Replacement of Project Manager during IT Projects – A Research Agenda

Tero Vartiainen
Department of Information Processing Science, University of Oulu, Oulu, Finland., tero.vartiainen@oulu.fi

Maritta Pirhonen
Department of Computer Science and Information Systems, University of Jyväskylä, Jyväskylä, Finland., maritta.pirhonen@jyu.fi

Heli Aramo-Immonen
Department of Industrial Management and Engineering, Tampere University of Technology, Pori, Finland., heli.aramo-immonen@tut.fi

Kirsi Liikamaa
School of Economics, University of Turku, Pori, Finland., kirsi.liikamaa@tse.fi

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Tero Vartiainen
University of Oulu
tero.vartiainen@oulu.fi

Maritta Pirhonen
University of Jyväskylä
maritta.pirhonen@jyu.fi

Heli Aramo-Immonen
Tampere University of Technology
heli.aramo-immonen@tut.fi

Kirsi Liikamaa
University of Turku
kirsi.liikamaa@tse.fi

ABSTRACT

Replacing the project manager (RPM) during IT project is a known phenomenon, but surprisingly, few studies have investigated the issue. To improve understanding of the situation in the IT field, we propose a research agenda that aims to provide IT professionals the means to sustainably manage RPM in IT projects. The research agenda is structured in line with the goals of theories in Gregor's taxonomy of IS theories, and with the agenda, substantive theories on RPM in IT projects are to be developed. There are four major research questions: i) How is RPM in IT projects experienced? ii) When RPM occurs in IT projects, what happens and why, and how does it affect stakeholders? iii) How can RPM in IT projects be predicted? iv) How to manage RPM in IT projects? The research agenda is discussed and evaluated.

Keywords

IT projects, project manager, project management, turnover, IS theory

INTRODUCTION

Replacing a project manager (RPM) during IT project means that the project manager is transferred from the task of managing the project to managing another project, the project manager is expelled from the project, or he or she voluntarily leaves organization, for example. Our discussions with IT professionals have shown that RPM is a known phenomenon and happens occasionally, but there are no clear means for addressing the situation. Although turnover of IT professionals has been studied, for example, Moore (2000) studied how work exhaustion causes turnover; Dinger, Thatcher, Stepina and Craig (2011) and Ahuja, Chudoda, Kacmar, McKnight and George (2007) studied how conflict between work and family duties causes turnover, very few studies have examined RPM in IT projects (e.g., Vartiainen and Pirhonen, 2007). We argue that the fundamental goal of research on RPM in IT projects should be developing theories that provide IT professionals and managers understanding, methods, instruments, organizational structures, and principles to handle RPM situations sustainably and successfully. We also argue that RPM in IT projects should be considered from the viewpoint of whether it should be avoided or whether it is, in some circumstances, a necessary situation. In addition, the positive viewpoint of RPM should not be forgotten as any challenging situation in any organization could also be considered a learning opportunity (e.g., Engeström, 1987).

For this aim, we adopt a theory-development approach and suggest a research agenda for RPM in IT projects to develop substantive theories on the issue. A substantive theory is a theory developed for a specific area of inquiry (Gregor, 2006), and in this case we propose that for RPM in IT projects specific theories should be developed. We divide the research agenda into developing theories that describe, explain, predict, and prescribe RPM in IT projects. This division is based on Gregor's (2006) division of the goals of theories in IS. We argue that Gregor's division is suitable for designing future research on RPM in IT projects as it provides a holistic way to consider RPM in IT projects from developing an understanding to managing RPM in practice.

This article is organized as follows. After this introduction, we briefly review the related literature on RPM in IT projects, and we show that a research agenda is needed. Then, we introduce Gregor's taxonomy of theories of IS, which is used as a framework to construct the research agenda described in the following section. Finally, the research agenda and its potential are discussed.

