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RESEARCH ARTICLE

## The Influence of Trust on Project Management Practice within the Construction Industry

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### Abstract

Given that any construction project is inherently a human endeavour, it follows that issues of trust are significant in terms of the stakeholder interactions that deliver eventual project outcomes. Previous research indicates that the relational basis upon which projects are undertaken are intended to influence the likelihood of trusting relationships between stakeholders. Thus, experiences of trust in a construction project environment are likely to be influenced by the contextual specifics of respective transactional and relational contracting procurement mechanisms, given the divergent theoretical principles upon which they are founded. The influence of trust has therefore been examined through the lived experiences of construction practitioners. A phenomenological interview study consisting of thirty-five (35) participants was conducted with sensitivity to the procurement of experiences being recounted. Issues of trust were shown to be integral to stakeholder experiences in both procurement environments, with the benefits of trust acknowledged in many instances. However, little understanding was evident regarding methods for building and maintaining trust, nor for repairing trust when problems arose. Importantly, despite the differing principles that underpin transactional and relational procurement, and particularly the contention that relational procurement would increase trust between trading partners, this was not evident; with individual personalities and appropriate risk apportionment shown to be greater influences upon the likelihood of trusting relationships. It is reasonable to conjecture that relational contracts actually diminish the need for trust, given that the objective is to reduce uncertainty through formulaic approaches to risk distribution

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and reward; the absence of risk negates the need for trust. Ultimately, the potential to deliver improved project outcomes as a result of proactive approaches to developing and maintaining trust, as well as repairing trust after difficulties, was shown to apply under all procurement conditions.

## Keywords

**Trust, relationships, project management, procurement**

## Introduction

The issue of trust is fundamental to all aspects of human interaction (Gad and Shane, 2014), and given the human component required to deliver any construction endeavour (Lechler, 1998), trust and dimensions of trust are therefore significant. While much has been written regarding trust across numerous disciplines, any investigation of trust within a construction project management setting cannot ignore the contextual particulars which govern and influence any construction environment.

Whilst it is clearly the case that trust is ultimately an interpersonal phenomenon that arises out of some sort of power imbalance, much has been written in relation to the influence of alternate procurement instruments used for construction projects and the likelihood of a trusting relationship eventuating between client and contractor (Che Ibrahim, Costello and Wilkinson, 2011; Gad and Shane, 2014; Guo, Lu and Song, 2013; Kumaraswamy et al., 2005a; Laan et al., 2011). In particular, there has been an emphasis upon relational contracting (Doloi, 2009; Goddard, 1997; Rahman and Kumaraswamy, 2008; Rahman, Kumaraswamy and Ling, 2007) and project alliances (Chow, Cheung and Chan, 2012; Davis and Love, 2011; Sakal, 2005; Walker and Lloyd-Walker, 2016) as vehicles for the formation of increased levels of trust across project teams.

Plainly an investigation of trust related issues requires a clear understanding of what is meant by trust and the various dimensions associated with it (e.g. formation, maintenance, loss, repair, and so on) before meaningful research can be undertaken. Such a framework of concepts and explanations has been constructed and reported elsewhere (Brewer and Strahorn, 2012) and underpins this current investigation. It should be clearly understood that the nature of trust and trusting relationships remains constant irrespective of the context – or procurement mechanism – under which it is exercised. It follows that trusting intentions – or absence thereof – will be shaped by the context within which they occur (i.e. the procurement context).

The experience of trust is a deeply individual phenomenon: that whilst onlookers might believe that they detect the consequences of trust or its absence upon a particular relationship, they cannot “know” the experience themselves, nor can they claim to have “observed” trust in any deep and meaningful sense. It follows that to understand the various phases in (non-)trusting relationships it is necessary to examine the phenomenon through the “lived experiences” of trustors and trustees. Moreover, given that the unit of study is the individual’s lived experience of trust/mistrust/distrust – as opposed to understanding both sides of a specific relationship – it follows that the examination of dyadic relationships is not necessary to fulfil the research aim.

Accordingly, a phenomenological interview study of thirty-five (35) industry practitioners was conducted to examine the influence of trust through the lived experience of construction practitioners. The contextual specifics of respective transactional and relational procurement

mechanisms were considered. Despite the fundamental differences that exist between the principles of alternate procurement mechanisms, similar outcomes were evident in terms of trust, and eventual project outcomes. Both the initial apportionment of risk, and the individual personalities of stakeholders were found to be of greater consequence than the use of transactional or relational procurement mechanisms.

## Literature review

### TRUST

The practice of project management within any construction endeavour is inherently reliant on the actions of project individuals (Lechler, 1998) who collectively interact as a project team in the pursuit of overall project objectives. Given that these interactions take place on a human level, the issue of trust is fundamentally significant (Gad and Shane, 2014). To this end, the value of trust in human behaviour is widely acknowledged (Bigley and Pearce, 1998), and is ultimately considered to be the essential requirement that makes human interaction possible (Romahn and Hartman, 1999).

