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Fedi El Arbi
EBS Business School

Frederik Ahlemann
EBS Universität für Wirtschaft und Recht i. Gr., Germany

Michael Kaiser
EBS Business School

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THE EFFECTS OF INTRA-ORGANIZATIONAL AGENCY PROBLEMS ON IS PROJECT ALIGNMENT

El Arbi, Fedi, EBS Business School, Konrad-Adenauer-Ring 15, 65187 Wiesbaden, Germany, fedi.elarbi@ebs.edu

Ahlemann, Frederik, EBS Business School, Konrad-Adenauer-Ring 15, 65187 Wiesbaden, Germany, frederik.ahlemann@ebs.edu

Kaiser, Michael, EBS Business School, Konrad-Adenauer-Ring 15, 65187 Wiesbaden, Germany, michael.kaiser@ebs.edu

Abstract

Information system (IS) project strategy alignment is considered a solution to overcome the challenges involved in IT strategy implementation and a requirement for the realization of business-IT alignment. Evidently, IS project failure is often not the result of lacking or ineffective project management practices but of inappropriate social interactions among project stakeholders or – in other words – limited project-social congruence (PSC). However, little research has been conducted with regard to the PSC dimension. Existing models and theories fail to explain problems, such as goal conflicts and project stakeholders' opportunistic behavior, and the reasons for their emergence. We hold that agency theory is the most suitable theory to explain such phenomena and subsequently use this theory to explore the interactions between the different project stakeholders.

We seek to identify the intra-organizational project agency relationships and problems as well as the triggers for the emergence of such problems in order to investigate how organizations respond to agency problems and to explain these responses. We use an explorative multi-case study approach to theory generation and identify two transitive agency relationships that affect IS project strategy alignment. We expand IS project alignment literature by investigating agency problems in the context of IS project alignment.

Keywords: IS project alignment, agency theory, multi-case study, transitive agency relationships.

1 Introduction

Projects are a suitable organizational vehicle to realize larger changes in software, hardware, internal IT operations, and the way in which IT supports business processes. As such, they are a means to implement strategic IT goals (Gutierrez et al., 2008) helping to establish business IT alignment (BIA), which ultimately leads to better business performance (Kearns and Sabherwal, 2006). However, in order to contribute to strategy implementation, IS projects need to be aligned. IS project alignment can be defined as “the degree to which an IS’s project deliverables are consistent with the project’s objectives, which are shaped by the organization’s IS strategy” (Jenkin and Chan, 2009). IS project alignment has three dimensions (Jenkin and Chan, 2009): 1) the extent to which a project’s objectives are aligned with the current IS strategy (strategy-to-project-objectives congruence; SPC), 2) the extent to which project outcomes reflect the current project objectives (project-objective-to-deliverables congruence; PDC), and 3) the social interactions in the project context that affect communication, coordination, and shared understanding among team members (project-social congruence; PSC). In other words, PSC refers to the factors that influence the individual behavior in project context and hence influence both other IS project alignment dimensions.

Despite abundant methodological advice on how to initiate, evaluate, and prioritize projects to achieve strategic objectives (SPC) (e.g., Lee and Kim, 2000) as well as the broad spectrum of project management techniques supporting project success (PDC) (e.g., Project Management Institute, 2004), many organizations fail to align their projects. For example, although Belgacom, the leading telecommunications company in Belgium, had established a formal IS project selection process in order to eliminate much of the political and power games between the different FLS departments, this process’s effectiveness was still limited as it faced issues, such as inadequate project approval decisions based on inappropriate information (Viaene et al., 2007). The Belgacom case is a striking example of a goal conflict between top management and middle management: While the top management was interested in selecting projects that were in line with the company’s IS strategy, the middle managers tried to pursue their own interests, thereby foiling strategic objectives. Even if suitable projects are selected, organizations seem to have trouble delivering aligned project results. For example, after spending three years and £80 million on the development of Taurus, a paperless share settlement system, and after the securities industry spent £400 million to adapt its IT to Taurus, the London Stock Exchange (LSE) decided to cancel this project in 1993. This case is a prominent example of project sponsors’ lack of commitment to their role in defining project requirements and project steering, which was one of the reasons for project failure (Drummond, 1996). Both cases demonstrate that IS project failure is frequently not the result of lacking or ineffective project management practices but of inappropriate social interactions between project stakeholders (e.g., Brown and Jones, 1998) or – in other words – limited project-social congruence (PSC). To date, the IS project alignment literature discusses the alignment process (Jenkin and Chan, 2009), the relationship between BIA and IS project alignment (Gutierrez et al., 2008; Tarafdar and Qrunfleh, 2009), and the importance of tactical middle management’s role (Wolf et al., 2010). However, little research has been conducted with regard to the PSC dimension. Existing models and theories fail to explain problems, such as goal conflicts and project stakeholders’ opportunistic behavior, and the reasons for their emergence. Therefore, in this study, we try to explain limited project alignment by focusing on the project-social congruence dimension of IS project alignment. As shown in the cases discussed above, IS project alignment is characterized by cooperation between different management levels, work delegation between the different project stakeholders and the guidelines regulating the relationships between them, as well as various informational problems. Hence, we hold that agency theory (Eisenhardt, 1989a) is the most suitable theory for explaining such phenomena and we use this theory to explore the interactions between the different project stakeholders. With this study, we aim to answer two research questions:

