# Prior ties and trust development in project teams – A case study from the construction industry

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Marte Pettersen Buvik *, Monica Rolfsen

*Department of Industrial Economics and Technology Management, NTNU, Norway*

## Abstract

The limited duration and the high time constraints facing projects may pose challenges to the development of working relationships in project teams. Relationships can be influenced by the history of interactions and prior ties between team members. Development of trust is crucial but challenging in the context of cross-functional project teams and prior ties can have imperative influence on the team's ability to create trust. Through a case study in the construction industry, we explore *how* prior ties between team members influence the development of trust. We identify four important aspects; early formation of integrative work practices, development of a common philosophy, open communication, early and clear role expectations, all contributing to development of trust in an early phase. Our findings offer new, empirical insights into the complex nature of temporary project work and underscore the significance of prior ties in facilitating early trust and integration within project teams.
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## 1. Introduction

Temporary forms of cooperation and working constellations, such as projects, are becoming increasingly widespread (Bakker, 2010). Projects are by definition characterized by finite time spans and this transient feature may influence working in such temporary systems. Teams in a project setting face different challenges when it comes to the development of working relationships, compared to ongoing work teams. Relationships and interactions between team members are temporal phenomena that can be influenced by the history of interactions and prior experiences between participants (Poppo et al., 2008).

Project teams are a group of people responsible for complex tasks over a limited period and are typically cross-functional, consisting of members who have complementary skills and come from different disciplines and functional areas in the organization. The advantage of cross-functional project teams lies in their capacity to do multiple activities simultaneously, rather than sequentially, which saves time (Brown and Eisenhardt, 1995). The inherent functional diversity should facilitate a team's ability to interact across team boundaries to its members' "home" departments, thereby enhancing performance. However, to utilize the potential benefits of functional diversity, cross-functional teams must engage in collaborative interaction (Daspit et al., 2013). Thus, the ability of a cross-functional project team to execute a project successfully relies on its ability to integrate the relevant knowledge and skills that are distributed among its members. This integration of the capabilities in the team depends on the way they work together and their interpersonal relationships, such as the degree of trust. Trust may thus be particularly important in these teams, because many sub-tasks are interdependent, with team members relying on the functional expertise of their colleagues. In this setting, the temporal aspects of relationships may affect the work and consequently influence the success of the project. Relationship duration is of particular

  * Corresponding author at: Department of Industrial Economics and Technology Management, Faculty of Social Sciences and Technology Management, NTNU, 7491 Trondheim, Norway. Tel.: +47 93211361.
    *E-mail address:* Marte.buvik@iot.ntnu.no (M.P. Buvik).

importance for trust development in a project team setting (Levin et al., 2006). The inherent need for collaboration and the high interdependency facing this form of work require trust between project team members. This is because trust has been identified as an important component of teamwork (Webber, 2008) and researchers have acknowledged its critical role in the development of effective work processes and the successful performance of traditional operational teams (Dirks, 1999; Kirkman et al., 2006). While trust has been proven to create various benefits for the team and the overall project, researchers also point to the difficulties of establishing trust in such a setting (Maurer, 2010). Trust rests on expectations and predictions of other people's behavior based on an evaluation of their trustworthiness (Mayer et al., 1995), but in a project team setting, members may lack prior collaboration and experience on which they could base their expectations and predictions (Gulati, 1995). The high time pressure often facing project teams (Nordqvist et al., 2004) makes it difficult to develop familiarity and to prove each other's trustworthiness. Hence, the formation of trust is a pivotal but simultaneously challenging task that has received only limited attention within the field of project management so far (Maurer, 2010). Even though the interest of trust in construction projects has grown in recent years (Chow et al., 2012), the focus has mainly been on inter-organizational trust (Lau and Rowlinson, 2010, trust among project stakeholders (Black et al., 2000; Laan et al., 2012; Pinto et al., 2009), and contracting in construction (Wong et al., 2008). Empirical research on team trust in general is underdeveloped (Kozlowski and Ilgen, 2006), and we argue that exploration of the role of trust development in project teams operating in complex project environments is warranted.

Team members may work with colleagues with whom they share a history of collaboration or they may work with new and unfamiliar team members. This may have a significant effect on trust development and is especially important in the early phases of a project. Prior experience between project members and knowledge of each other can create social relationships between members. These relationships are called prior ties in our study. Recent studies have shown that prior ties have a positive effect on trust in inter-organizational projects (Maurer, 2010), in teams (Webber, 2008), in project partnering (Laan et al., 2012), and on project performance (Huckman et al., 2009; Reagans et al., 2005). Still, there is a shortcoming in the literature regarding identifying in greater depth *how* prior ties influence trust development in a project setting. Recently, Pinto et al. (2009) have also called for more research on the various antecedent conditions or actions that can affect trust in a project setting, and Maurer (2010) recognizes that more in-depth qualitative approaches are needed to explore the complexity of trust.

Our study is set up to meet these shortcomings through developing a deeper understanding of the temporal aspect of relationships in project teams by exploring the following research question: "How do prior ties between team members influence trust development in cross-functional project teams?" Our focus is on trust development *within* the project team. Although trust can exist at different levels, we focus on trust development at the team level of analysis. The majority of trust

research has focused on interpersonal trust and organizational trust and there is a lack of research examining trust at the team level (Webber, 2008). We take an explorative approach to answering the research question with the use of a qualitative case study of a project team in the construction industry. The construction sector is a prime example of a project-based industry, in which new product development involves not only non-routine production processes, but also complex working relationships and interrelations (Bresnen et al., 2004). Our findings offer new, empirical insights into the complex nature of temporary project work and underscore the significance of prior relationships and shared experience in facilitating trust and cross-functional integration in the project team.