With consideration to the universal nature of trust, predictably much has been written across many disciplines, and within divergent contextual settings. An abundance of trust models subsequently exist, with their construct and development generally dependant on the definition of trust adopted by the respective research discipline (Mayer, Davis and Schoorman, 1995). It is therefore apparent that there is no single trust model that can provide universal applicability across disciplinary boundaries (Romahn and Hartman, 1999), with the subjective nature of trust similarly problematic in this regard (Becerra, Denzinger and Kremer, 2001). Hence, this research has taken a broad approach to trust literature generally, with a particular focus also given to the discipline of management. Consequently, with consideration to the practice of project management within a construction project context, an applicable framework of trust themes can be considered along contextual, human and attribution variables, with factors of trust failure also deemed significant (Brewer and Strahorn, 2012), as illustrated in Figure 1.

Contextual variables of risk, vulnerability and uncertainty are significant in terms of trust, particularly given the risk management function of the respective procurement mechanisms under which construction projects are delivered. Every project environment is unavoidably subject to risk (Schwalbe, 2004), and any efforts to mitigate issues in this regard are critically dependant on trust and its dimensions (Gad and Shane, 2014). To this end, the benefits of trust cannot transpire without one party's willingness to accept some form of risk (Chow, Cheung and Chan, 2012), while trust also encourages an individual's positive motivation towards universal project outcomes (Wong et al., 2008). Ultimately, trust assists to overcome risk and uncertainty (Gad and Shane, 2014).

The human variables influencing any project are logically significant given the human effort required in any project endeavour (Lechler, 1998). In this regard, trust is considered to be determined by the ongoing interactions within stakeholder relationships (Ceric, 2014), with attribution variables in which character traits are assigned amongst stakeholders similarly influential. Dimensions of trustworthiness are subsequently of note (She, 2013), as are mutually related trust building mechanisms; communication, reliable behaviour (Karlsen, Grae and Massaoud, 2008), honesty, integrity, benevolence and competence (McKnight and Chervany, 1995).

The potential for trust failure in any project environment is ever real, and the need to repair lost trust in stakeholder relationships is consequently important. When negative events

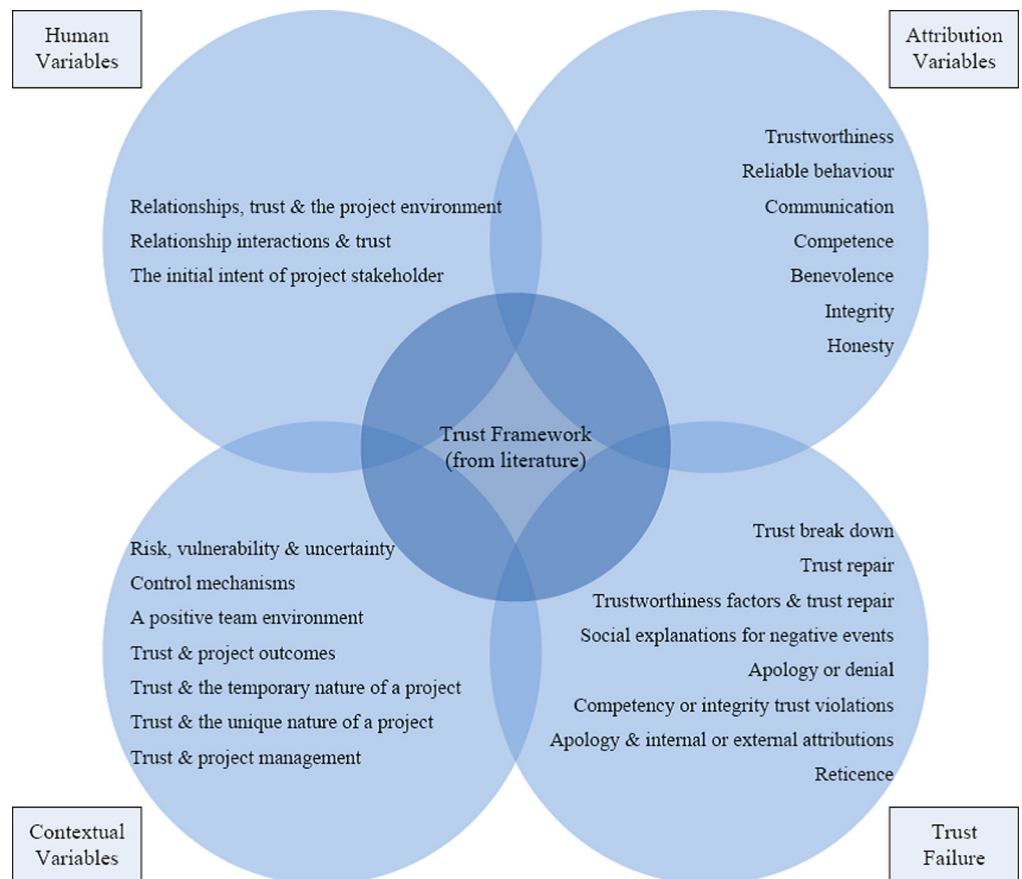


Figure 1 Framework of trust themes (Brewer and Strahorn, 2012)