RELATED LITERATURE

Research on staff turnover in general has been a topic of considerable research in areas such as sociology, organizational behavior, finance, economics, and accounting, as well as in the IT field, but only a rather small number have addressed the topic of management turnover - variously termed replacement, displacement, succession, dismissal or changes. Many of these studies (Murphy and Zimmerman, 1993; Coughlan and Schmidt, 1985; Leker and Salomo, 2000; Shen and Cannella, 2002; Puffer and Weintrop, 1991; Ton and Huckman, 2008; Lausten, 2002; Barron, Chulkov and Waddell, 2011) have shown that organizational performance is an important factor in top management turnover. The causes of IT professional turnover have been studied since the 1980s (Baroudi, 1985; Dittrich, Couger and Zawacki, 1985). Moore (2000) found that IT professionals' exhaustion causes turnover in organizations: The strongest contributors to turnover intention were perceived fairness of rewards, work exhaustion, organizational tenure, and perceived workload. In addition, other factors affected willingness to leave: a high level of stress, role ambiguity and role conflict create role stressors that impact turnover decisions (e.g., Baroudi, 1985; Guimaraes and Igbaria, 1992; Igbaria and Siegel, 1992; Thatcher, Stepina and Boyle, 2002; Jiang and Klein, 2002; McKnigh, Phillips and Hardgrave, 2009). According to Longenecker and Scazzero (2003) among the factors causing IT managers to leave their employer are shortage of resources and staff needed to get the job done, unrealistic performance demands, negative organizational culture, a better job opportunity or salary, and lack of cooperation, for example.

Changes in project management are common. Still few studies have examined replacement in the project management context (e.g., Abdel-Hamid, 1992; Parker and Skitmore, 2005). Sauer, Gemino and Reich (2007) found that in every two projects there was a change in project manager (N=412 IT projects) and the changes had strongly adverse effects to project. Parker and Skitmore's (2005) study showed that turnover disrupts and negatively affects the performance of the project team and the project, and conceivably negates the competitive advantage of organizations concerned. Turnover occurs chiefly during the execution phase of the project life cycle, and the main causes of turnover are related to career and personal development and dissatisfaction with the organizational culture and project management role (Parker and Skitmore, 2005). According to Abdel-Hamid's (1992) study, managerial turnover can lead to a considerable shift in cost or schedule trade-off choices, affecting staff allocations and eventually project performance in terms of cost and duration. With respect to IT management turnover, Longenecker and Scazzero's (2003) study showed that the most obvious and significant problem caused by turnover was its negative impact on achieving performance goals. In addition, turnover causes communication breakdowns, a loss of focus and direction, and an increase in unresolved problems. The loss of key IT managers can create morale and motivational problems among staff, an increase in workload and stress among staff, and loss of teamwork and cooperation, but turnover may also have positive effects (Dalton and Todor, 1979).

Three studies in IS directly concerned RPM. Based on interviews, Vartiainen and Pirhonen (2007) determined two classes of reasons for RPM: i) Replacing the project manager to rescue a troubled project and ii) replacing the project manager as part of the process. In addition, they defined what kind of knowledge should be transferred from the preceding project manager to the succeeding manager (Pirhonen and Vartiainen, 2007). Vartiainen, Aramo-Immonen, Jussila, Pirhonen and Liikamaa (2011) further showed that activity theory is a usable framework for considering RPM. These studies, however, were restricted to the project level, and the whole project portfolio viewpoint was missing, that is, how in an organization with multiple projects RPM is considered and how it should be dealt with. In Vartiainen, Aramo-Immonen and Liikamaa´s (2010) study, activity theory was used as a lens for analyzing the underlying reasons for RPM in IT projects. In their study, the project portfolio viewpoint was considered, and they found six reasons for RPM: i) Project manager's personal values, needs, capabilities, and life situations become inconsistent with the project, ii) collaboration between the project manager and the project organization becomes difficult, iii) the project manager has not achieved the defined objectives, iv) the need to re-plan the whole project leads to RPM, v) the client seeks an additional benefit by demanding RPM, and vi) the project manager is wanted for another project inside the company.

Although some studies have investigated RPM in IT projects, these studies are still in the first steps in developing in-depth understanding how to manage RPM. Therefore, we need a systematic way to define future research on RPM in IT projects. For this purpose, we use the description of the goals of theories in IS by Gregor (2006).