## 2. The temporal aspect of trust development in project teams

Trust has received research attention across multiple disciplines with different definitions and approaches. Nevertheless, there has been some convergence on the central elements of trust. Trust is viewed as both multidimensional and dynamic (Kramer, 1999; Rousseau et al., 1998), and scholars seem to agree that it includes "positive" or "confident" expectations about another party and a "willingness to accept vulnerability" in the relationship, under conditions of interdependence and risk (Kramer, 1999; Lewicki et al., 2006; Mayer et al., 1995; Rousseau et al., 1998). Trust within the project team has been associated with several outcomes that are expected to contribute positively to the success of the project. Examples of outcomes are knowledge sharing (Andrews and Delahaye, 2000; Ding et al., 2014; Lee et al., 2010; Park and Lee, 2014), commitment (Costa and Anderson, 2011), team satisfaction (Costa et al., 2001), formation of social networks (Shazi et al., 2015), and team performance (Costa, 2003; De Jong and Dirks, 2012; Webber, 2008). As noted, trust is a complex phenomenon and may have a variety of meanings and impacts, depending on the type of team and the context (Chiocchio and Essiembre, 2009). In construction, Kadefors (2004) has argued that the specific characteristics where contractual relationships dominate can counteract mutual trust development. It is recognized that successful trust building within project teams could improve project outcomes (Wong et al., 2008) and mutual trust has been found to be an important success factor in maintaining a partnering relationship (Black et al., 2000). Pinto et al.'s (2009) research on the role of trust among project stakeholders in construction projects showed that trust had different meanings for contractors and owners, thus demonstrating its context-specific nature (Ding and Ng, 2010).

Bakker (2010) recognizes that trust and social relations are areas that will most likely be affected by the duration of temporary organizational forms. Poppo et al. (2008) depict two perspectives on the origins of trust: the shadow of the future and the shadow of the past. The first perspective advances the notion that the shadow of the future – that is, the expectation of continued interaction – is necessary to promote cooperation and trust. The other position is that the shadow of the past – that is, prior relations – promotes trust as it is developed over time by a history of mutual interactions and experiences. Poppo et al. (2008) studied the interplay between these two origins of trust

in an inter-organizational exchange context and they propose that when expectations of continuity and prior history work collectively, their joint effect has a stronger influence on trust.

In recent studies, prior ties have been found to have a positive effect on trust in inter-organizational projects (Maurer, 2010), on trust in teams (Webber, 2008), on trust in project partnering (Laan et al., 2012), and on project performance (Huckman et al., 2009; Reagans et al., 2005). Maurer (2010) found that team members in inter-organizational projects who knew each other from prior collaboration had greater opportunities to interact and develop expectations of each other's behaviors, facilitating mutual trust. Further, Webber (2008) showed that early trust in project teams was developed through prior familiarity and that this trusting foundation was an important contributor to future trust. In a quantitative study of project partnering in the construction industry, Laan et al. (2012) found that both prior experiences and prospects of future exchange influenced trust between partners. Moreover, Reagans et al. (2005) found that team members' prior experience in working together helped them to allocate tasks effectively and coordinate across specialized roles.

When people have worked together on previous occasions, their mutual experiences will most likely result in a better understanding and knowledge of each other's motives, preferences, and routines. Prior ties can thus provide opportunities to obtain trust in the early phases of the project, and research has also shown that early trust formation has a positive impact on trust development later in the team's life (McKnight et al., 1998; Webber, 2008).

Although most previous research suggests that prior ties will have a positive influence on trust development, there are also studies suggesting that temporary organizations using prior ties may perform worse. This research argues that members tend to hold biased assessments in favor of their prior partners, and therefore tend to overestimate the actual quality and trustworthiness of their friends (Sorensen and Waguespack, 2006). It is also possible that a team member could be familiar with another team member from a previous collaboration that was problematic. In other words, prior collaboration with someone could represent knowledge of a negative experience, which would hinder the development of trust. Thus, the nature of the prior ties is important to consider when assessing how prior ties can affect trust development.

Following the shadow of the past perspective (Poppo et al., 2008), the traditional view of trust is that it needs time to develop and is built incrementally through prior experiences (Lewicki and Bunker, 1996). However, in a project setting, project team members often lack prior collaboration experience on which they could ground their expectations and predictions (Gulati, 1995). At the same time, they regularly suffer from time pressure throughout the time span of the project (Nordqvist et al., 2004). Project team members need to learn about each other's trustworthiness in order to develop expectations of how they will behave in future situations (Lewicki et al., 2006). According to Mayer et al. (1995), the assessment of fellow team members' trustworthiness can be evaluated along three dimensions: competence, benevolence, and integrity. Competence refers to the abilities, skills, and capabilities that a person has in a particular

domain, while integrity refers to expectations of whether the team member is loyal, has a strong sense of justice, and performs consistently. Benevolence implies an attachment between team members and an expectation that each party wants to do good for the other (Mayer et al., 1995). Lewicki and Bunker (1995, 1996) link trust development to the stages of relationship development and distinguish between three "bases" of trust: calculus-based trust, knowledge-based trust, and identification-based trust. Calculus-based trust is founded on consistency of behavior, the confidence that people will do what they say. Knowledge-based trust is generated through interactions over time as the parties learn about each other's actions and intentions through reciprocated behavior. The final step is identity-based trust, which occurs when the parties start to identify with one another, and expect the other party to be caring. The suggestion is that judgments of competence and integrity are formed in the earlier stages of a relationship and can be linked to calculus- and knowledge-based trust, while benevolence is more linked to identification-based trust, as the judgments would require more information and thus take more time to develop. In this sense, trust building is a slow and time-consuming process that moves from calculative to personal and emotional (Lewicki et al., 2006).

Trust can be viewed both as an outcome of effective teamwork (Cohen and Bailey, 1997) and as an input factor (Holland et al., 2000). This is an example of the reinforcing character of trust or "self-fueling spirals" (Hackman, 1990), where trust and teamwork mutually reinforce each other. Zand (1972) suggests that mutual trust or mistrust among team members is likely to be reinforced unless there is clear or continuous disconfirming behavior. The starting conditions, in the form of trust or distrust, may thus trigger both vicious and virtuous cycles of behavior and expectations. In the context of projects, the final outcome may be influenced by the initial intentions and expectations of the parties involved (Munns, 1995).

Historically, trust has been viewed as a dynamic phenomenon that develops and strengthens over time. However, research has also identified trust among individuals and groups early in relationships (McKnight et al., 1998). Meyerson et al. (1996) suggest that trust may be based on presumptive foundations beyond evidence of direct contact between individuals, and proposed the concept of *swift trust*. In swift trust individuals rely on defined roles rather than personalized sources to inform their decision to trust, and it is a unique form of trust that occurs between groups or individuals brought together to accomplish specific tasks. While swift trust is based on a feeling of confidence without having prior mutual experience (Meyerson et al., 1996), temporary organizations like projects may also be characterized by the shadow of the past (Poppo et al., 2008) and trust development may hence be a continuation of prior ties (Bechky, 2006).