inevitably eventuate, stakeholder relationships can be harmed (Lewicki and Bunker, 1996), leading to reduced trust and a requirement for trust repair (Kim et al., 2004). Trust levels from the perspective of the respective individuals will be influenced according to the underlying cause of any negative event (Lewicki and Bunker, 1996). In this regard, perceptions of trust will be considered according to internal, controllable or stable characteristics afforded to the trustee (Tomlinson and Mayer, 2009). The stability characteristic is deemed to be the most influential (Weiner, 2001), as context specific behaviour fosters the perception that under similar circumstances, the same results can be expected in the future (Sitkin and Roth, 1993).

In any trust repair effort, irrespective of a mistrusted party's efforts to display trustworthiness, low levels of trust will be compounded by the memories of any trust violation that inevitably remain (Slovic, 1993). Hence, the process of trust repair differs from initial trust development, and is inherently more complicated. Positive expectations in a relationship need to be restored, while lingering negative expectations also need to be overcome (Kim et al., 2004). Consequently, any attempt at trust repair is likely to involve greater effort than was required to establish a trusting relationship initially (Kim et al., 2006).

## CONSTRUCTION PROCUREMENT

In striving to deliver any construction project, the selected procurement mechanism logically provides the framework under which project stakeholders interact, with contextual specifics in this regard similarly significant in terms of trust and its influence. Hence, in investigating the influence of trust on project management practice within the construction industry,

the fundamental principles, and subsequent project environments specific to the respective procurement mechanism must be considered. The value of trust is acknowledged in both transactional and relational procurement mechanisms (Gad and Shane, 2014). However, generally speaking, transactional based procurement approaches are considered to inherently hinder the development of trust between project stakeholders (Che Ibrahim, Costello and Wilkinson, 2011). While relational based procurement approaches are considered to be more conducive to the development of trust (Laan et al., 2011), although it is acknowledged that the display of trust within this environment is none the less not guaranteed (Lau and Rowlinson, 2009). Hence, within the context of trust and its influence, the fundamental principles of the respective procurement alternatives have been explored.

## TRANSACTIONAL PROCUREMENT

The transactional (traditional) procurement approach customarily utilised within the construction industry adopts a definitive approach to risk allocation, despite the fact that it is fundamentally not possible to anticipate or quantify all potential risks and uncertainties (Macneil, 1978). Given the challenges inherent in any construction endeavour, the ability to contend with change and appropriately allocate and manage risk is critical (Gad and Shane, 2014). To this end, transactional frameworks are to some extent inadequate (Che Ibrahim, Costello and Wilkinson, 2011), particularly when dealing with high risk and complex construction projects (Campbell, 2004). Hence, effective risk management is unavoidably compromised.

The shortcomings of this procurement approach have been widely acknowledged; contractual imperatives encourage individual interests to be placed in front of overall project interests, resulting in disputes (Chan et al., 2006); adversarial relationships are prevalent (Chen and Chen, 2007), and can be ascribed to the competitive fixed price context (Pesamaa, Eriksson and Hair, 2009); onerous contract conditions can lead to irresponsible tendering, with the potential for opportunistic parties to exploit contract documentation in terms of tender price, expected variations, and errors or omissions (Rahman and Kumaraswamy, 2012); the contractual arrangements which mandate project processes can often facilitate inefficiencies (Doloi, 2013).

As a consequence of these shortcomings, sub optimal outcomes in transactionally procured projects have resulted, including conflict and distrust (Sakal, 2005), reduced productivity (Sakal, 2005), disputes (Pesamaa, Eriksson and Hair, 2009), cost over runs and project delays (Chan, Chan and Ho, 2003). A predilection for legal action (Yiu and Cheung, 2007), and disagreement rather than cooperation (Wood and McDermott, 1999), are also frequently common place.

The requirement for alternative procurement mechanisms has subsequently being widely acknowledged (Che Ibrahim, Costello and Wilkinson, 2011). With a focus on the definitive allocation of risk, a transactional approach ultimately fails to contractually recognise or enable the cooperative relationships that are considered critical to the success of any contractual arrangement in terms of dealing with issues when they eventuate (McInnis, 2003). Within the contextual specifics of projects procured under a transactional framework, the human element which influences project outcomes is therefore significant.

