

Trust and Team Performance: Assessing the Moderating Role of Risk in Global Outsourcing Teams

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[Abstract] In this study, the concepts of trust and risk are examined in relation to the performance of global outsourcing teams. First, competing arguments of the relationship between trust and performance are presented, followed by an examination of the impact of risk and uncertainty in the global task environment on the trust-performance relationship. Project risk, technical complexity, and project dynamism are argued to moderate the relationship between team trust and performance. To test these arguments, data were collected from a sample of global outsourcing teams spanning emerging economies and developed countries. Results support project risk as a critical moderator of the relationship between trust and performance, such that trust was positively related to performance when the project was highly risky. For low risk projects, trust was negatively related to team performance. These findings allude to a far more complex relationship between risk and trust than previous research has empirically considered. Results of this study provide insight into the advantages and limitations of trust in global teams, and underscore the need to move beyond a focus on the direct link between trust and performance in seeking to understand the conditions, such as risk and uncertainty under which trust promotes or inhibits performance, suggesting the complicated and contingent role of trust in global collaborations. Findings contribute to a practical understanding of under what conditions of environmental risk and uncertainty should managers build trust within teams to foster performance of global collaborations.

[Keywords] trust, risk, global teams

The relationship between trust, risk, and performance has long been considered in the organizational behavior and strategic management literature. While many researchers have theoretically expounded on the relationship between these constructs, few have empirically tested the nature of the relationship. Here, the complex relationship between trust and risk is examined in relation to the performance of global outsourcing teams. An initial review of the research on trust reveals conflicting findings of the impact of trust on performance. While some have found a positive relationship between the two (Lee & Kim, 1999), others note that trust can be detrimental to the performance of teams and alliances (Krishnan, Martin, & Noorderhaven, 2006). Drawing on these results, competing arguments are presented, in line with Platt's (1964) call for more strong inference research based on competing hypotheses, which is rare in international management research.

Results of this test are then used to examine the long-held view by researchers in organizational behavior that risk is necessary for the development of trust (Luhmann, 1979). The risk and uncertainty present in the task environment faced by global teams is discussed in detail, with a specific focus on project risk, technical complexity, and project dynamism. I propose and empirically test the moderating role of these components of risk and uncertainty in the global task environment on the trust – performance relationship. Results of this study provide insight into the advantages and limitations of trust in global teams, and underscore the need to move beyond a focus on the direct link between trust and performance in seeking to understand the conditions, such as risk and uncertainty under which trust promotes or inhibits performance, suggesting the complicated and contingent role of trust in global teams. Findings further contribute to a practical understanding of under what conditions of environmental risk and uncertainty should managers build trust within teams to foster performance of global collaborations.

Trust

The importance of trust has been emphasized in multiple literatures across diverse disciplines. Trust has been considered as a foundation of interpersonal relationships and social order (Barber, 1983; Luhmann, 1979). Understanding what trust is, its many conceptualizations, and how trust shapes social relationships has been a central focus for psychologists (Rotter, 1967), sociologists (Zucker, 1986), anthropologists (Ekeh, 1974), and students of organizational behavior (Rousseau, Sitkin, Burt & Camerer, 1998). Below, the various conceptualizations of interpersonal trust presented in the literature are reviewed, followed by a discussion of the impact of trust on global collaborations and, particularly, outsourcing relationships. Last, the conflicting research on the trust-performance relationship is discussed, and competing hypotheses examining the impact of trust on the performance of global outsourcing teams are presented.