## 3. Method

To study how prior ties influence trust development in project teams, we conducted a single case study in the construction industry in Norway. The project, named Project School, was selected because the project team had a substantial "shadow of the past" through prior experience in working together. Given the

exploratory nature of this study, the case-study approach was found to be appropriate, as it provides a deeper description and understanding of the social phenomenon of trust development (Eisenhardt, 1989). Following Yin (2003), we argue that the case-study approach is suitable, as it allows us to study "a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (Yin, 2003, p. 2). A single-case approach is especially valuable when the aim is to provide a rich description and to get as close as possible to the phenomenon described. Multiple case studies, on the other hand, may provide rather "thin" descriptions, rather than the deeper social dynamics that can be achieved by single-case studies. The most often-cited limitation of the case-study method is the difficulty of generalizing findings to different settings (Yin, 2003). However, the aim of this research is not to obtain generalizable findings, but to explore an underdeveloped phenomenon. The extent to which the findings can be applied to other situations is determined by the people in those situations. As stated by Merriam (1995, p. 58), "by providing thick description on the phenomenon under study, readers themselves are able to determine how closely their situations match the research situation and hence, whether findings can be transferred." In the qualitative paradigm, reliability and validity are commonly conceptualized as trustworthiness, rigor, quality, and dependability (Searle, 1999). In this study the process of respondent validation or member checking was used to address the validity (trustworthiness/rigor/quality) of the study (Lincoln and Guba, 1985). This allowed the participants the chance to correct errors of facts or of interpretation.

A longitudinal approach to data collection was adopted when we interviewed the project team at two different phases of the project. We interviewed the project team members in the start-up phase (phase 1), about four months into the project, and then conducted follow-up interviews with key members approximately one year after the first interviews were conducted (phase 2). A total of 12 interviews were completed, 8 in phase 1 and 4 in phase 2 (see Table 1 for details). Key project team members were selected for interviews, with the aim of obtaining a rich and comprehensive understanding of the influence of relationship duration and prior ties on trust development in our case project. The selection of project members for follow-up interviews in phase 2 was mainly based on the centrality of the role.

We used semi-structured interview guides with the main questions for every interview, completed with optional probing questions for stimulating rich descriptions. The interviews lasted from 35–75 minutes and were all recorded and transcribed verbatim to facilitate detailed and systematic analysis. The software QSR NVivo 9 was utilized to aid in organizing and examining the data. Thematic analysis was adopted to analyze the qualitative data. This is a research technique of encoding qualitative data into themes to help construct, understand, and make valid inferences from a body of texts (Braun and Clarke, 2006).

## 4. Case description

The case project is within a large construction company, involving the construction of a new school building for secondary education in a semi-urban area in Norway. Constructing buildings is primarily a labor-intensive process that involves a series of sequenced activities to produce a "one-off" product that is in line with the requirements of the client or the builder (Cooke, 2013). This work induces a complex interaction between different disciplinary approaches, such as architectural design, mechanical engineering, finance, and legal aspects, all of which need to be effectively coordinated and managed (Walker and Christenson, 2005). The project was a "turnkey" project, meaning that the construction company takes responsibility for the whole process from design to building. The client/builder puts forward its functional requirements, while the contractor can choose the solutions and suppliers to meet these requirements. The contractor coordinates the work and hires different subcontractors for the specific part of the construction. The building phase lasted for about two years and the total project value was approximately 45 million euros.

The project team had been cooperating for about four months prior to the first phase of interviews and it was at the starting point of the building phase. When the follow-up interviews were conducted, the project was in the completion phase. The work was at this point concentrated on the technical installation and the fixtures. The project team consisted of nine members with core functions: project manager, assistant project manager, engineering manager, construction manager, two operations managers, two procurement engineers, and one project controller. In this project key team members, such as the

Table 1
Overview of interviews and phases of data collection.

| Interviewee | Function | Age | Gender | Phase 1 (June 2013) | Phase 2 (August 2014) |
|---|---|---|---|---|---|
| 1 | Project manager | 33 | Male | x | |
| 2 | Assistant project manager | 63 | Male | x | x |
| 3 | Engineering manager | 43 | Male | x | |
| 4 | Construction manager | 55 | Male | x | x |
| 5 | Operations manager | 48 | Male | x | x |
| 6 | Operations manager | 31 | Male | x | |
| 7 | Procurement engineer | 30 | Male | x | |
| 8 | Project controller | 29 | Female | x | x |
| Total interviews | | | | 8 | 4 = 12 |

project manager, construction manager, project controller, and one operations manager, had worked together on a prior project and knew each other well. They described the earlier project as tough and challenging with many complications, and they believed that this experience had strengthened their mutual relationship.

The current project was complex, with high interdependency and complex tasks, strong time pressure, and multiple stakeholders. The project team had to coordinate and ensure productive collaboration, both internally with its engineering department and externally with the builder/client and the subcontractors. Even though the projects have company-specific systems and procedures, they are decentralized, with great autonomy regarding how work is conducted and roles and functions defined. Thus, team members did not simply execute predefined roles, but rather negotiated the content of the roles and the functions. The construction sector is a prime example of a project-based industry, in which new product development involves non-routine production processes as well as complex working relationships and interrelations (Bresnen et al., 2004). However, the industry has been widely criticized for its variable performance and project delivery (Baiden et al., 2006). While many projects perform well on time and on cost, there are also several examples of time and cost overruns due to extensive rectification. This has partially been attributed to the inability of project participants to work together effectively and their failure to form effective teams (Baiden et al., 2006). Construction projects often have complex design and engineering, which requires a range of expertise from multiple parties, both internally and externally. The nature of the work introduces high levels of uncertainty and unpredictability. Every building project represents a unique process and different expertise is brought together, with distinctive constraints and goals. In addition, different stakeholders represent different individual and organizational interests, needs, expectations, risks, and constraints (Lau and Rowlingson, 2010). Construction projects usually build on extensive subcontracting and incomplete contracts, and restrictive terms can produce conflicts (Li et al., 2001). In addition, the team members are seldom trained for the specific project and their individual contributions often come together as a whole-team effort in an *ad hoc* manner as the project processes (Cornick and Mather, 1999).