THE GOALS OF THEORIES IN GREGOR'S TAXONOMY

March and Smith (1995) first introduced a typology of methods for IT named "design and natural science research on information technology". In this study, methodology from other scientific domains was applied to IT research. More recently, Gregor (2006) introduced her proposal for theory building in IS. In her study, five interrelated theories were distinguished: theory for analyzing, theory for explaining, theory for predicting, theory for explaining and predicting, and theory for design and action. The phenomenon of RPM contains knowledge of human behavior in connection with the social-historical system in which RPM occurs. Therefore, an analysis and description of RPM, an explanation for RPM and prediction (causality

between contradictions and action, for example), and a design of action (for the management situation, for example) are needed. This being the case, we suggest, for guiding research on RPM in IT projects, the use of Gregor's (2006) classification of goals of theories in IS research (Table 1).

The goal of the theory	Description
Analysis and description	The theory provides a description of the phenomena. It may also analyze the interrelations of constructs, the degree of generalizability in constructs and relationships, and the boundaries within which relationships and observations hold. The theory does not extend beyond analysis and description.
Explanation	The theory provides an explanation of how, why, and when things happen. The theory provides explanations but does not aim to predict with any precision.
Prediction	The theory states what will happen in the future if certain preconditions hold.
Prescription	This is a special case of prediction in the way that theory provides a description of the method or structure (or both) for the construction of an artifact (akin to a recipe). If acted upon a recipe, an artifact of a certain type will come into being.

Table 1. The goals of IS theories (Gregor 2006)

Based on the goals of IS theories, we developed the following research agenda for RPM in IT projects. The development of the agenda was iterative in nature as there were different versions of research questions during the process. The research agenda is next introduced.

RESEARCH AGENDA FOR RPM IN IT PROJECTS

We propose four research questions the goals of which are based on Gregor's (2006) work. The research questions are as follows (see Table 2 for a summary).

The research questions	RPM in IT projects specific theories
Research Question 1: How is RPM in IT projects experienced? (analysis and description)	Descriptions of the individual experience of RPM
Research Question 2: When RPM occurs in IT projects, what happens and why, and does it how it affect stakeholders? (explanation)	Descriptions of the paths leading to RPM in IT projects; Effects of RPM on IT projects
Research Question 3: How can RPM in IT projects be predicted? (prediction)	Models predicting RPM in IT projects
Research Question 4: How to manage RPM in IT projects? (prescription)	A process model for RPM in IT projects; Principles for developing organizational and project culture to take into account RPM in IT project in sustainable ways; Create principles and methods to develop a learning environment for project organization

Table 2. The research questions for RPM in IT projects and the RPM in IT projects specific theories

Research Question 1: How is RPM in IT projects experienced? (analysis and description)

We need analytic theories that describe or classify by summarizing the commonalities found in RPM in IT projects:

Descriptions of the individual experience of RPM in IT projects. Studies have shown that IT professionals' jobs are mentally demanding (e.g., see the study by Ahuja et al. 2007 on IT road warriors), and therefore, IT professionals may suffer from psychological consequences stemming from their jobs. IT projects are pressurized environments (e.g., Baskerville, Levine,

Ramesh, Pries-Heje and Slaughter, 2001; Longenecker and Scazzero, 2003), and work exhaustion is reported to affect turnover intentions (Moore 2008). Therefore, it is likely that RPM in IT projects might have psychological consequences for the parties involved with RPM occurrences such as the preceding project manager, the succeeding manager, team members, and the supervisor. Future studies should develop descriptions for how individuals taking part in RPM in IT projects experience the situation. The experiences should be studied to anticipate RPM before it occurs, experience ongoing RPM, and how RPM is considered afterwards in IT projects.