Conceptualizations of Trust

A review of the research on trust in the organizational sciences reveals a breadth of theoretical and empirical approaches informing current conceptualizations of this concept. Personality theory, behavioral decision theory, social psychology, and sociological theory have each addressed the question "What is trust?" differently (Bigley & Pearce, 1998). For personality theorists, such as Rotter (1967), trust is a generalized trust of others, which is similar to an individual difference variable that is relatively stable over time and across situations. Behavioral decision theorists, examining trust from a rational choice perspective, define trust as a behavior or behavioral intention in mixed-motive game situations (Axelrod, 1984; Coleman, 1990). A large body of work by social psychologists considers trust in terms of beliefs or positive expectations about the other person (Rousseau et al., 1998). Rather than a behavior or a choice, trust is a psychological state conveying one's willingness to be vulnerable (Rousseau et al., 1998; Bigley & Pearce, 1998). Last, sociologists, such as Lewis and Weigert (1985) conceive of trust as a property of the social system, rather than individuals. Zucker (1986) and Garfinkel (1963) define trust as a set of shared expectations that must necessarily be situated in relationships between individuals, such as in groups or society.

These interdisciplinary definitions of trust vary considerably in their conception, reflecting trust's many facets and levels of analysis. In this study, I will specifically focus on the idea of trust as beliefs or expectations held by one individual about another. However, even when focusing on the individual level, definitions of interpersonal trust are still considerably diverse. Some research has considered trust as an individual's confidence in others' intentions and motives (Deutsch, 1960; Lewicki, McAllister & Bies, 1998; Sitkin & Roth, 1993). For example, Deutsch (1960) saw trust as an individual's confidence in the intentions and capabilities of a relationship partner and the belief that this partner would behave as one hoped. Similarly, Lewicki and Bunker (1995) defined trust as a state involving confident positive expectation about another's motives regarding oneself in situations of risk. In addition to the emphasis on positive intentions and motives, research has also incorporated the idea of one's willingness to be vulnerable in the definition of trust (Bigley & Pearce, 1998; Rousseau et al., 1998). For instance, Mayer, Davis, and Schoorman (1995) considered trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer et al., 1995, p.712). Being vulnerable implies that there is something of importance to be lost and risk is inherent in the situation. A review survey of the trust literature by Rousseau et al. (1998) and Bigley and Pearce (1998) revealed that this idea of willingness to be vulnerable is central to the concept of trust. In this study, I draw on Mayer et al.'s (1995) definition of trust, which focuses on actor vulnerability in order to understand trust in global outsourcing relationships. Recognition of the importance of trust has led to concern with not only defining the concept, but also discovering the impact of trust on employees, teams and global collaborations.

Trust and Performance in Outsourcing Relationships

A review of the research reveals extensive support for the beneficial effect of trust on employees, teams, and inter-firm collaborations. Trust has been found to foster organizational citizenship behaviors, reduce

the potential for conflict (Zaheer, McEvily, & Perrone, 1998), facilitate the flow of information between individuals and organizations (Sako, 1991), and generally lower transaction costs (Krishnan et al., 2006). Examining the impact of trust on teams, researchers (Hughes, Rosenbach & Clover, 1983; Klimoski & Karol, 1976; Jarvenpaa, Knoll, & Leidner, 1998) have found that trust between team members can have a positive effect on performance.

Recent research has further argued that building trust is fundamental to the success of globally distributed teams (Jarvenpaa & Leidner, 1999). O'Hara-Devereaux and Johansen (1994) note that only trust can prevent the geographical and organizational distances of global project members from becoming psychological distances whereby dispersed employees are alienated from one another. Those studying outsourcing relationships have found that trust facilitates coordination by reducing transaction costs in a number of ways, including lowering the need for monitoring, reducing opportunistic behavior, and the negotiation of protective governance mechanisms, such as detailed contracts (Das & Teng, 1998; Gulati, 1995; Poppo & Zenger, 2002). Furthermore, trust reduces the high levels of uncertainty endemic to the global and technologically based environment (Jarvenpaa & Leidner, 1999), and facilitates adaptive responses. Thus, trust has been empirically demonstrated to improve the performance of inter-organizational exchanges in regard to goal fulfillment, quality, timeliness and flexibility (Zaheer & Venkatraman, 1995; Zaheer, McEvily, & Perrone, 1998). Those investigating solely IT outsourcing projects have further found that trust is associated with a number of positive outcomes, including greater coordination, effective communication between partners, participation, and overall outsourcing success measured in terms of overall business performance of the client (Lee & Kim, 1999).