## RELATIONAL CONTRACTING PROCUREMENT

Relational contracting (RC) embraces themes of cooperation in stakeholder relationships, and strives for a mutually beneficial, win-win culture throughout the project team (Rahman and

Kumaraswamy, 2004). With an adversarial culture often the norm within the construction industry, RC was developed as a counter to the widely accepted shortcomings of the traditional transactional based approach (Goddard, 1997). Founded on principles of collaboration (Rahman and Kumaraswamy, 2004), and appropriate allocation and management of risk (Jones, 2000), RC aims to nurture benevolent relationships between contracting partners which overcome transactional barriers to team building (Macneil, 1980). By adopting a dynamic and mutually beneficial approach, a contractual, economic and behavioural RC framework allows stakeholders to move away from a reliance on strictly legal terms (Macaulay, 1963). Furthermore, the contractual landscape in any construction endeavour is inherently subject to change. Hence, the ability for a relational contract to provide the context in which strong relationships can be developed and maintained is critical, and overcomes the typical failings of a traditional transaction based procurement approach in this regard (Rahman and Kumaraswamy, 2004).

The widely recognised benefits of collaboration within the construction industry (Gajendran and Brewer, 2012) are particularly pertinent in terms of the fundamental principles of RC, and the central desire to reduce conflicts (Rowlinson and Cheung, 2005). The question of how to cultivate a collaborative environment is therefore important. To this end, distribution of authority, along with mutual objectives and actions are considered antecedents to effective collaboration. Themes of individual competence, communication and trust are also identified and are of particular relevance within the context of this study (Gajendran and Brewer, 2012).

In terms of the investigation of trust which is central to this study, the fundamental principles of RC are significant. Reoccurring themes and dimensions in this regard include; relationships, team work, collaboration, communication, culture, risk management, trust between parties, trust and trust based relationships, ability based trust, and mutual trust (Cheung et al., 2003; Ngowi, 2007; Rahman and Kumaraswamy, 2004; 2008; Rahman, Kumaraswamy and Ling, 2007).

While the ultimate benefits of RC are broadly acknowledged (Rahman and Kumaraswamy, 2004), there remains some criticism that literature professing its advantages, fails to adequately consider the inherent limitations of this approach, nor the poor examples that have at times eventuated (Bresnen, 2007). However, these criticisms have not attempted to challenge the potential advantages of a RC approach. Furthermore, it is also accepted that a universally applicable solution in terms of any RC mechanism is not achievable, and that success in this regard is strongly dependant on application and context (Bresnen, 2007).

Within the Australian construction sector, Alliancing is a form of RC in which long term strategies between client, contractor and supply chain are developed (Rowlinson and Cheung, 2004), and risks and rewards shared, in the pursuit of common project objectives (Peters, Walker and Hampson, 2001). Critical success factors for Alliance projects align closely with the fundamentals of RC; trust, collaboration, relationships and relationship management, cooperation, open and honest communication, joint problem and conflict resolution, team selection, goal alignment, team work, a win-win philosophy, and total organisational buy in (Chow, Cheung and Chan, 2012; Peters, Walker and Hampson, 2001; Rowlinson and Cheung, 2004; She, 2013; Yeung, Chan and Chan, 2007). Trust and dimensions of trust are commonly acknowledged in this regard, and are categorised within the “soft” elements that form one part of any alliance arrangement (Yeung, Chan and Chan, 2007). These “soft” elements are of consequence within the context of this study.

The second part of an alliance arrangement concerns the “hard” contractual elements that are none the less required in order to spell out in strictly legal terms the rights and



obligations of the respective alliance partners (Love et al., 2011). Hence, despite the collaborative approach central to an alliance, an explicit contractual element is still required. To this end, the collective sharing of risk is defined, and the pain-share, gain-share agreement determined in line with a best for project approach (She, 2013). Fundamental themes of trust and goal alignment are further encouraged via a “no dispute” clause that is generally included (She, 2013). Nevertheless, a no blame culture or contract is not possible without a definitive relational vision, and a proactive approach to relationship management. This further emphasises the value of the softer elements in any alliance arrangement. In this regard, the provisions that define an alliance contract appear to give little credence to the softer interpersonal aspects of a relationship, of which trust, as a response to risk, is pivotal.

Despite the success of many alliance projects, recent times have seen a decline in the use of this form of procurement in the delivery of infrastructure projects. Issues of trust are considered to be instrumental in this regard, and the ability for the pain share, gain share arrangement to align behaviours and values in project teams has being called into question (She, 2013).

## Research method

When considering the variables which invariably influence the divergent contexts within which transactional and relational procurement mechanisms operate, trust is clearly relevant, and critically significant. Hence, in order to provide enlightenment in this regard, the design of this research aims to consider theoretical trust themes against the lived experiences of practitioners in both procurement environments (Cohen and Daniels, 2001), with consideration given to human, technical and socio-technical dimensions. The human element is logically significant, as is the technical dimension that considers the respective legal frameworks upon which alternate procurement mechanisms are founded. The socio-technical dimension, influenced by the project context, (e.g. risk, control mechanisms etc.), essentially considers the interaction between the human and technical elements.