## 5. Results

The case analysis indicates that prior ties affect trust development within the project team through their impact on central team processes. These processes are particularly imperative for the early phases of construction projects. More specifically, we found that prior ties led to the *early establishment of integrative work practices* that could respond to challenges that they had experienced previously. The familiarity also made it easier to create a *common philosophy* that depicted which attitudes and norms of behavior were desirable. Further, knowledge of each other influenced the communication climate by facilitating *open communication* in the early phases. Additionally, prior knowledge and experience enabled *clear role expectations*, as the key persons were familiar with each other's preferences and way of working. Finally, we found that prior ties contributed to the

early development of a *shared climate of trust*. We will now provide more details qualifying these findings.

### 5.1. Early establishment of integrative work practices

Based on their prior experiences, the team members established work practices that could prevent some of the previous difficulties. Team members described the prior project as turbulent, and this shared experience stimulated them to prevent such a situation happening again. Weekly meetings were established involving the whole team, where they allocated time for each function to go through the current situation and make assessments about workload and resources. This became an arena for identifying "where the shoe pinches" and offering support when needed. All the project members talked positively about these meetings and some even called them sacred, in the sense that they were of great importance for the team to function. They felt that they could talk freely and prevent misunderstandings. One team member described the impact in the following way:

"So it's things like this [the internal meeting] I think, that make everyone a little bit safer at what we do, and we always get to say something if there are things we encounter."

Another team member elaborated on the function of this meeting and its benefits:

"When we are all here together and talking together it is much easier … Yes, then we can ventilate if we have any problem – if there is something that is incorrect or if we see that there can be a problem, or we see that we must speed up, or if we need to make some changes somewhere, so we address it there and then [in the internal meeting]. So all possess the same information and that's what's really important, that everyone doesn't hold on to THEIR information, and so no one knows what the other is doing or if there are any problems."

The last quote sheds light on the integrative function that this meeting had for the project team. By being together and talking freely about all aspects of the project, they were able to unify their different experiences and perspectives and create a mutual understanding. The sharing of important project information with all members simultaneously contributed to a collective orientation and a feeling of shared responsibility for obtaining the project goals.

The follow-up interviews indicated that this practice persisted throughout the project and was still considered important.

### 5.2. Common philosophy

Based on the shared experiences of working together, key team members knew each other's thoughts and attitudes, views and perspectives on important aspects of the project work. They described their views as a common philosophy of humanity and they agreed on a mutual standard for how to treat people. One team member explained:

"It's easier to think the thoughts and do something with it if you have some of the same people who also have shared the experience."

Their shared experience also included knowledge of each other's thinking processes, the tacit, implicit knowledge that is difficult to articulate but is revealed in people's actions. The mutual knowledge made it easier to set ideas into practice, as the quote indicates. Another team member explained the common philosophy in this way:

"We have somehow our own policy here … I can't really explain it so well, but I feel that we – we think the same thought, mostly. Mostly – we are different people of course. But for the most part we see things the same way. We have the same goals and treat people on site in an orderly manner, and all that. We know that people do not promise more than they can hold."

The shared experiences helped them agree on arrangements in the current project. They generally agreed on the work norms and behavior towards external partners. This common philosophy was discussed and further developed in their weekly meeting. By setting a common standard, the team members were better coordinated towards their external partners. The quote from one team member demonstrates:

"For it is about building a team and building a mentality and a spirit that one can gather around. And if you don't, then you also get trouble out there [on the construction site]."

### 5.3. Open communication

Several team members described the communication climate as open and supporting. When asked how prior ties influenced their work, one team member responded:

"I think it has a great deal to say. Because – for one thing, one feels safer with one another, and it is easier to ask each other questions when you know each other."

Many emphasized that they felt safe in expressing themselves and that no questions were too silly. They were not afraid to "lose face" because they knew that they all had common interests. They felt safe in asking each other for assistance and it was appropriate to admit mistakes and shortcomings. One team member explained it like this:

"And we have made it very clear that the offices are always open. We should always come to each other and clarify things. This is much better when you are unsure of things, instead of doing something wrong."

The common understanding was that if something went wrong they should report it immediately, instead of hiding it and trying to get away with it. The following quote expresses this and the importance of familiarity in this respect:

"Of course it is allowable to fail too. But … if you are familiar with the person then you dare to admit a mistake. If you don't know the person – then you are afraid to get into trouble and the reprimand it can create."

This demonstrates an open communication climate where team members felt safe enough to admit or let the others know their inadequacies and insecurities. The project team managed to create a mutual understanding of norms for communication early in the project and this continued throughout the period.

### 5.4. Clear role expectations

Since several of the team members knew each other previously, they were familiar with each other's strengths, weaknesses, and preferences for working procedures. They explained that they could predict the others' behavior more easily because they knew how they would evaluate different situations. This knowledge made it easier to distribute the resources and know when different team members needed support. The following quote from a team member demonstrates this:

"If you know that his [the construction manager's] strength is out at the construction site but that he needs more backing with papers, economics, and that sort of thing, then you know you have to go in and support those things. While on the things he is good at, well, then you can 'drop the reins' a bit, because then you know that he has full control of the operation."

The content of the roles and functions in the project team was decided shortly after startup. Their mutual understanding made it possible to evaluate how they executed their roles.

"I think that you allocate responsibility on the various things much better when you know each other, know that HE is very good at this and HE is good at that and HE is good with those groups or professionals. So this is really – it is the essence of all building projects, that we have this."

The existence of mutual understanding and clear role expectations was considered crucial for the functioning of the project team, as reported by all team members. As one team member put it:

"We all have our tasks, and then – then we know what we should relate to it. So it is not crisscrossing. If it is, then there could be a crisis."

### 5.5. Shared trust climate

Sharing information and having open communication indicated a high level of trust. Team members emphasized the importance of trust, as this quote shows:

"We are loyal to the group. […] we trust each other, we keep together. We can't have somebody who does their own thing

… who runs to their mom. It gets a little tough sometimes, you know."

They trusted each other's intentions to be loyal to the team and to prevent hidden agendas. They described working in the construction industry as harsh at times, an environment where important decisions had to be made involving money and the safety of workers. All team members emphasized mutual trust as crucial.

The trust climate was evident from the beginning. Team members reported in an early phase that they were not afraid to reveal to the other team members if they were unsure about something or if something was bothering them. They also reported that they could rely on their team members to do their tasks. When they asked someone to do a task, they reported that everyone did what they promised. This indicates a shared climate of trust, meaning that team members had shared perceptions of the level of trust in the group. They describe a feeling of safety and comfort following the high level of trust:

"When we trust each other then there is also a reassurance – so you can be gone for a few days without worrying somehow. It goes well anyway. We are all pawns in the big game and if one chip is gone for a while, it will go well anyway."