In contrast to these findings, researchers have found that trust does not always result in better performance. Indeed, the trust-performance relationship has been shown to be relatively inconsistent across studies. Dirks' (1999) review of the management literature concludes that there is little support for a positive relationship between trust and performance. While some studies have either not found any effect of trust on performance (Kimmel, Pruitt, Magenau, Konar-Goldband, & Carnevale, 1980), others have found evidence that trust can decrease performance in outsourcing relationships (Sabherwal, 1999). Furthermore, a review of the research on group performance and team building suggests that better interpersonal relationships amongst team members does not necessarily result in higher team performance (McGrath & Altman, 1966; Sundstrom, De Meuse, & Futrell, 1990; Tannenbaum, Beard, & Salas, 1992; Woodman & Sherwood, 1980). Research by Krishnan, Martin, and Noorderhaven (2006) sheds light on these findings. Their research suggests that trust can foster overconfidence in the information provided by another and restrain the vigilant scanning of the environment and the cross-fertilization of views, thereby negatively impacting performance. Thus, trust within the team can actually decrease the performance of global outsourcing teams. Based on these conflicting findings, I propose competing hypotheses of the impact of trust on the performance of global outsourcing teams.

Hypothesis 1a: Trust will be positively related to the performance of global outsourcing teams.

Hypothesis 1b: Trust will be negatively related to the performance of global outsourcing teams.

To understand why researchers find these conflicting relationships between trust and performance, I examine the role of risk and uncertainty in the task environment of global outsourcing projects.

Risk and Trust

Central to the relationship between trust and performance is the role of risk. Risk and uncertainty have long been linked to the development of trust in the theoretical literature (Molm, Takahashi, & Peterson, 2000; Blau 1964; Coleman 1990; Kelley & Thibaut, 1978; Kollock 1994; Luhmann 1979); however, considerable ambiguity exists surrounding the exact nature of the relationship between the two constructs. Mayer, Davis, and Schoorman (1995) argue that there is a lack of clarity in the relationship between these concepts. It is unclear whether risk is an antecedent to trust, trust a subset of risk (Williamson, 1993), or risk an outcome of trust. A prominent stream of research (i.e. Rousseau et al., 1998) argues that risk is an essential condition for trust to arise across psychological, sociological, and economic conceptualizations of trust (Coleman, 1990). Risk is often defined in this research as uncertainty or the perceived probability of loss (Das & Teng, 2004), and risk and trust have been theorized to have a strong reciprocal relationship:

risk creates an opportunity for trust, which leads to greater risk taking (Rousseau et al., 1998). Indeed, trust would be unnecessary if “actions could be undertaken with complete certainty and no risk” (Rousseau et al., 1998: 395). If trust in an exchange partner is to develop, there must be the possibility of exit, betrayal, defection by the partner (Gambetta, 1988). Molm et al. (2000) further argue that the risk and uncertainty of exchange provide the opportunity for partners to demonstrate their trustworthiness. Many researchers, such as Coleman (1990) and Deutsch (1958) have argued that only in risky situations or under conditions of risk do we need trust. That is, there must be “uncertainty that hinges on the choices made by others” (Sitkin & Roth, 1993, p.369). Thus, uncertainty and risk have been argued to be central to the development of trust.

Adding to the complicated relationship between risk and trust, researchers have further suggested that trust can be viewed as an attribute of risk taking behavior (Mayer et al., 1995). “Willingness to take risks may be one of the few characteristics common to all trust situations” (Johnston-George & Swap, 1982: 1306); that is, a sense of trust encourages risk taking by trustors. Thus, trust and risk are intricately interwoven and the nature of the relationship difficult to tease out. Indeed, few researchers have attempted to empirically test the relationship between these two constructs, with the exception of Krishnan et al. (2006) who found that uncertainty impacts the relationship between trust and the performance of alliances. Building on this research, I investigate the influence of risk and uncertainty in the task environment on the relationship between trust and performance of global teams.

