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Impact of Trust, Commitment, and Openness on Research Project Performance: Case Study in a Research Institute

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Abstract: This study focuses on three important shared values—trust, openness, and commitment—and examines the impact of these values on project performance and outcomes, specifically for science and innovation research projects. To this end, 12 in-depth interviews were conducted with researchers, research managers, and research leaders at the largest research institution in Scandinavia. The findings indicate that the three values (trust, openness, and commitment) are practiced at this research institution and are essential to effective teamwork. The findings also show that trust and openness promote shared understanding, and encourage commitment.

Keywords: research projects; organizational culture; commitment; trust; openness

1. Introduction

The purpose of this paper is to present the results of a study that was conducted in a major research institute in Norway. The main activities of the research institute are centered around contract research projects. Every year the institute performs more than 9000 research projects for some 3000 clients. The main objective of this type of research is to develop knowledge and technologies that can be applied and brought into practical use, and to contribute to value creation and increased competitiveness within the private and public sectors.

In the last years, there has been a strong and increasing tendency among project management researchers to move away from the traditional views of predictability and linearity in project practice to one that highlights the complex nature of human interrelations (Small and Walker 2011). The underlying assumption under this tendency is that the project is a complex setting embedded in a social-cultural context and characterized by human interactions and tension between predictability and control (Cicmil et al. 2006). Bearing in mind that projects are submerged in such a complicated context, then project success is not only dependent on proper planning and control but also is dependent on a number of organizational factors, and these factors are often referred to as organizational culture. Understanding organizational culture is important for understanding the project as a complex social process. Organizational culture can be defined as a pattern of shared values and beliefs (Erkutlu 2012). According to Alvesson (2002), good cultures are specified by norms and values such as teamwork, honesty, commitment to the organization, and pride in one's work.

The purpose of this study is: (1) to explore the impact of values such as trust, commitment, and openness on research project outcomes in the case initiation; and (2) to identify some remedies that project managers can apply to increase the positive effects of trust, commitment, and openness on research project performance and outcomes.

The study is limited to examining trust, commitment, and openness because, firstly, we wanted to limit the scope of the study and, secondly and more importantly, in project management literature,

values such as trust, openness, and commitment are viewed as important success factors in projects in general. For example, it has been suggested by (Aubert and Kelsey 2000) that trust can facilitate the exchange of information and reduce control and its associated cost, as well as make working relationships more efficient. Trust has also a strong positive influence on the strength of relationships and ultimately has a positive effect on project outcome (Rousseau et al. 1998). Openness refers to the level of transparency in sharing task-relevant information (Schein 2010). Openness facilitates the alignment of goals and expectations and helps team members to achieve a common and mutual understanding of the project scope (McLeod and MacDonell 2011). Open and adequate communication helps to develop shared understanding, improves the atmosphere of the relationship, fosters commitment, ensures that deadlines are respected, and enhances trust between the partners (Dyer and Chu 2003; Bstieler 2006; Zidane et al. 2016). In addition, openness reduces mistrust and conflict of interest and improves project performance (Turner and Müller 2004). The importance of commitment (organizational commitment and commitment of the project organization) to project success is widely considered an important success factor (Hussein and Hafseld 2016).

Hussein (2013) identified a combination of top management commitment and project team commitment as a force driving the successful development of projects. Fowler and Horan (2007) identified top management commitment as a critical success factor and suggested its dominance in the planning phase of the project lifecycle. Pinto and Prescott (1988) emphasized the importance of top management commitment in projects as it plays various roles in the organization, for example, influencing attitudes, creating a positive context for change, overseeing the development of the project, and ensuring the availability of resources.

The paper is organized as follows: In Section 2 we explain the meaning and interpretation of trust, commitment, and openness in literature and explain their significance in managing projects. In Section 3 we explain the methodology used in the study. Section 4 presents the findings and discussions of these findings. Section 5 presents the conclusions.

2. Literature Review

2.1. Trust

Rousseau et al. (1998) defined trust as a complex phenomenon that enables cooperative behavior, reduces harmful conflict, decreases transaction costs, and promotes effective responses to crisis. There are three basic forms of trust (Kadefors 2004; Rousseau et al. 1998). (1) Calculus-based trust is when the trustor (the trusting party) perceives that an action that is going to be performed is beneficial to him or her. In this kind of trust, individuals are motivated primarily by economic self-interest; (2) Relational trust appears between individuals who interact repeatedly over time; (3) In institution-based trust, trust refers to the role of the institution in shaping the conditions necessary to create trust. Similarly, trust is needed when there are uncertainties, in order to have a successful outcome (Smyth et al. 2010). Since trust is believed to have a positive effect for the duration of a project, it is relevant to try to assess its overall effect. A high level of trust between clients and project design teams reduces transaction costs and maximizes creativity and problem-solving (Smyth et al. 2010). Trust-based relationships will not easily weaken because of differences of opinion. Trust enables partners to overcome difficulties and facilitates mutual understanding (Bstieler 2006). Therefore, trust can help to strengthen and improve the relationships among project partners, and as a result bring a variety of benefits for the project as a whole (Wong et al. 2008).