Central to the design and execution of the adopted methodology is the view that trust is a phenomenon that can be exposed via the detailed examination of lived experiences (Cohen and Daniels, 2001). Given the absence of a construction project specific theory of trust, a ‘constructivist’ perspective (Cresswell and Plano Clark, 2007) was suitably adopted, in order to examine the divergent perceptions and experiences of construction practitioners, and deliver a theoretical contribution in this regard. A phenomenological research method was subsequently conceived. An interview based study was developed and implemented, embracing an ‘emic’ perspective (Pike, 1967) in order to capture lived experience. Accordingly, with consideration to trust and its influence, this phenomenological approach has conceptualised the meaningful world that exists via experience. Ultimately, by way of investigating lived situations, the experience of trust has been explained (Wertz et al., 2011).

Interpretive phenomenological principles (Heidegger, 1927/1962) have guided the adopted methodology. In this regard, any experienced reality, which includes the relationships and interactions between individuals, is considered to be significantly influenced by contextual specifics (Lopez and Willis, 2004). Consequently, the interpretation of the narratives provided by research participants with consideration to context is fundamental (Lopez and Willis, 2004). To this end, the interpretive enquiry approach adopted has aimed to understand how factors specific to the respective life world of the selected research participants contributes to commonalities and differences between their

individual experiences and the decisions they make (Lopez and Willis, 2004). Ultimately, the specific circumstances that inherently constrain the situated freedom of any individual (Leonard, 1999) provide the empirical reality form which understanding can emerge (Satre, 1993). By applying the developed trust framework (figure 1) to the lived experiences of construction practitioners in both transactional and relational procurement environments, enlightenment regarding the influence of trust on the practice of project management within construction projects has been obtained.

The data for this study consisted of 35 interviews, conducted with various stakeholders from different sectors and multiple projects. All participants were suitably experienced (5+ years) in the delivery of major projects procured under either transactional or relational procurement mechanisms, with respective procurement categories within the data set assigned accordingly.

Framed against the developed trust framework which consisted of 25 open codes and 74 axial codes (Brewer and Strahorn, 2012), a thematic analysis process was applied to the interview data. Multiple analysis rounds were undertaken, with open coding used to reveal prevalent trust themes, and axial coding utilised to provide detail. To this end, the axial codes essentially guided the analysis and discussion of relevant trust themes, with an ensuing process of synthesis ultimately allowing recurrent trust themes to be constructed and explained. A qualitative abstraction process was subsequently developed to compare the contextual specifics of transactional and relational procurement in terms of trust and its influence. To this end, the developed trust framework (Brewer and Strahorn, 2012) and the primary interview data were set aside (Dahlberg, Drew and Nystrom, 2008). By way of bracketing (Dahlberg, Drew and Nystrom, 2008) in this regard, the generated findings aim to move beyond the original trust framework integral to this research (Giorgi, 1994).

A pair wise comparison methodology was adopted to examine the consolidated coding outcomes previously derived from the thematic analysis of the interview transcripts. Utilising the assigned transactional and relational procurement categories, this process essentially analysed the codes arising from each of the main trust themes independently of the counterpart coding outcomes in the other procurement mechanism. To this end, the salient points relating to each trust concept were summarised, with further codes consequently derived, and thereafter identified within respective conceptual models relating to them. By way of a pair wise comparison of the respective conceptual models, the influence of trust within the contextual specifics of transactional and relational procurement has been further examined, with pertinent issues highlighted.

Ultimately, this comparison has directly identified the divergences and confluences that exist between transactional and relational procurement in terms of trust and its influence.

## Results and discussion

The results of the pair wise comparison process have provided enlightenment regarding the influence of trust on stakeholder experiences within both transactional and relational construction project environments. To this end, similarities and differences regarding the human, attribution and contextual variables of trust have been identified. Aspects of trust failure and repair have been similarly highlighted. Trust was ultimately found to be an integral part of stakeholder experiences in both procurement settings, with the interrelated nature of trust and its dimensions widely evident. For the most part, the results have confirmed the pan procurement influence of trust, and highlighted other more significant factors.



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## HUMAN VARIABLES

In terms of eventual project outcomes (Pinto, Slevin and English, 2008), the human influence of relationships, initial intent, and the ongoing interactions between project participants was widely evident in both procurement environments, with themes of trust integral in this regard. Personal characteristics of trustworthiness, honesty, integrity, reliability, competence, and benevolence were considered advantageous in terms of developing and maintaining strong working relationships. Similarly, a demonstrated willingness for open and transparent communication, along with a collaborative and cooperative approach to problem solving were also considered to have a positive influence. Conversely, exploitive, adversarial, or aggressive behaviours and attitudes, were shown to have a negative influence, with trust levels similarly affected.

It was widely evident that past experiences and/or relationships (Ceric, 2014), along with multiple interactions over time (Schoorman, Mayer and Davis, 2007), were a strong influence in any relationship. Prior interactions in this regard were considered pivotal, providing the foundations for responding to negative events, and resolving issues when they inevitably arose. In the same way, future decisions, attitudes, and behaviours, along with the propensity for either party to accept risk in the future, were driven by past experiences.