The Task Environment of Global Outsourcing Teams

Central to the relationship between trust and performance is the task environment in which global teams operate. Over the last decade, developments in the global economy have focused considerable attention on understanding the task environment of global collaborations as business realities have given rise to tremendous complexity (Prahalad, 1990; Doz & Prahalad, 1991). Managers are subjected to pressures to coordinate and integrate their organization with globally dispersed operations, customers, and suppliers. The pressures of globalization are particularly relevant in outsourcing projects where operations are globally distributed across multiple countries, and employees must coordinate with dispersed co-workers as well as accommodate customers’ demands.

Researchers studying outsourcing relationships have characterized the global environment as increasingly turbulent, unpredictable, and complex (Jahner, Bohmann & Krcmar, 2006). According to Kim and Chung (2003), risk and uncertainty arise from several factors in the environment, including a competitive industry, technology, and outsourcing clients. Barki, Rivard, and Talbot (1993) have further argued that uncertainty and risk vary by project, such that some outsourcing projects and client relationships experience considerably greater risk and ambiguity than others. The risks involved in a project context can be characterized along several dimensions, including client needs, the complexity of the technology involved, and the novelty of the project. Outsourcing project members must interface with their client and often confront fluctuating client demands and varying time pressures to complete the project. The degree to which requirements change in the project creates tremendous uncertainty for project members in terms of how to organize their work, determine staffing levels, and schedule timely delivery of their work. Indeed, Wallace, Keil, and Rai (2004) found that unclear, inadequate, ambiguous or unusable requirements from the client increased the dynamism of the project, which subsequently influenced its performance. Indeed, these changing demands diffuse throughout the value chain, affecting the size and scope of IT systems, and the expectations towards the IT service provider, who are then faced with the increasing need to be flexible. Outsourcing vendors must adapt not only to the changing needs of their customers, but also time pressures (Lacity & Hirschheim, 1993; Willcocks & Lacity, 1999). As Wallace et al. (2004) found, excessive schedule pressure or unrealistic timelines create considerable project risk and impact timely delivery to the customer. Responding to client demands becomes even more challenging in projects that are inadequately resourced by the vendor organization in terms of employees’ skills, abilities, and the budget.

Another source of risk and uncertainty in the project context is the degree of technological uncertainty. Kim and Chung (2003) note that outsourcing vendors must increasingly adopt new standards

and functionalities to address their customers' needs and keep pace with the changing technology industry. Lyytinen and Hirschheim's (1987) survey of information technology relationships revealed that technological complexity and uncertainties play a significant role in information system failures. In addition to the problems of working with untested technologies, employees confront additional challenges of developing projects without a prior proof of concept or conceptual blueprint, which can add to the project risk. Thus, a number of factors including the technological complexity, client demands, and time pressures prior proof of concept, and adequate resourcing of the project are argued to be sources of risk and uncertainty in the project task environment faced by global outsourcing teams. In this study, three components of the project task environment that present risk and uncertainty are examined, specifically environmental risk, technical complexity and project dynamism experienced by the global outsourcing team. The impact of the risk and uncertainty presented by these components of the task environment are argued to impact the trust-performance relationship.

The Moderating Role of Risk in the Project Task Environment

The risk in the project task environment is critical to understanding the relationship between trust and performance of global outsourcing teams. As discussed above, the relationship between trust and performance has been ambiguous with some arguing that trust enhances the performance of teams and alliances, while others note that trust can negatively impact team performance (Dirks, 1999). I propose that the risk and uncertainty in the task environment is critical to clarifying the relationship between trust and performance, such that risk will play a critical moderating role. Drawing on the research on risk and uncertainty, I argue that risk is a necessary condition for trust to exist. Trust will only impact performance in the presence of risk and uncertainty on the project. Thus, I propose that only in the presence of risk and uncertainty in the project task environment, considered here in terms of technical complexity, project risk, and project dynamism, can trust impact performance. The effect of trust on performance may be positive or negative, as noted in the competing hypotheses above. Building on Hypothesis 1a and 1b, I propose competing hypotheses drawing on these three components of risk and uncertainty in the global task environment. Thus, I hypothesize that risk and uncertainty in the task environment will moderate the trust-performance relationship.