This quote demonstrates that they rely on each other's abilities to perform well even without control. This relates to their mutual reliance as honest and sincere persons who would not pretend to have competence in something that they did not possess, as this quote shows:

"There is no one who pretends to be an expert if he or she is not, that would backfire on you and the group. So if we need help then we consult someone who is skilled on timber or concrete, for example, so we don't need to worry about that. If there are things that are a bit outside [our competence] then we ask someone else and find out how it is. And we also check with each other before we proceed. That is because we trust each other – we rely on each other."

## 6. Discussion

The analysis indicates that positive prior ties affect the development of trust in the project team significantly, suggesting that prior ties may facilitate the early establishment of working practices as well as trust development. The team members who had worked together in the past brought their shared experiences into the project, including an awareness of the necessity of establishing mutual arenas for information sharing and integration of different perspectives. The former project had been challenging and they drew on this shared experience by establishing weekly meetings with the project team and the support functions of procurement and controller. They continued with these meetings throughout the project period and members considered them imperative for their

successful collaboration. By having this regular arena for interaction, all members were kept informed. This provided an opportunity for cross-functional integration, where everyone could contribute with their perspective on matters according to their professional background and their personal experience and interpretation of situations. Frequent interaction within a team is considered important for team effectiveness (Cooper, 1996; Webber, 2008). Cooper (1996), for instance, found that high-quality teams interact well and often, holding weekly meetings to ensure that the entire team was up to speed. Furthermore, teams with frequent interaction are more likely to develop strong relationships among the team members, resulting in higher trust (Webber, 2008).

The results also indicate that the shared experience enabled the team to develop a common philosophy and norms of behavior. The shared beliefs further facilitated the team in acting in a coherent and coordinated way when interacting with external partners, and prevented them from communicating conflicting views. As noted earlier, the construction team is mutually dependent on various partners to obtain the project goals. To have shared beliefs and aligned actions was thus crucial for success. The common beliefs and norms also increased the cohesiveness, team identity, and their feeling of unity.

Prior ties also laid the ground for an open communication climate, characterized by widespread acceptance of asking questions and revealing sensitive information. We will argue that while this is generally important, it is especially imperative for project teams in the construction industry with high interdependence and uncertainties. The ability to discuss possible pitfalls and potential solutions openly, even if that means disclosing inadequacies and mistakes, makes the project team capable of averting potential negative events. Alexopoulos and Buckley (2013) suggest that disclosing sensitive information to colleagues with whom one has little shared experience is likely to result in negative consequences unless it is clear that both parties share clear norms for disclosure. In our study, the prior ties made it easier to be vulnerable, to communicate freely in an early phase of the project, and to establish this as a norm. Our findings are consistent with prior research stating that team members' recurring interactions help to establish communication channels and a common language (Weber and Camerer, 2003). When teams communicate openly, their ability to share important information about the team task increases, improving the team's progress in completing the task, and ameliorating any challenges that the team is facing (Webber, 2008).

Further, we found that prior ties were positively associated with early and explicit role expectations. Early clarification of roles and reconciliation of expectations made it easier to assess each other's competence, contributions, and ability to follow through. These findings are in line with those of Reagans et al. (2005), who found that team members' prior experience in working together helped them to allocate tasks effectively and coordinate across specialized roles. When team members without knowledge of each other form as a team, they may spend a great amount of time in getting to know each other and clarifying their mutual roles and expectations. In the current construction company, the roles and functions were not predefined and stable

across projects, and each project had to negotiate what the different roles should imply in its own context. In particular, the interfaces and interdependencies between the roles were areas where they had to negotiate responsibilities.

The project team in this study had a high level of trust at an early stage, and this climate of shared trust grew even stronger through the project. Team members expressed reliance in each other's competence, integrity, and goodwill. Since key team members had interacted previously, their mutual experiences enabled them to understand each other's motives, preferences, and routines, and they were able to predict each other's behavior. Prior ties and shared experiences provided opportunities to obtain trust in the early phases of the project. We propose, in line with McKnight et al. (1998) and Webber (2008), that this early trust had a positive impact on trust development later in the team's life.

The open sharing of information and communication patterns enabled team members to develop strong relationships, resulting in higher levels of trust. This is in line with previous research suggesting that trust building is influenced by open communication (Johnson and Johnson, 1989; Lewicki and Bunker, 1996) and a shared language (Levin et al., 2006). Lewicki and Bunker (1996) found that regular communication allows the exchange of information about each other's preferences, values, and approaches to problems, thereby creating knowledge-based trust. In the project context, Lee et al. (2010) found that team members' personal trust was positively associated with knowledge sharing by motivating them to disclose their "ideas, beliefs, and feelings about the project for the greater good of the team" (p. 478).

If there is a lack of trust in a relationship, the amount of information sharing is often restricted (Munns, 1995), and the nature of the information changes. Team members act as information gatekeepers (Munns, 1995), and if any team member withholds information this may reduce the chances of project success. In trusting relationships, information is disclosed even though it makes one team member vulnerable to exploitation by the others. Communication and trust create a reinforcing cycle where open communication builds trust, which leads to more open communication, and again to even more trust. Full and open information in a project team is thus important for project success (Munns, 1995).

We also suggest that the early clarification of role expectations and the feeling of team coherence and team identity had a positive impact on trust development, consistent with previous research. The feeling of team identity (Jarvenpaa et al., 1998) facilitates trust development and people perceive others as more trustworthy when they embrace similar values and outlooks (Gillespie and Mann, 2004; Levin et al., 2006). Further, relationships between people are particularly influenced by role expectations (Gabarro, 1987), and a lack of clearly defined roles, inconsistent role behavior, and "blurring" of roles can erode trust (Jarvenpaa and Leidner, 1999; Meyerson et al., 1996). Without prior knowledge, it can be rather difficult to assess others' abilities in the early stages of a project team due to unclear roles and different expectations. This can affect the level of trust, as competence and ability are viewed as strong predictors of trust (Mayer et al.,

1995; McAllister, 1995). We could assume that there would be evidence of swift trust (Meyerson et al., 1996) in the project team without members knowing each other previously. Swift trust is based on presumptive knowledge about the competence of the other team members and their compliance with their professional roles (Meyerson et al., 1996). When swift trust is present, team members rely on defined roles. Since we found that the roles and functions had to be negotiated and adopted accordingly, we propose, in line with Rusbult and Van Lange (2003) that the concept of swift trust is more adaptive to situations in which people engage in routine interactions that require clearly established and predefined roles.