Research Question 2: When RPM occurs in IT projects, what happens and why, and how does it affect stakeholders? (explanation)

We need explanatory theories for RPM. These theories should explain how and why RPM occurs. With respect to the nature of explanatory theories, these theories may also answer the question when and where RPM occurs. These explanations should promote greater insights into the RPM phenomenon than analytic theories can offer. The following theories are needed:

Descriptions of the paths leading to RPM in IT projects. Two existing studies describe the reasons for RPM in IT projects (Vartiainen and Pirhonen, 2007; Vartiainen et al., 2011), but more studies taking the viewpoint of the entire RPM process are needed. The episodes before, during, and after RPM and why such episodes occur should be analyzed and described. As RPM relates to chronological developments of situations or processes (cf. project escalation, Keil, 1995; Keil, Mann and Rai, 2000), process theory viewpoint would be fruitful: Process theory makes it possible to identify antecedent conditions, encounters, episodes, and outcomes (Newman and Robey, 1992, Markus and Robey, 1988); that is, in the case of RPM it would be possible to identify paths leading to RPM. Descriptions of the paths would explain why RPM occurs. In addition, process theory makes it possible, by analyzing events, their paths, and their sequences, to identify patterns (Markus and Robey, 1988). With this kind of knowledge, we would understand the patterns with respect to the emergence of RPM in IT projects.

Effects of RPM in IT projects. Abdel-Hamid's (1992) results show that turnover in software development (cf. Parker and Skitmore, 2005) has negative consequences for projects as whole. In addition, Vartiainen and Pirhonen's (2007) results suggest that RPM in IT projects causes "chaos" in a project. This being the case, RPM may have serious consequences for stakeholders such as the client and the project team and its single members, for example. We argue that these effects should be studied. In addition, the effects of refraining from RPM - when in retrospective RPM should have been implemented— should be studied. The effects might be economical, psychological, and social in nature, for example. As an example, RPM causes the succeeding project manager to build relationships with individual team members who have to adjust to a new situation. This means that the project team confronts a change that has to be managed. Thus, knowledge on the effects of RPM on the team is needed, for example.

Research Question 3: How can RPM in IT projects be predicted? (prediction)

In order to prevent RPM and avoid or handle this situation we need predicting theories to recognize the predictor variables for RPM. These kinds of theories state what will happen in the future if certain preconditions hold. With respect to RPM in IT projects, the following theories would be beneficial:

Models predicting RPM in IT projects. According to variance theories, variables are identified and causally linked to outcomes (Ahmad, Lyytinen and Newman, 2011). As the prior studies on RPM in IT projects describe the reasons for RPM (Vartiainen and Pirhonen 2007; Vartiainen et al., 2010), we might be able to identify preconditions that affect the emergence of RPM in IT projects; that is, we might produce causal connections between conditions in IT projects and the emergence of RPM. A contradiction (in terms of activity theory) causing RPM was that the project manager's personal values, needs, capabilities, and life situations become inconsistent with the project (Vartiainen et al. 2010). This broad category includes the project manager's concerns of well-being at work, for example. Based on this finding, job satisfaction might be a variable that has a causal connection to RPM. Other variables should be identified, and their connections to the emergence of RPM should be studied. At least two studies might provide insights into identifying variables. First, Joseph, Kok-Yee, Koh and Soon (2007) defined a contextual model of turnover of IT professionals that constitutes of environmental-level, firm-level, and individual-level variables. At the individual level, there are job-related factors such as role behaviors and role stressors, for example. Second, Fredrickson, Hambrick and Baumrin (1988) defined a model of CEO dismissal that includes objective determinants, sociopolitical constructs, and performance dismissal link. Sociopolitical constructs relate to the board's expectations and the availability of alternative CEO candidates, for example.