2.2. Openness

Openness refers to the level of transparency in sharing task-relevant information (Schein 2010). Openness facilitates the alignment of goals and expectations and help team members to achieve a common and mutual understanding of the project scope (McLeod and MacDonell 2011). Open and adequate communication helps to develop a shared understanding, improves the atmosphere

of the relationship, fosters commitment, ensures that deadlines are respected, and enhances trust between the partners (Dyer and Chu 2003; Bstieler 2006; Zidane et al. 2016). In addition, openness reduces mistrust and conflict of interest and improves project performance (Turner and Müller 2004). Organizational policies and practices may constrain the appropriation of innovations, such as new standard methods, techniques, or tools (McLeod and MacDonell 2011). To overcome these difficulties, a project team should have an organizational culture that supports individual efforts and ensures that the required information is shared and that there is direct communication among all members of the team (Cserháti and Szabó 2014).

2.3. Commitment

Mowday et al. (1979) defined commitment as the strength of an individual's identification with and involvement in an organization. It has three components: a strong belief in and acceptance of the organizational goals and values, a willingness to exert considerable effort on behalf of the organization, and a desire to maintain organizational membership. Commitment is a strong and important concept with considerable relevance for both employees and organizations. For employees, commitment to work in an organization represents a positive relationship (Mowday 1998). Commitment is classified in three forms: affective, continuance, and normative. Affective commitment refers to an individual's emotional attachment to the organization (Meyer et al. 1993). Continuance commitment means being associated with the organization based on the cost of leaving or the rewards for staying. Normative commitment reflects the feeling of being obligated to stay in the organization (Mahdi et al. 2014). Organizational commitment as the organizational support has a positive impact on achieving project objectives (Basu et al. 2002). In addition, organizational commitment increases an individual's feeling of involvement and sense of belonging (Zehir et al. 2012). Commitment has a vital role in reducing variance and slippage in project cost and schedule (Gulzar et al. 2012).

3. Methodology

This study used semi-structured interviews as a data-collection technique. We conducted face-to-face interviews with 12 individuals from the research institution who have been working on various types of research projects. The interviewees determined the direction and content of the interview within a broader framework. Interviews lasted between 30 and 40 min. The interviewees had from 8 to 20 years of experience in research. Their fields of research are project management, production and logistics, financing, economics, and health and safety. All interviewees are senior research scientists, and half are researcher managers or research directors. As mentioned, this study was conducted in a research institution. All respondents were working on research projects at the time of the study. The 12 interviews were sufficient in providing rich insights into the impact of the shared values of trust, commitment, and openness on the performance and outcome of research projects.

Validity in qualitative research is described as whether a measure of a concept really measures that concept (Koufteros et al. 2010). In qualitative research, theorists often appeal to the criterion of "respondent validation"; in other words, researchers' interpretations should be recognizable when presented to study participants (Van Den Hooff and De Ridder 2004). With this in mind, all of the interviews were recorded with the interviewees' permission, then all of the interviews were transcribed. Having face-to-face interviews helped to avoid any misunderstanding. When interviewees did not understand questions or main concepts, they were explained to make sure that they were clear. At the core of qualitative analysis are the related processes of describing phenomena, classifying them, and seeing how concepts are interconnected (Dey 1993). After completing the interviews, they were transcribed into documents, and all transcripts were carefully checked against the audio recordings to ensure accuracy.

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4. Findings and Discussion

4.1. Impact of Trust

The findings suggest that researchers, research managers, and leaders value trust as being vital to research projects success. The findings show that trust in the researchers' ability to complete their tasks increases the level of involvement in the project.

"If I think she [leader] is not confident about what I am doing, then I am losing confidence as well."

The findings show that trust at different levels affects the project. For example, in innovative or problem-solving projects, a high level of trust between clients and the project group reduces the transaction costs in the early phase of the project. This finding is in line with findings reported by Smyth et al. (2010), who proved that a high level of trust between clients and the project team reduces transaction costs and maximizes creativity and problem-solving.