Hypothesis 2a: Project risk will moderate the positive relationship between trust and team performance, such that the relationship will be stronger the greater the project risk.

Hypothesis 2b: Project risk will moderate the negative relationship between trust and team performance, such that the relationship will be stronger the greater the project risk.

Hypothesis 3a: Technical complexity will moderate the positive relationship between trust and team performance, such that the relationship will be stronger the greater the technical complexity.

Hypothesis 3b: Technical complexity will moderate the negative relationship between trust and team performance, such that the relationship will be stronger the greater the technical complexity.

Hypothesis 4a: Project dynamism will moderate the positive relationship between trust and team performance, such that the relationship will be stronger the greater the project dynamism.

Hypothesis 4b: Project dynamism will moderate the negative relationship between trust and team performance, such that the relationship will be stronger the greater the project dynamism.

Methods

The research site for this study was a multinational corporation that provides information technology solutions and consulting services to organizations operating across a range of industries. The MNC consists of approximately 75,000 employees located in over twenty-five different countries. Data were obtained from a sample of outsourcing project teams spanning the emerging economies such as India and

China, as well as developed countries, including the United States and Europe. Employees and teams across various geographic regions were randomly selected by the organization to participate in the study.

To facilitate the survey development, structured and unstructured interviews of both employees and managers were conducted first. Data from interviews were used to understand the context of global outsourcing teams, develop hypotheses, and validate study concepts and questionnaire scale items. Twenty-two, in-depth interviews were conducted in the organization in a variety of formats, including face-to-face discussions, teleconferences, and phone conversations. Employees across all corporate and project levels participated in the interviews, from senior executives in the organization, managers on technology and consulting projects to software engineers. Findings from the interview data were used to confirm that the theorized concepts were relevant in this context and to develop the survey.

All interviews and questionnaires were conducted in English because all employees working for this MNC used English as their primary language of communication at work. To address any colloquial English differences across locations, senior management and project managers reviewed the survey, identifying and helping to correct any discrepancies between them in colloquial English. Next, the survey was extensively pilot tested and revised twice.

A survey was administered to employees working in global teams. The response rate across all twenty-six project teams was 74.43%. This is a very high response rate for international management research with teams distributed across a range of countries. A total of 1347 employees and managers participated in the survey. Respondents were located in over 18 countries. The majority of respondents were currently working in India (74.3%) and the United States (9.8%) with a small percentage of the sample also working in the United Kingdom (2.9%), Australia (1.3%), Japan (3.1%), China (1.3%), and Mexico (1.2%). Approximately 19% of the sample was from customer sites, 58% were from offshore locations, and 12% of respondents had worked both onsite and offshore. The sample was also examined in terms of job titles. Approximately 78% were employees on the project and worked as either software engineers or programmer analysts, while 14.3 were managers on the project or occupied a higher managerial role in the organization. The majority of respondents had worked on the team for 7 months to 3 years (58%), and the organization for 1 to 4 years (60%). An examination of the demographic details further reveals that there was a decent mix between males (54.9%) and females (31.6%) in the sample, with 44.8% of the respondents between the ages of 23 and 26. All respondents in the sample had at least a bachelors degree, with 13% holding a masters degree in engineering/ sciences or business administration.

Measures

The measures to test the hypotheses are described below. Respondents assessed the measures in the study on a five-point scale, ranging from “strongly disagree” (1) to “strongly agree” (5).

Trust. Trust was assessed using several items from Pearce, Branyiczki, and Bigley’s (1997) scale, including “We have confidence in one another in this project.” Several items were also constructed to assess trust in outsourcing projects where team members are geographically distributed. A sample item includes “I think the level of trust between onsite and offshore employees on this project is very high.” The alpha for the final six item scale was .87.

Team Performance. To develop the items to measure outsourcing project team performance, a thorough review of the outsourcing literature was conducted, as well as interviews with project managers, to determine how their organization considers project performance. A six-item scale was constructed with items measuring project effectiveness, customer satisfaction, and the business impact of outsourcing on the client. Senior managers in the organization reported on the performance of the project. The scale demonstrated strong internal consistency ($\alpha = .88$).