Research Question 4: How to manage RPM in IT projects? (prescription)

We need prescriptive theories touching on the question how to manage RPM in an organization (theories for design and action). These theories should describe how the organization as a whole should consider RPM in their IT projects. These theories should provide key players such as the top-management and supervisors methods and principles for reacting to RPM

occurrences. In addition, the methods and principles should consider the development of the organizational and project culture to handle RPM as sustainably as possible. In addition, research might reveal how to avoid RPM altogether or how to minimize negative effects of RPM and even to benefit from it. The following prescriptive theories are needed:

A process model for RPM in IT projects. RPM is a challenge for balanced and harmonious project portfolio management as an RPM situation causes a turbulent situation for the project (cf. Vartiainen and Pirhonen, 2007). There is a need to define a prescriptive process model for RPM to aid all related parties in such a change situation. This process model should take into account experiences of individuals confronting RPM (cf. Research Question 1) as for project managers RPM may be a difficult situation. The process models should also take into account the different paths leading to the RPM situation (cf. Research Question 2) as the underlying reasons for RPM are diverse (Vartiainen et al., 2010). This might mean that the steps succeeding RPM may differ with respect to the underlying reasons for RPM possibly resulting in multiple process models. In any case, the process models should include instructions on how to transfer the critical knowledge from the preceding manager to the succeeding manager (see Pirhonen and Vartiainen, 2007) on knowledge transfer in RPM), for example.

Principles for developing organizational and project culture to take into account RPM in an IT project in sustainable ways. An organizational culture is the shared basic assumptions accepted and used by the organization (Schein, 1985). These assumptions and their application can be affected (Andersen, 2003), and we argue that there is a need to define principles that guide managers and staff in organizations to more sustainably take into account RPM in IT projects. Furthermore, according to activity theory, an activity system such as project, for example, is highly influenced by the dominant culture (e.g., Engeström, 1987). Therefore, these principles might consider how supervisors should act when anticipating or confronting RPM occurrence by supporting preceding and succeeding managers and the entire project group, and working for a more open and conversational atmosphere in the project, for example. When RPM is perceived as an unwanted situation, the principles should take into account how RPM could be avoided altogether by strengthening the confidential atmosphere inside the project (namely, the project culture), for example. Our discussions with supervisors revealed that there is a need for these kinds of principles as there are no clearly defined policies in organizations that take into account RPM in IT projects. These principles might be developed via action research or design science approaches that emphasize rigorous development of relevant practical issues.

Create principles and methods to develop an integrated learning environment for project organization. Learning should be integrated in everyday actions in projects (Aramo-Immonen and Porkka, 2009). The concepts of expansive learning and externalization and internalization of knowledge (Engeström, 2000; Nonaka, Reinmoeller and Senoo, 1998) may offer new insights for RPM. In the case of RPM, the organizational learning capability of the project team is vital. As an example, project teams are required to develop relationships with the successor project manager. Thus, the successor manager may have novel working methods, visions, and attitude (i.e., a different mental model). Furthermore, project portfolio managers (Levine, 2005) have to learn the affecting factors in allocating project managers to projects in new situations. This means that RPM leads to a change management situation in which individual and collective learning ability is necessary (cf. the effects of turnover of IT management in Longenecker and Scazzero, 2003). Development of these abilities has to be supported by a learning environment to gain a balanced and harmonious project portfolio.

DISCUSSION

In this study, we proposed a research agenda with four research questions to develop substantive theories on RPM in IT projects (Table 2). The theory development is based on the goals of theories, analysis and description, explanation, prediction, and prescription (Gregor, 2006). The RPM theories aim to develop the professional practice of IT projects by increasing understanding of the experience of RPM, reasons for RPM, effects of RPM, and different paths ending up with RPM situations. In addition, the theories would provide the means to predict and manage RPM in IT projects. Theories on RPM in IT projects may be partially connected to turnover theories. For example, in IS literature many studies are concerned about staff turnover (e.g., Baroudi, 1985; Jiang and Klein, 2002; Guimaraes and Igbaria, 1992; Igbaria and Guimaraes, 1999) but they do not take dismissal or involuntary turnover into account. However, in the management literature the dismissal has been taken into account (cf. studies on CEO dismissal, Fredrickson et al., 1988).

EVALUATION OF THE STUDY

Our proposal for the research agenda is restricted to theory development. Other approaches to advance research on RPM in IT projects might also be fruitful such as critical research. Furthermore, RPM is a general phenomenon characterizing project manager turnover in any project. Therefore, the study of RPM generally, and in project contexts other than IT, will be necessary and complementary for the research agenda suggested in this article.

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