These findings also indicate that long-term relationships with clients contributes to establishing a level of trust.

"Long-term working with companies and also inside, establishes a level of trust and reduces transactional cost in the project."

The findings show that in the early phase of a project, researchers from different departments who participate in the project need to know each other first. When researchers do not know each other, it takes longer to build trust.

"We trust each other inside the department, but being involved in the project with other departments, we need to create trust, because we do not know each other."

The findings show that trust can affect the project through knowledge sharing. Without trust, researchers do not share their knowledge, which hinders the progress of the project. Some informants believe that researchers are willing to share their knowledge, but they have many projects and do not have time for sharing.

"People share their knowledge very well. They just do not have time to share the knowledge."

"I trust my colleagues; it is not good for our company to be protective. I think trust is individual."

The findings show that research projects do not need to have a reward system to create trust and increase productivity. However, based on the literature, trust can be enhanced through a reward system that influences people's perception of each other's motivation and the value of joint performance (Ferrin and Dirks 2003). Therefore, a reward system cannot be considered as a motivational issue for the organization under study.

"I do not think a reward system would help. I do not think a reward system would impact on what we want."

4.2. Impact of Commitment

The findings from this study suggest that researchers, research managers, and leaders value commitment as a vital element to a research project's success. Moreover, the level of commitment may affect the success or failure of a project. It is a common approach for researchers to have priorities for their tasks based on their interest in the project. In other words, they prefer to work on projects that they have an interest in. Freedom to do the projects that they are interested in motivates them to be committed to the projects. Thus, the level of commitment depends on the level of interest.

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"We have freedom with responsibilities. There is freedom of choice in selecting the project in our field."

The findings show that in addition to the importance of researchers' freedom motivating them to be committed to projects, knowing and understanding the objectives of the organization can also encourage commitment. Researchers who believe in the organization's goals and values are committed to the work.

"I think making society better, as a slogan in our organization, encourages commitment to the project."

The findings show that in addition to team members' commitment, the organization's support is also very important and affects project performance.

Organizational support is necessary to encourage researchers' commitment to the project. The majority of researchers were satisfied working at this organization. They were proud of their organization, and that was a big motivation for them to be committed to projects.

"The organization has shown commitment, both in financial terms and appreciation for the job you do, and they see you."

The findings show that researchers have to be flexible, because in project work they are faced with many unexpected things. As mentioned, researchers work on different projects simultaneously, and they have priorities for their projects. They cannot be involved in all of the projects as much as they would like. In the middle of a project, they will make an excuse for not performing their own tasks. Leaders try to deal with that problem by replacing them with somebody else or dividing the work among team members. These problems affect project duration and cause delay.

"Commitment is not enough, you should be flexible."

"Researchers are too busy to contribute as much as they would like. We [research managers] try to deal with that."

The findings show that when researchers feel a sense of belonging in the organization, they have a stronger sense of commitment to the project. For employees, commitment to work and the organization represents a positive relationship (Mowday 1998).

"The motivation for our employees is that they understand they are part of the organization."

4.3. Impact of Openness

The informants believe that their culture is one of openness. The findings also show that through open communication, researchers share information that affects project outcome. Through communication, they ensure that deadlines are respected. According to the literature, through communication, people share information that is critical to the successful implementation of projects (Pinto and Pinto 1990).

"Openness is one of the things that actually helps us. When we work together as a team, we need to share our knowledge."

"With open communication, everybody can have a voice, everybody will be allowed to have an opinion. Involvement, I think, is important."

Findings show that in research organizations with a high degree of openness, such as open communication with colleagues and managers, people can solve problems, and this has a direct effect on project outcome. In addition, through effective communication, researchers share their knowledge, which affects project performance.

"If you are not open enough, you struggle in your problem. This affects the duration of the project."

The findings show that transparency leads to teams having the whole picture of the project. If researchers know the whole project, they will have a better understanding of the project. This has a positive effect on project outcome.

"You get the task that is part of the bigger task. We make better results if we can see part of the whole picture."

Openness helps to avoid misunderstanding, particularly in the early phase of a project.

"Openness is important to avoid misunderstanding."

"Openness in the research organization is quite important. Getting efficient information from others, meeting and discussing things."

4.4. Possible Remedies

This study sought to examine the impact of shared values on project performance and outcomes. The problems seen in organizations can be divided into four categories. We will suggest some remedies for the problems in order to increase the positive effects of trust, commitment, and openness. Before discussing the problems and remedies, it is necessary to explain the role of the project management's leadership style in increasing the positive effects of trust, commitment, and openness.