Risk and Uncertainty in the Project Task Environment. Scales were constructed to measure the task environment on outsourcing projects. In order to develop items that would represent the extent of project risk, technical complexity and dynamism experienced by the globally distributed team, the literature on outsourcing projects was first reviewed, and in-depth interviews conducted to validate the factors contributing to the risk and uncertainty in the outsourcing project environment. A significant factor

contributing to the task environment of information technology projects was the technology itself. The outsourcing literature argued, and interviewees confirmed that the complexity of the technical environment and the adoption of new or untested technologies contributed significantly to the uncertainty of the task environment. Items assessing the technical complexity of information technology outsourcing projects were developed. Research further revealed several metrics that are critical in assessing project risk, including the availability of resources for the team, cooperation from critical stakeholders, such as the client and the presence of a conceptual framework for the project, called proof of concept. Items were developed to assess each of these factors. Lastly, the outsourcing literature identifies project dynamism and volatility as a critical component of the risk in the task environment (Lacity & Hirschheim, 1993). Items measuring the fluctuating nature of client demands were included.

Team members on the outsourcing project rated the task environment items on a five-point scale. An exploratory factor analysis with varimax rotation and a factor extraction criteria of eigenvalues greater than 1 revealed three underlying factors as components of the outsourcing project task environment associated with risk and uncertainty. Items with cross-loading or weak loadings below .50 were eliminated, resulting in three final scales evident in Table 1. The first factor, Technical Complexity, has an alpha coefficient of .70. The second factor, Project Risk, has an alpha coefficient of .66. The final factor, Project Dynamism, has an alpha coefficient of .69. These three factors, Project Risk, Technical Complexity, and Project Dynamism, demonstrated discriminant validity and explained 56.63% of the variance in the data.

Table 1. Principal Component Factor Analysis Project Task Environment

Items	Technical Complexity	Risk	Project Dynamism
Technical Complexity			
High levels of technical complexity are involved in this project.	.82	.12	.13
Technologically, this is a sophisticated and complex project environment.	.81	.16	-.05
The project environment is very competitive and exacting.	.63	-.05	.23
This project involves new or immature technology.	.51	.20	.25
Risk			
There are inadequate resources on this project.	.10	.73	.04
There is little cooperation and/or commitment from client employees on this project.	.01	.69	.08
On this project, there is little prior proof of concept.	.03	.66	.28
This project is very risky.	.33	.66	.00
Project Dynamism			
We must frequently adjust to meet customers' requests on this project.	.17	.05	.86
Client demands on this project are frequently changing.	.18	.23	.79
Eigenvalue	3.18	1.43	1.15
Alpha	.70	.66	.69

Results

Table 2 presents descriptive statistics and inter-correlations among variables used to test Hypotheses 1 through 4.

Table 2. Means, Standard Deviations, and Correlations

Variables	Mean	SD	1	2	3	4	5
Trust	3.62	0.62	-----				
Project Risk	2.94	0.21	-0.11**	-----			
Technical Complexity	3.22	0.25	0.08**	-0.01	-----		
Project Dynamism	3.70	0.21	-0.01	0.18**	0.30**	-----	
Team Performance	3.80	0.29	0.09**	-0.75**	0.03	-0.05	-----

* $p < .05$; ** $p < .01$; $n = 1347$

Hypothesis 1a and 1b presents competing arguments on the relationship between trust and performance. An analysis of the bivariate relationship indicates that trust is positively related to performance ($r = 0.09$, $p < .01$), indicating support for Hypothesis 1a. The remainder of the hypotheses in this study, Hypothesis 2-4 were tested using moderated multiple regression with the independent variables entered in Step 1 and the centered interaction terms (i.e. trust x project risk) entered in Step 2. In Hypotheses 2-4, variables assessing the risk and uncertainty of the project task environment, specifically project risk, technical complexity, and project dynamism were argued to moderate the relationship between trust and performance.