The three bases of trust identified by Lewicki and Bunker (1996) highlight the different ways in which confident positive expectations of trust are established. The climate of trust that was evident in our case study indicated a high level of knowledge-based trust. Team members reported strong confidence in each other's predictability, dependability, and reliability. This confidence requires considerable information about each other across different situations. The deep interpersonal relationships and understanding that had emerged made it possible to develop this kind of trust. The early establishment of integrative working practices and the open communication climate enhanced the development of a shared notion of trust that included members who did not have prior experience in working with any of the others. This starting condition of a high level of trust was, in line with Zand's (1972) spiral reinforcement model, further reinforced by behavior that confirmed their expectations and predictions. High trust levels may also have contributed to the development of commitment among team members early on. Research has shown that trust is a major determinant of commitment (e.g. Costa and Anderson, 2011). Further, project commitment has been found to be positively related to team performance (Hoegl et al., 2004). Early commitment is particularly important in projects as committed team members are likely to sustain their motivation irrespective of external circumstances throughout the project (Tremblay et al., 2015).

Our findings also shed some light on the ongoing debate about whether temporary organizations are unique or repetitive (Engwall, 2003). Prior ties, where project team members continue to work together across different projects, can be considered repetitive action. This provides evidence for the context dependency of projects, with both unique and repetitive activities.

Trust is particularly important in temporary project teams in the construction industry, as was claimed earlier. The mutual interdependency of these cross-functional teams makes the process of defining tasks clearly challenging, and members must interrelate to a great extent to achieve the project outcomes. The ability of a temporary project team to execute a project successfully relies on the team's ability to integrate the relevant knowledge, expertise, and skills that are distributed among the project team members. Moreover, this integration of the capabilities in the team depends on the way they work together and their interpersonal relationships, such as trust. Our results are in line with Jassawalla and Sashittal's (1998) findings that trust acted as a strong cohesive force, increasing

cross-functional collaboration in the team. The presence of positive relationships from the beginning can serve as an integrating mechanism and facilitate coordination of the project team. Social integration and coordination are important, as they facilitate interaction and thereby encourage the development of trust (Grandori and Soda, 1995). Without social integration, the project team can remain fragmented and unable to work together effectively. Blame cultures with mistrust and adversarial relationships may be the result (Baiden et al., 2006). Mechanisms that foster the integration of work and different disciplines into a cohesive unit are of pivotal importance for project success.

Taken together, our findings indicate that positive prior ties enhance a high level of trust and thus create conditions for a good start to the project. It is at the beginning of the project that many of the premises for how the work will be conducted are developed. Decisions and experiences in the beginning can have a tremendous impact on the whole course of the project. A good start lays the foundation for a good continuation of the project and contributes to team members' satisfaction and commitment, helping them stay for the whole project period. We argue that trust is a determining factor for cross-functional integration and that positive prior ties can create good conditions for early trust and integration in the project.

### 6.1. Limitations

Our study represents an important contribution to research into work in temporary project teams by providing insights into how prior ties affect the way in which teams function and how trust is developed. However, we must put forward a word of caution, as this study is restricted to a single project from a single organization and, consequently, is limited to the context of this organization and the particular local conditions. As noted earlier, case studies are a particularly good method for understanding underlying complex, social processes (Yin, 2003) such as trust, but this obviously presents inherent limitations to generalizability. Although formal generalization is not the aim of this study, there are some limitations in the use of a single case study. In addition, this study mainly focused on interviews as data sources and did not make use of extensive triangulation of methods. Triangulation provides multiple perspectives on issues and allows for cross-checking of interpretations. To remedy this lack, member checking was conducted as a way of ensuring the trustworthiness of the study. We must also acknowledge that there might be factors in the project teams contributing to the findings, such as team composition in terms of personality and trust propensity and other compositional factors, which might affect trust development. Nevertheless, the findings reflect the team members' attributions about how prior ties influenced the work in the project team.

In spite of the limitations outlined above, we argue that the single case study allowed us to undertake an in-depth examination of the influence of prior ties on trust development in a cross-functional project team.

### 6.2. Implications and future research

Project teams are a prevalent fact of organizational life today, and advances in understanding how prior ties between team members can influence trust development should be valuable to project organizations and project managers of such organizational settings. This research finds that positive prior ties can have a substantial effect on trust development, and thus that their existence is of great importance to take into account when staffing projects in order to create good conditions for successful teamwork. Project staffing that pays attention to prior relationships can thereby create some stability and a long-term basis for team member interaction. If some team members have positive prior ties from previous collaborations, this could provide opportunities to obtain trust in the early phases of the project. Moreover, as suggested by McKnight et al. (1998), early trust is essential, as it appears to be an important contributor to future trust.

Our study show how *positive* prior ties can influence work in a temporary organizational setting. However, there might also be several instances where *negative* prior experiences between participants can affect the work in project teams as well. Thus, being aware of the nature of the relationship is essential when studying the effects of prior ties in temporary systems. Future research should therefore explore how negative experiences can affect project work and how to overcome such undesirable effects. As noted earlier, Poppo et al. (2008) suggest that trust is based on positive past interactions and favorable expectations of future relationships, a combination of the shadow of the past and the shadow of the future. We have focused on the effects of prior relations, or the shadow of the past; we did not specifically concentrate on the participants' expectations of future interactions. In such project work, team members often have little influence on their selection and the project staffing typically opts for the optimal composition of professions and availability of team members. Nevertheless, future research could also include team members' expectations of future interactions when examining trust development in temporary organizational settings.

## 7. Conclusion

Our research question addressed how prior ties between team members influence trust development in cross-functional project teams, and we have focused on trust within project teams. We have conducted research using a single case from a large construction company, considering cross-functional teams experiencing uncertainties and a high level of time pressure. Our study shows that positive prior ties can have a substantial effect on the development of trust at the beginning of the project. However, we lack evidence of the effect of negative prior ties, and future research should explore how negative experience can affect project work. Our findings suggest that positive prior ties between team members seem to stimulate early trust formation and integration within the team through their effect on central team processes. We identify these team processes as the early establishment of integrative work practices,

development of a common philosophy, open communication, clear role expectations, and a shared climate of trust within the team. The prior ties made it easier to be vulnerable and communicate freely, and thus to establish common norms and good team practices. In addition, prior ties were positively associated with explicit role expectations, which improved the working practice and increased the level of trust. Hence, this study underlines the effect of positive prior ties in creating favorable conditions for early integration of the team, the development of trust, and obtaining a good start to the project.