1. Under which conditions do agency problems emerge that affect SPC and PDC?

2. What are suitable responses to these problems to establish IS project alignment?

We intend to extend the IS project alignment literature by developing a substantive theory on the agency problems in IS project alignment and the contracts governing these problems. We concentrate on agency problems in internal projects, since agency problems relating to external contractors have been extensively investigated in the literature (e.g., Bhattacharyya and Lafontaine, 1995; Hancox and Hackney, 2000). Furthermore, we reduce our investigation's scope by excluding possible agency problems between the project manager and the project team members subordinated to the project manager, since they have already been empirically investigated (Mahaney and Lederer, 2003, 2010). Owing to the limited literature on both IS project strategy alignment and intra-organizational project agency relationships and in order to get a vivid picture of the link between agency problems and IS project strategy alignment, we chose an explorative multiple case study approach.

The remainder of the paper is structured as follows: In Section 2, we present the agency theory and discuss prior work related to agency problems in the project context. In the third section, we outline our research design and methodology. Subsequently, we present our research findings and formulate propositions regarding the link between IS project agency problems and IS project alignment (Section 4). In Section 5, we discuss our findings by comparing them with existing literature. The last section discusses our study's limitations and contributions.

2 Prior Research

In this section, we aim to introduce Agency Theory (AT) and to provide an overview of the AT literature in project context. AT has been applied by researchers in many disciplines, including accounting, economics, finance, marketing, political science, organizational behavior, and sociology (Eisenhardt, 1989a). It addresses the agency relationship in which the principal delegates work to the agent, who then performs the work. The AT unit of analysis is the contract that governs the principal-agent relationship (Jensen and Meckling, 1976). AT suggests two types of contracts between principals and agents (Eisenhardt, 1989a): Behavior-based contracts specify the way in which an agent should behave. The agent is rewarded on the basis of information about his behavior. Outcome-based contracts reward the agent on the basis of the realized outcomes. This theory makes the following human, organizational, and informational assumptions (Eisenhardt, 1989a): In the context of AT, people are self-interested, risk-averse and have bounded rationality. The organization is characterized by partial goal conflicts among participants and information asymmetry between principals and agents. Efficiency is considered as the effectiveness criterion. Finally, information is considered a purchasable commodity. The aim of AT is to solve two problems that can occur in an agency relationship (Eisenhardt, 1989a). The first is a control problem resulting from goal conflicts between the principal and the agent and the difficulties involved in verifying what the agent is actually doing. The second problem is a risk-sharing one that occurs when principals and agents have different risk preferences. Agency problems can be chronologically divided into two categories (Bergen et al., 1992): *Precontractual* problems arise prior to contract conclusion between the principal and the agent. The major issues in this phase are 1) to find out whether the agent fits the principal's expectations, and 2) the strategy the principal follows to determine this. *Postcontractual* problems arise after contract conclusion between the principal and the agent. The major issues in this phase are 1) determining how the principal should evaluate and reward the agent's performance in a way that motivates the agent to behave consistently with the principal's goals, and 2) establishing what information strategy the principal should use to make such evaluations. Agency literature refers to *precontractual* problems as *hidden information* or *adverse selection* problems and to *postcontractual* problems as *hidden action* or *moral hazard* problems (Bergen et al., 1992).