The allocation of risk was considered to be significant, and in instances where it was perceived that risk was poorly apportioned, relationships were damaged, with diminished trust levels the result. The design and implementation of the control mechanism itself was integral in this regard, with onerous and excessive controls (Gad and Shane, 2014), or a contractually aggressive approach, deemed detrimental. To this end, a mutually beneficial and partnered approach was considered more conducive to developing and maintaining good relationships, and achieving ultimate project success. Furthermore, strong relationships and high levels of trust were shown to reduce the need for contractual control (Gad and Shane, 2014), and hence provided an effective means of managing project risks.

Despite the influence of the respective control mechanism, and irrespective of a traditional or relational procurement environment, individual personalities were shown to be a significant determinant of project relationships. Attitudes founded on past experiences, along with demonstrated actions and behaviours were shown to be the ultimate determinant of relationships, trust, and project success. This reinforces the importance of trading partner selection during the initial stages of any project. While contextual project specifics, along with the underlying principles of either procurement mechanism, will indeed place pressures (both positive and negative) on stakeholder relationships, sub optimal outcomes could be avoided via careful project team member selection. To this end, positive outcomes could be realized if individual attitudes, actions, and behaviours demonstrate a willingness to prioritize overall project interests above individual interests. The converse is also true, with a prioritization of individual interests particularly damaging to relationships and trust in either procurement mechanism.

The pair wise comparison has ultimately confirmed that the influence of human trust variables within traditional and relational procurement environments is for the most part comparative. While the fundamentals of a transactional approach can inherently be at odds with good relationships and trust, positive outcomes in this regard can still be realized depending on the individuals involved. Likewise, despite the fundamentals of relational procurement aiming to create an environment which is conducive to good relationships, and high levels of trust, this is not a given. Again, it comes down to the individuals involved,

and how they chose to behave and interact in response to the contextual specifics influencing any project setting.

### ATTRIBUTION VARIABLES

In both procurement environments, the inter-related nature of the various trust building mechanisms was widely evident (Lander et al., 2004), with the perceived level of trustworthiness between project participants determined to a large degree by their respective characteristics and actions (She, 2013). To this end, behaviours, and attitudes that actively displayed reliability, competence, and a willingness for open communication were shown to have a positive influence on trust, and eventual project outcomes. Personal character traits of benevolence, honesty and integrity were also highly regarded, and ultimately demonstrated a willingness to act in the best interests of another party (McLain and Hackman, 1995). In instances in which non-trustworthy behaviour was displayed, immediate and often long lasting damage to stakeholder relationships was the result. Future decisions and behaviours were hence forth based on the memory of any trust violation in this regard (Kim et al., 2004), with a party's willingness to engage in future relationships and/or projects strongly determined by past experiences.

The influence of attribution variables on trust and eventual project outcomes was therefore comparative between transactional and relational procurement environments. To this end, the actions, behaviours, and attitudes of individual project participants was again critical, irrespective of the chosen procurement mechanism. The transactional fundamentals of a traditional contract were not shown to be an insurmountable obstacle to strong relationships and high levels of trust. With transactional trading partners often choosing to adopt a partnering approach to contractual issues, despite opportunities to the contrary, the benefits of trustworthiness in this regard were subsequently acknowledged. Similarly, the positive influence of trustworthy behaviour was also evident within a relational environment. However, despite the underlying collaborative principles of a relational contract, the potential for poor relationships and lost trust remained ever real, with eventual project outcomes ultimately determined by the actions of the individuals involved, albeit with influence from contextual specifics.

While the actions of individual stakeholders were shown to be commonly and critically significant, the contextual specifics and fundamental principles of the chosen procurement mechanism were none the less influential, in terms of stakeholder behaviour and the subsequent attribution variables of trust. To this end, given the transactional nature of a traditional procurement environment, project participants were not contractually encouraged to adopt a mutually beneficial approach, in which aligned goals, collaboration and a benevolent attitude would foster strong relationships and trust. Hence, the importance of the attribution variables that influence trust are arguably more significant within a traditional procurement environment, as project individuals must actively and benevolently pursue positive outcomes in this regard. In contrast, the mandated framework of collaboration within a relational procurement mechanism does aim to encourage such behaviour, albeit without any guarantees. When interacting within the contextual framework of any RC project, the actions of project individuals ultimately determine outcomes in this regard, and non-trusting behaviour such as excessive control, poor communication, and adversarial interactions were still prevalent within projects procured under a relational contracting environment.

The pair wise comparison has ultimately confirmed the comparable influence of attribution trust variables in both traditional and relational procurement environments. Notwithstanding

the contextual influences synonymous with the respective procurement mechanism, attributes ascribed to project individuals were shown to be similarly influential in terms of trust and eventual project outcomes.

## CONTEXTUAL VARIABLES

With consideration to the human and attribution variables mentioned previously influencing trust in both traditional and relational procurement environments, the importance of project individuals, and their respective attitudes, actions and behaviours was universally apparent. However, these attitudes, actions and behaviours were shown to be unavoidable influenced by context. To this end, the contextual variables of any project are significant. While many commonalities were evident, several differences were also apparent, with the inherent principles of the chosen procurement mechanism influential in this regard.