## References

Alexopoulos, A., Buckley, F., 2013. What trust matters when: The temporal value of professional and personal trust for effective knowledge transfer. Group Organ. Manag. 38, 361–391.

Andrews, K.M., Delahaye, B.L., 2000. Influences of knowledge processes in organizational learning: The psychological filter. J. Manag. Stud. 37, 2322–2380.

Baiden, B.K., Price, A.D.F., Dainty, A.R.J., 2006. The extent of team integration within construction projects. Int. J. Proj. Manag. 24, 13–23.

Bakker, R.M., 2010. Taking stock of temporary organizational forms: A systematic review and research agenda. Int. J. Manag. Rev. 12, 466–486.

Bechky, B.A., 2006. Gaffers, gofers, and grips: Role-based coordination in temporary organizations. Organ. Sci. 17, 3–21.

Black, C., Akintoye, A., Fitzgerald, E., 2000. An analysis of success factors and benefits of partnering in construction. Int. J. Proj. Manag. 18, 423–434.

Braun, V., Clarke, V., 2006. Using thematic analysis in psychology. Qual. Res. Psychol. 3, 77–101.

Bresnen, M., Goussevskaia, A., Swan, J., 2004. Embedding new management knowledge in project-based organizations. Organ. Stud. 25, 135–1555.

Brown, S.L., Eisenhardt, K.M., 1995. Product development: Past research, present findings, and future directions. Acad. Manag. Rev. 20, 343–378.

Chiocchio, F., Essiembre, H., 2009. Cohesion and performance: A meta-analytic review of disparities between project teams, production teams, and service teams. Small Group Res. 40, 382–420.

Chow, P.T., Cheing, S.O., Chan, K.Y., 2012. Trust-building in construction contracting: Mechanism and expectation. Int. J. Proj. Manag. 30, 927–937.

Cohen, S.G., Bailey, D.E., 1997. What makes teams work: Group effectiveness research from the shop floor to the executive suite. J. Manag. 23, 239–290.

Cooke, T., 2013. Can knowledge sharing mitigate the effect of construction project complexity? Constr. Innov. 13, 5–9.

Cooper, R.G., 1996. Overhauling the new product process. Ind. Mark. Manag. 25, 465–482.

Cornick, T., Mather, J., 1999. Construction project teams: Making them work profitably. Thomas Telford Publishing, London.

Costa, A.C., 2003. Work team trust and effectiveness. Pers. Rev. 32, 605–672.

Costa, A.C., Anderson, N., 2011. Measuring trust in teams: Development and validation of multifaceted measures of formative and reflective indicators of team trust. Eur. J. Work Organ. Psychol. 20, 119–154.

Costa, A.C., Roe, R.A., Taillieu, T., 2001. Trust within teams: The relation with performance effectiveness. Eur. J. Work Organ. Psychol. 10, 225–244.

Daspit, J., Tillman, C.J., Boud, N.G., Mckee, V., 2013. Cross-functional team effectiveness: An examination of internal team environment, shared leadership, and cohesion influences. Team Perform. Manag. 19, 34–56.

De Jong, B.A., Dirks, K., 2012. Beyond shared perceptions of trust and monitoring in teams: Implications of asymmetry and dissensus. J. Appl. Psychol. 97, 391–406.

Ding, Z.K., Ng, F.F., 2010. Personal construct based factors affecting interpersonal trust in a project design team. J. Constr. Eng. Manag. 136, 227–234.

Ding, Z.K., Ng, F.F., Li, J., 2014. A parallel multiple mediator model of knowledge sharing in architectural design project teams. Int. J. Proj. Manag. 32, 54–65.

Dirks, K.T., 1999. The effects of interpersonal trust on work group performance. J. Appl. Psychol. 84, 445–455.

Eisenhardt, K.M., 1989. Building theories from case study research. Acad. Manag. Rev. 14, 532–550.

Engwall, M., 2003. No project is an island: Linking projects to history and context. Res. Policy 32, 789–808.

Gabarro, J., 1987. The dynamics of taking charge. Harvard Business School Press, Boston, MA.

Gillespie, N.A., Mann, L., 2004. Transformational leadership and shared values: The building blocks of trust. J. Manag. Psychol. 19, 588–607.

Grandori, A., Soda, G., 1995. Inter-firm networks: Antecedents, mechanisms and forms. Organ. Stud. 16, 183–214.

Gulati, R., 1995. Does familiarity breed trust? The implications of repeated ties for contractual choice in alliances. Acad. Manag. J. 30, 85–112.

Hackman, J.R., 1990. Groups that work (and those that don't). Jossey-Bass, San Francisco, CA.

Hoegl, M., Weinkauf, K., Gemuenden, H.G., 2004. Interteam coordination, project commitment, and teamwork in multiteam R&D projects: A Longitudinal Study. Organ. Sci. 15, 38–55.

Holland, S., Gaston, K., Gomes, J., 2000. Critical success factors for cross-functional teamwork in new product development. Int. J. Manag. Rev. 2, 231–259.

Huckman, R.S., Staats, B.R., Upton, D.M., 2009. Team familiarity, role experience, and performance: Evidence from Indian software services. Manag. Sci. 55, 85–100.

Jarvenpaa, S.L., Leidner, D.E., 1999. Communication and trust in global virtual teams. Organ. Sci. 10, 791–815.

Jarvenpaa, S.L., Knoll, K., Leidner, D.E., 1998. Is anybody out there? Antecedents of trust in global virtual teams. J. Manag. Inf. Syst. 14, 29–64.

Jassawalla, A.R., Sashittal, H.C., 1998. An examination of collaboration in high-technology new product development processes. J. Prod. Innov. Manag. 15, 237–254.

Johnson, D.W., Johnson, R.T., 1989. Cooperation and competition: Theory and research. Interaction Book Company, Edina, MN.

Kadefors, A., 2004. Trust in project relationships – inside the black box. Int. J. Proj. Manag. 22, 175–182.