As the Belgacom case illustrates, there is an agency relationship between the top management and the middle management concerning the proposal of project ideas: Top management constitutes the top of the organization's hierarchy (i.e. the CEO, CIO) (Dutton and Ashford, 1993) and is responsible for the definition of the business strategy and the approval of (major) project ideas. Middle management (the

FLS department managers in the case of Belgacom) operates at the intermediate level of the organization's hierarchy, two or three levels below the CEO (Dutton and Ashford, 1993) and has to propose project ideas in order to realize the business strategy. A second principal agent relationship between the project sponsor and the project manager is revealed by the LSE case: The project sponsor assists the project managers in matters, such as defining projects' scope, and monitoring projects' progress. Moreover, the project sponsor serves as a communication channel with the higher management (Project Management Institute, 2004). Hence, project sponsors are generally middle managers. On the other hand, the project manager acts on behalf of the project sponsor and manages the project on a day-to-day basis in order to achieve the project's objectives (Turner and Müller 2004).

The AT literature investigates several project-related agency relationships and problems: Agency problems between top managers as agents and shareholders as principals concerning project selection and effort choice have been discussed extensively in the literature (e.g., (Cadenillas et al., 2007; Hirshleifer and Suh, 1992; Hirshleifer and Thakor, 1992)). However, little research has been done to investigate agency problems between top management and further internal project stakeholders. Extant research on intra-organizational project agency problems focuses on the *postcontractual* stage, and especially on the agency relationship between the project sponsor and the project manager (Turner and Müller, 2004, 2003; Müller and Turner, 2005; Kakar and Thompson, 2010; Booth and Schulz, 2004), the agency relationships between the project manager and project staff (Mahaney and Lederer, 2010, 2003), and conflict of interests between some project staff members (Turner and Keegan, 2001). Except for the work of Booth and Schulz (2004), research on the agency relationship between project managers and project sponsors is rather conceptual and does not empirically examine the impact of agency problems between project sponsors and project managers on the project's outcomes.

To sum up, research on intra-organizational project agency problems recognizes the agency relationship between the project manager and project sponsor during the project execution phase and develops assumptions about the impact of agency problems between those two actors on the project's success. However, concerning project selection, intra-organizational agency relationships are not considered. Existing research has failed to explain agency problems between top management and medium management and the consequences of the principal agent relationship between project sponsors and project managers.

3 Research Method

We seek to develop a substantive theory on how intra-organizational agency problems influence IS project alignment. In order to gain an in-depth understanding of these phenomena and their context for theory building and due to the nascent body of knowledge in this field (Benbasat et al., 1987; Eisenhardt, 1989b), we opt for an explorative multi-case study approach, as specified by Eisenhardt (1989b). In order to shape the initial design of our theory building research, we specified a priori constructs derived from AT (Eisenhardt, 1989b). The unit of analysis is the contract between principals and agents involved in internal IS projects.

3.1 Site Selection

Since we are still in the phase of building rather than testing our theory, we used a theoretical sampling approach. We subsequently looked for sites that appeared well suited for revealing the relationships we sought to explore (Charmaz, 2006). We performed theoretical sampling to achieve a theoretical replication of the results (Yin, 2009) and selected our cases "for their similarities as well as their differences" (Orlikowski, 1993) (See Table 1). The cases were limited to financial services firms in German-speaking countries. We chose the financial industry because of IS's strategic importance (McFarlan et al., 1983), the high IT expenditure (Harris and Katz, 1991), and the high regulatory pressure (Goodhart, 1998) in this industry. All three factors have been identified as drivers of IT governance implementation (Damianides, 2004; Weill and Ross, 2004) and should therefore also

increase the likelihood of finding mature contracts between IS project stakeholders in financial industry firms. However, we selected companies of different sizes and that have different business models to ensure that the resulting theory is independent of company type or size.