In terms of eventual project outcomes, team environment was shown to be important in both procurement mechanisms, with the influence of trust widely acknowledged (Gad and Shane, 2014). Attitudes founded on collaboration and cooperation were considered desirable, with open communication, shared values, trustworthiness (integrity, honesty, benevolence, competence, reliability) and strong, empowered leadership, shown to facilitate a positive team culture and ultimate project success (Pinto, Slevin and English, 2008). With consideration to the divergent transactional imperatives that underpin respective traditional and relational procurement, the need to overcome an engrained adversarial mindset, and proactively strive for strong relationships and trust was particularly highlighted within a traditional procurement environment.

The unavoidable presence of risk (Schwalbe, 2004) was also widely evident in both procurement environments, with the link to trust and its dimensions similarly acknowledged (Gad and Shane, 2014). To this end, a balanced approach to risk apportionment was considered critically vital to the development and maintenance of relationships and trust in any project setting. Poor risk apportionment was found to be significantly damaging in this regard, resulting in adversarial relationships and reduced levels of trust. The acknowledgment of trust as a mitigatory of risk was also evident, with traits of benevolence and integrity highlighted in terms of striving for mutually beneficial outcomes. Future relationships, and subsequent decisions were also shown to be strongly dependent on resultant trust levels in any project, with the propensity for either party to accept risk in the future similarly influenced.

Within the context of a traditional procurement setting, compensation disproportionate to risk was found to be harmful to relationships and trust. An appropriately designed contract was hence considered essential, with flexible contractual arrangements beneficial in terms of the ongoing management of risk, and subsequent development and maintenance of stakeholder relationships and trust. Given the transactional fundamentals that underpin a traditional procurement mechanism, displays of benevolent behaviour despite contractual opportunities regarding risk was also shown to be particularly influential in terms of promoting trust amongst contracting parties.

Within the context of a relational procurement setting, the fundamental pain share, gain share approach to risk management was thought to be significant in terms of strong relationships and trust. However, the limited ability for individual parties to manage their own risk was at times detrimental, with feelings of resentment prevalent in this regard, ultimately leading to a break down in trust amongst relational partners.

In both procurement environments, the design and implementation of the respective control mechanism was shown to be significant in terms of managing project risk, with subsequent relationships and levels of trust strongly influenced in this regard (Guo, Lu and Song, 2013). To this end, the appropriate apportionment of risk in the first instance was again deemed to be critically significant, and a strong determinant of eventual project outcomes. Stakeholder behaviour was shown to be influenced by the way control mechanisms were designed and implemented, however, the individuals themselves, and their respective personalities and attitudes were considered of greater importance. For example, benevolent behaviour despite contractual opportunities was revealed to be a strong precursor for trust, while exploitive behaviour, and a demonstrated lack of integrity, benevolence or honesty was considered particularly damaging. Similarly, strong, collaborative relationships based on a mutually beneficial approach were considered to have a positive influence on trust, reducing the need for control. While excessive and strict control measures had the potential to foster mistrust (Gad and Shane, 2014).

Within the context of a traditional procurement setting, past experiences were shown to be a strong influence on relationships and trust, with the informal processes rather than the contract itself also highlighted in this regard. This again reinforces the idea that people and not contracts are key, and to this end, good relationships were often prioritized over contractual opportunities, resulting in improved project outcomes, founded on trust.

Within the context of a relational procurement setting, demonstrated transparency amongst the project team was considered desirable, with a shared purpose and collaborative environment encouraging the development of strong relationships, and trust. However, improved stakeholder relationships were by no means guaranteed, and in this regard, a dictatorial approach, onerous performance criteria, and perceptions of poor value for money were revealed to be detrimental.

The pair wise comparison has provided enlightenment in terms of the contextual trust variables that influence both traditional and relational procurement environments. While project individuals were again shown to be critically influential, context unavoidably prejudiced their respective actions, with the fundamental principles of the chosen procurement mechanism significant. However, contextual influences were not exclusively determined per procurement fundamentals, and both positive and negative outcomes were evident in both traditional and relational settings. Factors of greater significance have consequently been identified, with the apportionment of risk, and the attitudes and actions of project individuals decisive in this regard.

## TRUST FAILURE

Experiences of trust failure were commonly acknowledged in both procurement environments, with comparable influences on eventual project outcomes evident. Given the complex nature of many construction endeavours, the potential for negative events, and subsequent reduced levels of trust remains ever real. To this end, strong relationships founded on past experiences were shown to be significantly important. When managing disagreements, a cooperative and collaborative attitude was shown to be crucial, with an informal approach to resolving issues, along with open and regular communication also significant. Numerous factors were shown to be detrimental to trust amongst project participants. Issues of risk apportionment were often central in this regard, and in instances of perceived unfair or inappropriate risk allocation, a negative re-assessment of trust levels was apparent, with future risk taking decisions

unavoidably influenced. Adversarial attitudes were similarly influential, with negative personal characteristics (incompetence, dishonesty, unreliability) and behaviour which displayed a lack of integrity also shown to negatively impact trust, and eventual project outcomes.