Moderated regression results indicate that only project risk moderated the relationship between trust and performance (see Table 3). Hypotheses 3 and 4 arguing for the moderating role of technical complexity and project dynamism were not supported in this study. To understand the nature of the significant interaction effects, the relationships were graphed, and simple slope analyses conducted, following Aiken and West's (1991) suggestions. The interaction between trust and project risk was significant. Interaction graphs (in Figure 1) and analyses of the simple slopes indicated that trust positively impacted performance only when project risk was high, as indicated by the significant slope ($t = 3.01$, $p < .01$). Trust was negatively related to performance when project risk was low ($t = -2.20$, $p < .05$). These results indicate that the benefits of trust on performance differ based on the risky nature of the project and the adequacy of resources, support, and prior proof of concept of the project. These results provide partial support of Hypothesis 2a; although project risk moderated the trust-performance relationship, the nature of the moderation was not as expected. Implications of these unexpected findings will be examined in detail in the discussion below.

Table 3. The Moderating Effect of Project Risk on Trust – Performance^a

Variables	Performance			
	Step 1		Step 2	
	β	t	β	t
Trust	0.01	0.67	0.01	0.38
Project Risk	-0.75**	-39.93	-0.76**	-40.21
Trust X Project Risk			-0.07**	-3.56
Adjusted R ²	0.57		0.57	
R ² change			0.00	
F	809.53**		548.97**	

a Entries represent standardized regression weights.

** $p < .01$, * $p < .05$

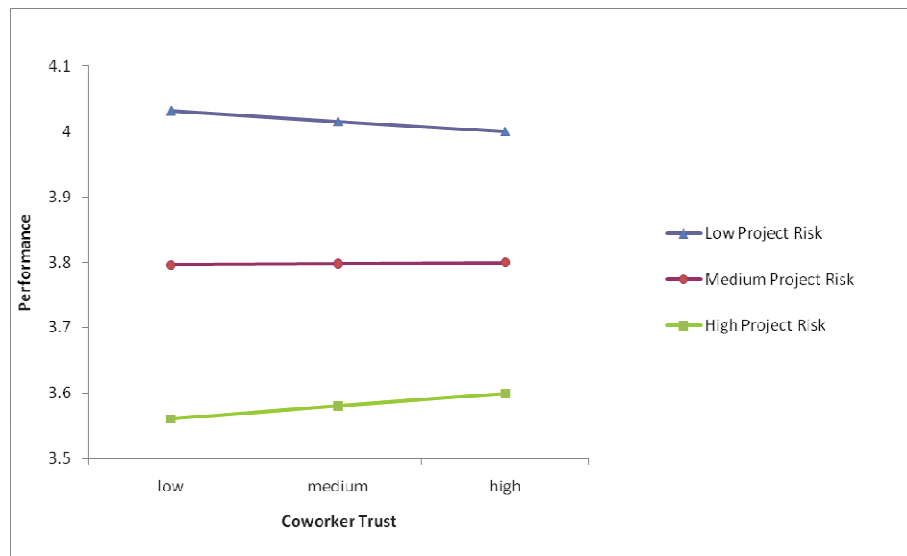


Figure 1. The Moderating Effect of Project Risk on Trust – Performance

Discussion

Results demonstrated that trust has a positive effect on the performance of global teams, and project risk moderates the trust-performance relationship. Results further revealed that trust was positively related to performance when the project was highly risky. Risky projects with little proof of concept (or conceptual blueprint) and resource and commitment deficits required strong trust within the project to perform well. For low risk projects, trust was actually negatively related to performance. These results were unexpected and allude to a far more complex relationship between risk and trust than previous research has considered. One possible explanation for this finding rests on the concept of groupthink. Janis' (1972) research on groupthink found that excessive solidarity and cohesiveness within groups decreases team performance. Lewicki, McAllister & Bies (1998) theorized that insofar as trust is a necessary precondition for team cohesion, excessive trust and active suppression of distrust may be at the root of groupthink dynamics. In high performance work teams, the authors noted that both trust and distrust can functionally coexist. They further argued that distrust gives rise to questioning, and differences in perspective may be essential for effective group functioning. Similarly, excessive trust can minimize the voicing of reservations and alternative perspectives, decreasing performance.