	Case 1	Case 2	Case 3	Case 4	Case 5
Industry	Insurance	Insurance	Stock exchange	Banking	Asset management
Employees	4,000	3,500	3,500	1,150	2,300
Revenue	€ 2.3b	€ 663m	€ 2.4b	€ 560m	€ 10.7b
Project budget (p.a.)	€ 21m	€ 35m	-	€ 25m	€ 35m
Project portfolio size	40	130	-	25	75
Avg. project duration	1.1 years	1.6 years	ca. 1 year	ca. 8 months	ca. 1 year
Interviewees	2	3	3	4	5

Table 1. Case Company Profiles

3.2 Data Collection

We collected empirical data for the reconstruction of the implementation history of the contracts between the project stakeholders in two data collection rounds. The first round was undertaken between January and June 2009. We interviewed project managers and project portfolio managers at every case site and collected documents relating to project management and multi-project management in these companies (e.g., project management guidelines, reporting templates, and organizational charts). During the first round, we conducted 14 in-depth semi-structured interviews. Each interview lasted between 1 and 3.5 hours. The interviewees received interview guidelines beforehand, together with information on anonymity, the purpose of the research study, and the use of the data to obtain their informed consent (Myers and Newman, 2007). The included questions addressed a wide range of topics and, depending on the information we needed to further our understanding of the concepts, we picked appropriate questions during the interview, which were often supported by follow-up questions. The interviews were always led by two interviewers to reduce any bias, ensure comprehensiveness, and increase the field notes' validity. All interviews were recorded and transcribed. We collected approximately 350 pages of interview transcripts and an additional 250 pages of documents and field notes. The interview transcripts, documents, and interviewer notes were analyzed and interpreted during the data collection process (Eisenhardt, 1989b). We used triangulation techniques to corroborate evidence from different respondents or documents (Eisenhardt, 1989b). The second data collection round took place between November 2010 and February 2011. We conducted three further semi-structured targeted interviews with project portfolio managers and middle managers to sharpen our results. Each interview lasted about one hour and was also conducted by two interviewers. These additional interviews were also transcribed. About 60 pages of interview transcripts were collected during this phase. We organized and structured all case material in a case database (Yin, 2009).

3.3 Data Analysis and Theory Building

The case material was coded following the grounded theory technique as specified by Strauss and Corbin (1990). As we want to investigate the triggers for the emergence of the project agency problem, the organization's response to those problems, as well as how this response impacts IS project alignment, we explicitly choose this grounded theory variant, since it specifies prescriptions for the coding of causality patterns. This technique specifies three types of coding: *open*, *axial*, and *selective*. We used the *open coding* process to identify, uncover, and label key concepts hidden within

the qualitative data that is potentially relevant for understanding the phenomenon of interest. These codes were then grouped into categories or “constructs” for theory building. The open coding was done by two researchers independently. The resulting two code bases were reconciled after the open coding process by comparing and resolving divergent codes and merging analogous codes. A third researcher provided feedback on the coding process and reviewed the coding results. As a result of the open coding and reconciliation steps, we identified 308 codes in the source material. During the *axial coding* process, we grouped the identified constructs into “synthesizing categories.” Such grouping allowed us to identify patterns of causality that could then be integrated into a preliminary theory. We derived four “synthesizing categories” as a guide for our axial coding: *agency problems’ antecedents*, *agency problems*, *contractual contents*, and *contractual outcomes*. Subsequent coding employed the *selective coding* approach for which we used the “theoretical sampling” procedure to selectively sample new data and reconcile emergent codes with the preliminary theory. This allowed for faster coding by consolidating analogous codes, while still allowing new codes to emerge from subsequent data analyses, which could then be integrated into the preliminary theory as the theory was iteratively refined and modified. To compensate for the data analysis process’s complexity, we complemented our analysis approach with graphical representations of the emerging codes and their relationships (Miles and Huberman, 1999).

The data analysis was completed when theoretical saturation was reached, i.e. no new codes emerged from further analysis and the target theory had stabilized following multiple rounds of refinements (Eisenhardt, 1989b). This was the case after the second round of data collection. As recommended by Eisenhardt (1989b), we compared our emergent theory to the extant literature in order to achieve theoretical integration. We screened AT, BIA, and project management literature for studies supporting or contradicting our findings in order to enhance the internal validity, generalizability, and theoretical level of our theory building. In the following sections, we first describe the findings and then highlight their links to existing literature.