Within the context of a traditional procurement environment, the importance of leadership and the management of relationships were highlighted, along with the harmful effect of self-interest, as opposed to the prioritization of overall project goals. The fundamental principles of this approach were shown to be significant in this regard, with the lack of mandated means for resolving disputes and responding to negative events shown to contribute to an environment in which reduced trust levels eventuate.

Within the context of a relational procurement environment, the contractual obligation to maintain relationships was shown to be beneficial in terms of mitigating the possibility of trust break down. However, high levels of trust were none the less not a guarantee, and excessive controls in the form of arduous key performance indicators, along with client value for money concerns, were shown to be damaging in this regard.

With instances of trust failure common, the requirement for trust repair was also highlighted within both procurement environments. To this end, the importance of communication was acknowledged, with an informal and face to face approach deemed to be more effective than a formal, contractual attitude. That is, personal and sensible communication is superior. Despite a widespread acknowledgment of the need to repair lost trust, there was no obvious understanding within either procurement environment regarding the intricacies of trust repair as opposed to initial trust building (Kim et al., 2004), nor the ongoing impact on trust of the significant information remaining from any trust violation (Slovic, 1993).

## Conclusions

This study has recorded the gamut of trust-related experiences – both positive and negative – within the lived experience of construction practitioners. These have occurred in both transactionally- and relationally-based procurement environments. Given that experienced individuals from diverse enterprises related their experiences within the context of project teams, the influence of trust on project management practice within the construction industry has been exposed.

The importance of trust and its consequent benefits was widely acknowledged, though this remained largely intuitive rather than academically-based; thus, the intricacies of building and maintaining trust in a project environment, and how to repair it when things went wrong were largely unacknowledged. It is important to note that none of the questions related to trust within an individual firm, so its importance to the effective functioning of an enterprise remains a topic for further research.

There was widespread agreement amongst practitioners operating in both relational and transactional environments as to the benefits and perils of relying on trust to overcome contractual-based problems. This suggested that irrespective of the strictly legal constraints upon action and remedies available, certain practitioners would always have a propensity to expose themselves to heightened levels of risk in the hope or expectation of overcoming problems in projects. Conversely, others were very reluctant to engage in this type of behaviour. Together these groups confirmed that trust was not a prerequisite for relational contracting, nor did transactional procurement preclude its development during the life of the project.



This apparent paradox calls into question the mantra that relational contracts engender trust. The presence of risk is necessary for trust to be desirable; the absence of risk negates the reason for trust in the first place since negative consequences are now ruled out. Indeed it can be seen that the riskiest part of the relational procurement process occurs early on, when the nature of contract risks, their apportionment among the contracting parties, and the levels of reward and penalty for bearing them are determined. Thereafter performance-based risk is an entirely known quantity and commercial decisions can be taken as to the costs and benefits arising from inadequate risk management by each party, without affecting the other.

Transactional procurement can, given the right circumstances, engender heightened levels of risk exposure – particularly unforeseeable, latent risks – and hence the potential for trust to develop. Where good faith attempts to meet contractual requirements are evident in the face of major problems, clients may choose not to exercise the letter of their contract in terms of damages, or to grant extensions of time for completion before penalties are invoked. Under these circumstances a good working relationship between two highly placed decision-makers is critical to champion the cause of trust over expediency, in the expectation of long-term, superior project outcomes.

Of course, the very act of placing oneself in a vulnerable position through the exercise of trust in the expectation of a superior outcome introduces an unquantifiable risk of its own. i.e. that the superior outcome never eventuates. It is often said that everything has a price, but it appears that pricing the risk associated with employing trust is harder than most to quantify. Then again, the true benefits of trust – both quantifiable and intangible – can on occasion prove to be great. i.e. more than just the monetary value alone. It is interesting to speculate as to the extent of trusting behaviour within construction projects that would eventuate, if it was possible to quantify the intangible benefits – lower workforce stress, increased reputation, bigger order books. This is perhaps the most important – and the most difficult – question to answer, arising out of this research.

Ultimately this study has provided enlightenment on the influence of trust within a construction project setting, and consequently identifies the following for future research:

- Investigate and measure trust-related influences, and subsequent project performance, via quantitative testing of lived experience pertaining to trust;
- Examine the lack of proactive measures for trust development and maintenance within a transactional procurement framework, and the means required to establish an environment in which trust can flourish within this context;
- Investigate lived experience within a relational procurement context, regarding the counterintuitive principles of relational contracting in terms of the risk/trust nexus, and the diminished requirement for trust, because of the collective approach to risk apportionment;
- Investigate and compare project cost and trust performance outcomes between transactional and relational procurement alternatives;
- Investigate the means and measures by which a formalised environment that encourages and fosters trust can be established, with consideration given to the subsequent design of both transactional and relational procurement mechanisms.

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