breaking Cooperative Relations, electronic edition, Department of Sociology, University of Oxford, pp3-13, http://www.sociology.ox.ac.uk/papers/williams3-13.doc.

Wood, G., and McDermott, P. (1999) Searching for Trust in the UK Construction Industry: An interim view, Ogunlana S. O. (ed.) *Profitable Partnering in Construction Procurement.* CIB W92 and CIB TG 23 Joint Symposium, E & FN Spon, pp. 107-116.

Wood, G., McDermott, P., and Swan, W., (2001) The Ethical Benefits of Trust-Based Partnering: The Example of the Construction Industry. *Business Ethics European Review Conference.*

Zand, D.E. (1972) Trust and Managerial Problem Solving. *Administrative Science Quarterly*, Vol. 17, pp. 229–39.

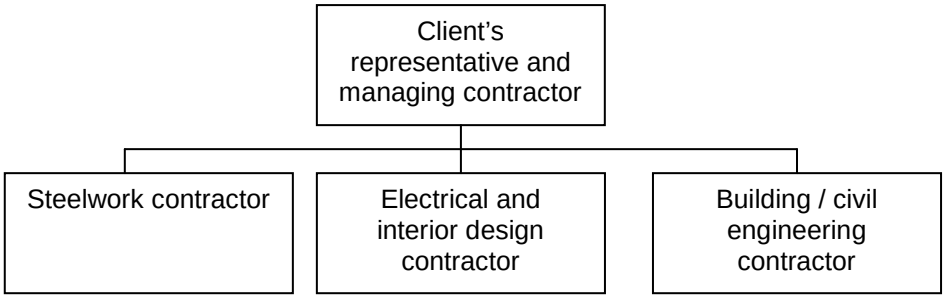

Figure 1

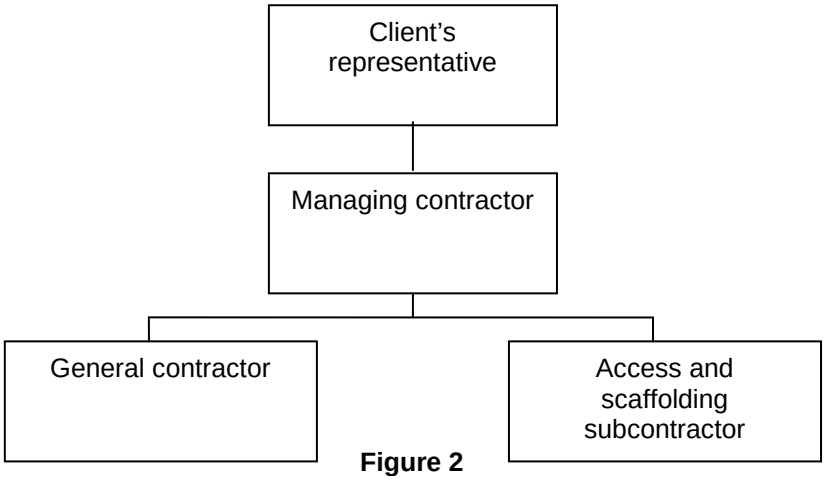

Figure 2

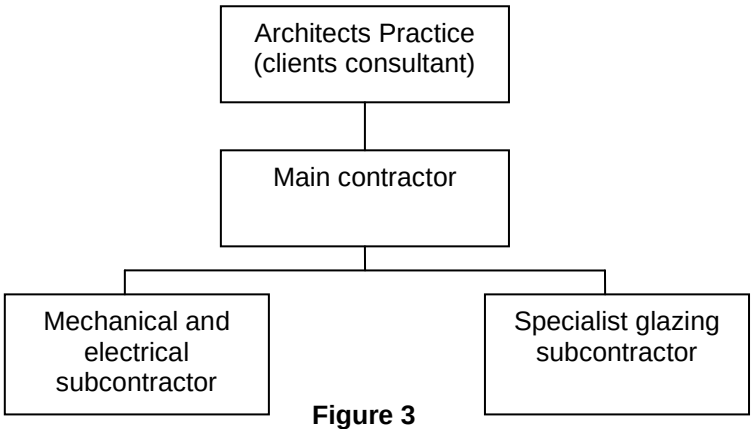

Figure 3

The Trust Cycle In Construction Supply Chains

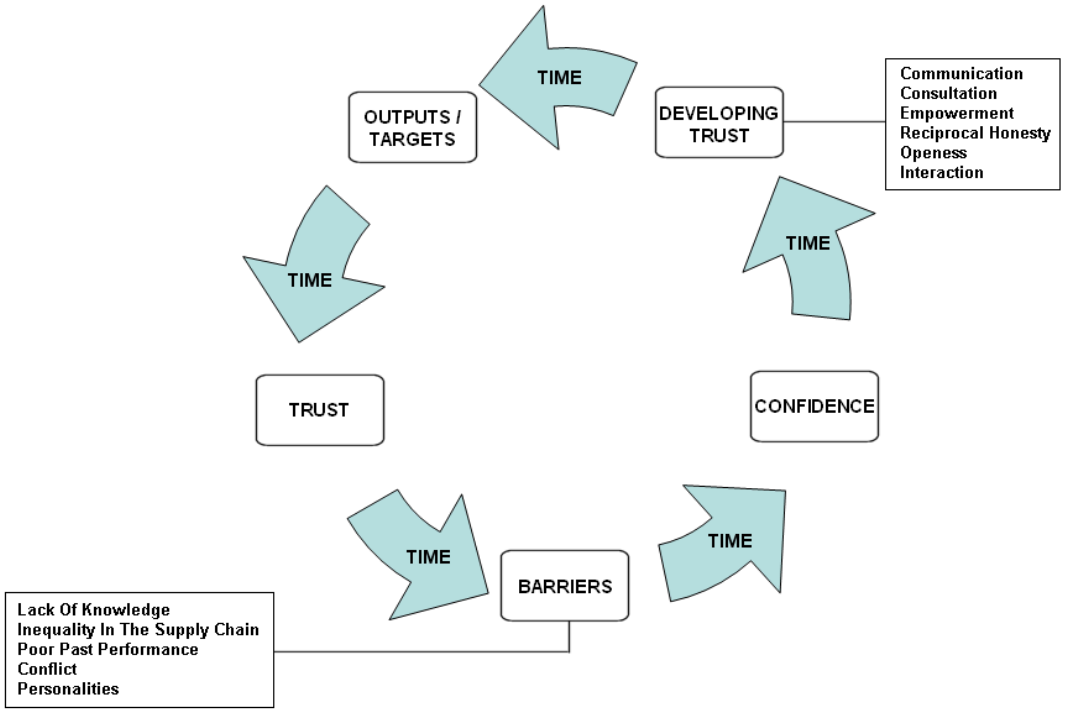

Figure 4