The findings show that project management has an important role in involving team members, communicating effectively, and collaborating inside and outside of the organization. Leadership factors, as well as organizational factors, can directly impact project performance (de Oliveira et al. 2012). It is very important to have good relationships and a good working climate and environment. Project managers in leadership roles can create an effective environment for project teams (Turner and Müller 2005). Organizations need to assess their cultural orientation and make changes rather than keep the culture as an invisible and non-measurable element. Project management has an essential role in creating a team culture to achieve project goals and group norms (Yazici 2009). The following outlines some situations that are needed in an organization to consider possible remedies.

A summary of the identified problems and possible remedies are presented in Table 1; more discussion about the identified problems and the remedies are discussed later.

Number	Identified Problems	Remedies
1	Projects postponed because researchers' commitment depends on the project field and their interests.	Increase commitment to projects with project management's effective communication.
2	Projects delayed due to researchers not being involved in projects equally.	Project managers must know team competency by increasing communication.
3	Lack of trust and misunderstanding in the early phase has negative effects on project performance and outcome.	Project managers must allocate much more time in the early phase in order to avoid misunderstanding and build trust.
4	Project managers do not have enough time to control the progress and make decisions before the project is postponed.	Project managers, by delegating their responsibilities, can help and support teams. Shared leadership is appropriate for knowledge-based work like research projects.

Table 1. Summary of possible remedies for problems.

For the first problem, the findings show that researchers work on several projects simultaneously. Their priories for their tasks are based on their interest in the project. However, researchers give up some projects in the middle, because they do not have enough time for all of their tasks. Then project managers have to replace them with somebody else or divide their work among the group. This problem may affect the project outcome, and causes some projects to be postponed. In addition, if people just follow their own interests, it creates a challenge for team members and management for a long time.

"Lack of a project manager's competency to push enough in the proper manner leads to delay."

"If we do not change our way, the market is gone, and then people do not have projects."

This shows that lack of communication creates some problems.

"People do not speak aloud. If we have a problem, I think it is difficult to bring it up."

One of the main responsibilities of project managers is to motivate their teams to complete projects on time. Project managers need leadership skills to develop researchers' interest in different kinds of projects. Informants 6 and 8 emphasized the project management dialogue. Project managers must have better communication with team members. Research managers believe that project managers can motivate researchers through effective communication. The literature review shows that culture becomes a critical factor in defining project success, and project managers should understand the different organizational cultures that may affect a project (PMI 2013). The right leadership style of project managers can improve organizational commitment (Limsila and Ogunlana 2008). Finally, the appropriate style of leadership motivates individuals and teams to work effectively and efficiently toward the performance goals that the project has to achieve (Rees 2008). Project managers using the appropriate leadership style can overcome these difficulties. Transformational leadership is committed to organizational goals and seeks to encourage people's commitment to the results (Bass 1999; García-Morales et al. 2012). Thus, there is a correlation between the manager's leadership style and the employees' commitment and motivation (Turner and Müller 2005).

A second problem identified in this study is that project managers select team members based on their prior work experience. This leads to some people having many projects to do and some not having enough. This shows a lack of communication between project managers and people in the organization. Then the researchers in different groups are not allocated to projects equally. In addition, for some projects, the big challenge was that sometimes people were encouraged to commit to the project, but top management had to pursue people who were not competent. This shows that project managers did not have enough meetings and communication with the project teams.

"We have project managers and resource managers as well. I think we could be better at this in our organization."

Selecting the right people for projects must be based on their competence for that particular work. Project managers have to know team competency. Effective performance by team members is expected by appropriate leadership. Leaders must help teams find the path to their goals and help them in the process (Turner and Müller 2005). Transformational leaders provide inspiration by motivating their team members through communicating high expectations (García-Morales et al. 2012). Thus, a culture that includes listening and meaningful dialogue throughout the organization is critical to effectiveness.

The findings show that in the early phase of a project, team members have some difficulty getting to know each other and building trust. Researchers from different backgrounds and different nationalities need to know each other and have the right understanding of common goals. The findings show that lack of trust and misunderstanding have negative effects on project performance and outcome. A lack of time and continuity makes it difficult for project partners to develop familiarity and to prove their good will and competence to each other. Building trust is an important but challenging task that has received little attention within the discipline of project management (Maurer 2010).

"Lack of trust can slow down the project a lot."

In the early stage of a project, available information is scarce, but the consequences of the project-related decisions are great (Williams and Samset 2010). Poor management in the early stage has a negative impact on project performance and outcome (Khurana and Rosenthal 1998). Therefore, it is important to examine employees' perceptions of the project. The findings indicate that there

is a relationship between leadership and project performance and outcome. Informant 1 suggested that project management should allocate much more time in the early phase in order to learn about the team members. Leaders should build relationships considering each individual's needs, along with growth and achievement, creating a supportive climate to reach higher levels of potential (Limsila and Ogunlana 2008).