Kirkman, B.L., Rosen, B., Tesluk, P.E., Gibson, C.B., 2006. Enhancing the transfer of computer-assisted training proficiency in geographically distributed teams. J. Appl. Psychol. 91, 706–716.

Kozlowski, S.W.J., Ilgen, D.R., 2006. Enhancing the effectiveness of work groups and teams. Psychol. Sci.Publ. Interes. 7, 77–124.

Kramer, R.M., 1999. Trust and distrust in organizations: Emerging perspectives, enduring questions. Annu. Rev. Psychol. 50, 569–598.

Laan, A., Voordijk, H., Noorderhaven, N., Dewulf, G., 2012. Levels of interorganizational trust in construction projects: Empirical evidence. J. Constr. Eng. Manag. 138, 821–831.

Lau, E., Rowlinson, S., 2010. Trust relations in the construction industry. Int. J. Manag. Proj. Bus. 3, 693–704.

Lee, P., Gillespie, N., Mann, L., Wearing, A., 2010. Leadership and trust: Their effect on knowledge sharing and team performance. Manag. Learn. 41, 473–491.

Levin, D.Z., Whitener, E.M., Cross, R., 2006. Perceived trustworthiness of knowledge sources: The moderating impact of relationship length. J. Appl. Psychol. 91, 1163–1171.

Lewicki, R.J., Bunker, B.B., 1995. Trust in relationships: A model of development and decline. In: Banker, B.B., Rubin, J.Z. (Eds.), Conflict, cooperation, and justice. Jossey-Bass, San Francisco, CA, pp. 133–173.

Lewicki, R.J., Bunker, B.B., 1996. Developing and maintaining trust in work relationships. In: Kramer, R.M., Tyler, T.R. (Eds.), Trust in organizations: Frontiers of theory and research. Sage, Thousand Oaks, CA, pp. 114–139.

Lewicki, R.J., Tomlinson, E., Gillespie, N., 2006. Models of interpersonal trust development: Theoretical approaches, empirical evidence, and future directions. J. Manag. 32, 991–1022.

Li, H., Cheng, E.W.L., Love, P.E.D., Irani, Z., 2001. Co-operative benchmarking: A tool for partnering excellence in construction. Int. J. Proj. Manag. 19, 171–179.

Lincoln, Y.S., Guba, E.G., 1985. Naturalistic inquiry. Sage, London.

Maurer, I., 2010. How to build trust in inter-organizational projects: The impact of project staffing and project rewards on the formation of trust, knowledge acquisition and product innovation. Int. J. Proj. Manag. 28, 629–637.

Mayer, R.C., Davis, J.H., Schoorman, F.D., 1995. An integrative model of organizational trust. Acad. Manag. J. 20, 709–734.

McAllister, D.J., 1995. Affect and cognition-based trust as foundations for interpersonal cooperation in organizations. Acad. Manag. J. 38, 24–59.

McKnight, H., Cummings, L.L., Chervany, N.L., 1998. Initial trust formation in new organizational relationships. Acad. Manag. Rev. 23, 473–490.

Merriam, S.B., 1995. What can you tell from an N of 1?: Issues of validity and reliability in qualitative research. PAACE J. Lifelong Learn. 4, 51–60.

Meyerson, D., Weick, K.E., Kramer, R.M., 1996. Swift trust and temporary groups. In: Kramer, R.M., Tyler, T.R. (Eds.), Trust in organizations: Frontiers of theory and research. Sage, Thousand Oaks, CA, pp. 166–195.

Munns, A.K., 1995. Potential influence of trust on the successful completion of a project. Int. J. Proj. Manag. 13, 19–24.

Nordqvist, S., Hovmark, S., Zika-Viktorsson, A., 2004. Perceived time pressure and social processes in project teams. Int. J. Proj. Manag. 22, 463–468.

Park, J., Lee, J., 2014. Knowledge sharing in information systems development projects: Explicating the role of dependence and trust. Int. J. Proj. Manag. 32, 153–165.

Pinto, J.K., Slevin, D.P., English, B., 2009. Trust in projects: An empirical assessment of owner/contractor relationships. Int. J. Proj. Manag. 27, 638–648.

Poppo, L., Zhou, K.Z., Ryu, S., 2008. Alternative origins to interorganizational trust: An interdependence perspective on the shadow of the past and the shadow of the future. Organ. Sci. 19 (1), 39–55.

Reagans, R., Argote, L., Brooks, D., 2005. Individual experience and experience working together: Predicting learning rates from knowing who knows what and knowing how to work together. Manag. Sci. 51, 861–881.

Rousseau, M.T., Sitkin, S.B., Burt, S.B., Camerer, C., 1998. Not so different after all: A cross-discipline view of trust. Acad. Manag. Rev. 23, 393–404.

Rusbult, C.E., Van Lange, P.A.M., 2003. Interdependence, interaction and relationships. Annu. Rev. Psychol. 54, 351–375.

Searle, C., 1999. Quality in qualitative research. Qual. Inq. 5, 465–478.

Shazi, R., Gillespie, N., Steen, J., 2015. Trust as a predictor of innovation network ties in project teams. Int. J. Proj. Manag. 33, 81–91.

Sorensen, O., Waguespack, D.M., 2006. Social structure and exchange: Self-confirming dynamics in Hollywood. Adm. Sci. Q. 51, 560–589.

Tremblay, I., Lee, H., Chiocchio, F., Meyer, J.P., 2015. Identification and commitment in project teams. In: Chiocchio, F., Kelloway, E.K., Hobbs, B. (Eds.), The psychology and management of project teams. Oxford University Press, New York; NY, pp. 189–212.

Walker, D.H.T., Christenson, D., 2005. Knowledge, wisdom and networks: A project management centre of excellence example. Learn. Organ. 12, 275–291.

Webber, S.S., 2008. Development of cognitive and affective trust in teams: A longitudinal study. Small Group Res. 39, 746–769.

Weber, R.A., Camerer, C.F., 2003. Cultural conflict and merger failure. Manag. Sci. 49, 400–415.

Wong, W., Cheung, S., Yiu, T., Pang, H., 2008. A framework for trust in construction contracting. Int. J. Proj. Manag. 26, 821–829.

Yin, R.K., 2003. Case study research: Design and methods. 3rd ed. Sage, Thousand Oaks, CA.

Zand, D.E., 1972. Trust and managerial problem solving. Adm. Sci. Q. 17, 229–239.