Lewicki et al. (1998) concluded that the functional coexistence of trust and distrust in a group may be a necessary precondition for the emergence of alternate opinions and better team performance. Drawing on these arguments, the findings in this study suggest that varying levels of trust, distrust or risk are necessary to improve performance. When projects did not involve external project risk, or internal skepticism and ambiguity (as suggested by low distrust), performance was negatively affected. These teams might not have faced any diverse opinions, experiences or requirements to externally adjust, leading to lower performance. Thus, trust within the team is critical to mitigate against risk and uncertainty in the task environment in order to achieve high performance. However, focusing excessively on internal trust is unnecessary and leads to lower performance for teams that did not face high levels of risk in their environment. These results are interesting and suggest a rich, complementary relationship between trust and risk on global teams, one that previous research has yet to empirically explore.

This study is not without its limitations. First, technical complexity and project dynamism were not found to moderate the trust-performance relationship, as predicted. Although interviewees reported that these factors were sources of risk and uncertainty on their project, these elements of the task environment were not found to moderate the trust-performance relationship. One reason that might account for these

findings is that not enough respondents across projects perceived technical complexity and project dynamism as critical sources of risk and uncertainty; consequently, the expected moderating relationship was not found. Future research can further explore how employees perceive these elements of the task environment in relation to trust and performance. Another limitation of this study lies in the use of cross-sectional data. Data was collected at one point in time from managers and employees across projects; thus, any conclusions regarding causality would be erroneous. To clarify the causal relationship of the arguments in this study, future research must collect longitudinal data across the project life cycle.

In spite of these limitations, this study offers critical insights into the relationship between trust, risk, and performance. A contribution of this study is that the conflicting research on trust and performance is evaluated and competing alternative hypotheses presented, thereby answering Platt's (1964) call for more strong inference research based on competing hypotheses, which is rare in international management research. By presenting these head-to-head tests, the diverse arguments and conflicting results of the trust-performance relationship are more clearly elucidated and clarified in this study. A second contribution of this study is that the task environment of outsourcing project is further differentiated, and the uncertainty and risk present in this global task environment operationalized as three separate components. Future research should explore if these elements of the global task environment apply to other contexts other than information technology projects and if each of these constructs has a distinct relationship between trust and performance.

Third, this study contributes to a stream of research in organizational behavior and strategy by providing a more in-depth understanding of the relationship between trust and risk. While many have acknowledged that the link between the two concepts is reciprocal, few have clearly articulated how the two are related. Rather, most researchers, such as Coleman (1990) and Deutsch (1958), have theoretically argued that in general, only under conditions of risk do we need trust. Here, we propose and empirically find that the relationship between trust and risk is far more complex and nuanced than previously considered. Surprisingly, trust was positively related to performance when the project task environment was highly risky, but the trust-performance relationship was negative when risk was low. These findings are the first to empirically support the long-held theoretical argument that risk is critical for trust, and trust would be unnecessary if actions could be undertaken with complete certainty and no risk (Lewis & Weigert, 1985).

Thus, as empirically found in this study, environmental risk is necessary for trust to impact performance, and perhaps even other team outcomes. Future research can build on the findings in this study to examine the complex relationship between trust and risk and their effect on other strategic and organizational behavioral outcomes in global collaborations. Last, the findings in this study have practical implications to managers of global teams who must decide when they should build trust within their global teams and under what conditions of environmental risk and uncertainty is trust critical to the performance of global collaborations. Indeed, as Krishnan et al. (2006) note, trust is a double-edged sword. This study provides insight into the advantages and limitations of trust in global teams and underscores the need to move beyond a focus on the direct link between trust and performance in seeking to understand the conditions, such as risk and uncertainty under which trust promotes or inhibits this relationship, suggesting the complicated and contingent role of trust in global teams.

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