The findings show that project managers do not have enough time to spend with project teams. We have seen researchers who cannot perform all the tasks they are allotted because they have a lot to do. If project managers and team members are aware of the project's progress, then they can decide before the project is postponed.

Project managers, by delegating responsibilities, can help and support team members. Planning efficiency will increase. Organizations with low-control cultures and more decentralization are more likely to delegate decisions (Wiewiora et al. 2014). With the shift toward team-based knowledge work, it is necessary to revise and rethink whether the traditional model is still appropriate. Shared leadership is appropriate for knowledge-based work that has characteristics including interdependence, creativity, and complexity (Pearce and Barkus 2004). Without trust, there is no hope of developing shared leadership. Top leaders play an important role in the development of a shared-leadership culture (Pearce and Barkus 2004). Thus, the leadership style is important. Leaders are able to develop their team's interest. Communication and conscientiousness are important throughout the project lifecycle. Without the right culture and values, it takes longer, costs more, and ultimately affects the project performance and outcome. Different leadership styles are appropriate for different types of projects. The project manager's leadership style impacts project success (Müller and Turner 2007). In addition, team members' assigned leaders recognize them as individuals and look out for their interests. This shows that culture can determine the outcome of a project. Transformational leadership tends to lead to high performance on projects with a degree of innovation (de Oliveira et al. 2012). Transactional leaders motivate people to perform as expected while inspiring them to do more than originally expected (Den Hartog et al. 1997). The project manager's leadership style influences his or her perception of success in different situations (Turner and Müller 2005). Project managers ideally should possess a repertoire of leadership styles rather than just one style (Müller and Turner 2010). In some situations, a highly directive style might be better, and in other situations a strongly supportive style might be better (Rees 2008).

5. Conclusions

This study examined the impact of trust, commitment, and openness on research projects. Lack of trust in some projects causes delays in project delivery. The findings show that trust is an essential value that affects project performance and outcomes, particularly in the early phase of the project. Honesty is considered as a practiced and promoted value in the organization under study and can be considered a key factor in promoting and encouraging the building of trust. Trust promotes cooperation and higher performance, and facilitates the exchange of information and interdependencies. It also reduces control and increases efficiency.

The impact of commitment as a practiced value was also investigated regarding project performance and outcome. The level of commitment to a research project depends on the researchers' level of interest in the project. In other words, researchers prioritize their tasks based on their interests and choices. The most common motivation for carrying out research projects is freedom to prioritize tasks based on interest. Flexibility to select and complete tasks also can have a negative effect on project performance. Some projects will not be completed on time due to this freedom and flexibility. Besides that, the findings show that when researchers feel they are assets to the organization and feel that they belong, they have a stronger sense of commitment to the project.

In the early phase of a project, it is very important to make sure that everybody understands the project's objectives and knows what they are supposed to do. In addition, project team members have to know who the right person to communicate with is. These findings show that effective interactions

among researchers can facilitate the alignment of goals and expectations. In a flat organization, people are willing to share their knowledge through effective communication. In the early phase of a project, effective communication as a promoted value helps to avoid misunderstanding. Adequate communication helps to develop shared understanding, improves the atmosphere of relationships, fosters commitment, and ensures that deadlines are respected.

Finally, this study identifies some causes of research project failure and postponement, including poor understanding of the objectives in the early phase, lack of effective communication, insufficient resources due to project teams being chosen based on previous experience with project managers (i.e., the way in which tasks are assigned to researchers), and commitment by researchers being based on their interest in the field. The findings show that project managers' leadership skills can increase the positive impact of trust, commitment, and openness on project performance and outcome. Project managers who engage in frequent, open, and effective communication can increase researchers' commitment to projects and have a positive effect on project performance and outcome. Project managers' leadership skills can reduce monitoring and control cost, which has a positive effect on project outcome. Thus, project management has an important role in involving team members, engaging in effective communication, and collaborating inside and outside of the organization. Leadership factors and organizational factors can directly impact project performance.

There are limitations regarding the reliability and validity of this research due to the small number of participants in this study. To overcome that, we used in-depth interviews. At this endpoint, for further research, we suggest more quantitative methods to identify more practiced values and categorize them based on their impact on the success of research projects.

Supplementary Materials: The following are available online at www.mdpi.com/2076-0760/7/2/22/s1.

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