4 Findings

As predicted by AT, the project stakeholders at the investigated companies acted in a self-interested way. All interviewees were unable to diversify their employment (i.e. they work for only one company) and can thus be considered risk-averse (Eisenhardt, 1989a). Furthermore, project decision-makers’ rationality can be considered bounded, since they made decisions in a finite amount of time on the basis of the project information (Gigerenzer and Selten, 2002). Our case companies had also invested in information systems (i.e. systems that reveal agents’ behavior in the AT context) in accordance with AT’s informational assumptions. As suggested by AT, project efficiency is indeed considered the project effectiveness criterion. Additionally, we notice goal conflicts and information asymmetries between different project stakeholders. In our case companies, the matrix organization (Project Management Institute, 2004) structure was chosen to carry out IS projects. Thus, the project sponsor had to mandate a project manager for project execution. Our findings confirm the existence of agency problems between project sponsors (PS) and project managers (PM) and reveal the existence of an additional agency problem between middle management (mostly acting as project sponsors) (i.e. division and department managers) and top management (TM) (i.e. CIO, CEO, and board of directors) that has not yet been addressed in the literature (See Figure 1).

Two moral hazard problems arose in our case companies between the project managers and the project sponsors during the project execution phase. The first problem is goal conflicts between the project managers and the project sponsors. A project manager at Case company 3 pointed out¹: “[...] *Conflict of interests is a challenge for the project managers. This is not a governance related issue. This is quite normal since the project managers also have line positions.*” The project managers made

¹ All quotes are translated from German.

decisions in favor of their line unit, which was not always the best decision for the project. However, they could hide this behavior due to the information asymmetry between the project manager and project sponsor. This information asymmetry also triggered the emergence of the second moral hazard problem: The project managers tried to hide their skill deficiencies and the problem they had in planning and managing the IT projects (e.g., due to incomplete project requirements and IS projects' specificity). These two problems were accentuated by the lack of project management competence and commitment of the project sponsors, who were not able to evaluate the performance of the project managers and were shirking their supervisory role over the project managers; as a project portfolio manager at Case company 2 stated: "[...] *One of the big problems is that project sponsors do not apprehend their role as defined. They sometimes do not even know that they are the sponsor of a project*". This led to Propositions 1a and 1b:

Proposition 1a: *Conflicting loyalties, information asymmetry, and competency deficiencies on the side of the PM lead to moral hazard problems between PS and PM.*

Proposition 1b: *Competency deficiencies and lacking commitment on the side of the PS lead to moral hazard problems on the side of the PM.*

These two moral hazard problems compromise the congruence between IS project outcomes and the project objectives (PDC), since they lead to wrong project decisions and poor project management. This led to Proposition 2.

Proposition 2: *Moral hazard problems between PM and PS reduce PDC.*

Organizations respond by proposing hybrid contracts to project managers that contain both outcome-based and behavior-based components. The contracts between project managers and project sponsors contain incentives for project managers, such as success-oriented elements and dedicated career paths. These contracts also specify agent behavior by standardizing project management practices and making the use of certain standardized practices mandatory. The standardization increases task programmability, which makes the task easier to monitor and reveals agent behavior (Eisenhardt, 1989a). The contracts stipulate the centralization of project information in order to make project information available to the sponsor. The contracts also specify the nature of the relationship between the project manager and the project sponsor. Organizations invest in information systems to curb agent opportunism (Eisenhardt, 1989a): Different mechanisms are defined to monitor the project manager's behavior, such as information-gathering activities (e.g., project audits, project reviews, and project progress reporting) and the establishment of project governance structures (e.g., the project steering committee). These contracts lead to better overall alignment between project outcomes and objectives, but increase project managers' administrative load. A middle manager at Case company 1 pointed out: "[...] *The project performance gets better. However, many project managers claim the opposite, stating that the standards are all about administrative overheads.*" This led to Proposition 3.

Proposition 3: *Hybrid contracts between PS and PM lead to better PDC by minimizing PM's moral hazard problems.*

An additional moral hazard problem arose between the middle management and the top management during the project selection phase. There were goal conflicts between the middle management and the top management; as a project portfolio manager at Case company 1 pointed out: "[...] *It is sometimes obvious that a project does not yield any benefits. Nevertheless, department managers sometimes want to complete such projects.*" While the top management selected IS projects according to the function of their alignment with the IS strategy, the middle managers' choice of projects tended to be based on whether it would benefit their own department. This moral hazard was accentuated by the lack of consolidated project information available to the top management that could allow for better evolution of project ideas and a better evaluation of projects' realized benefits. A portfolio manager at Case company 4 stated: "[...] *Too much detailed project information was reported to the board of directors, so that the board members lost sight of the essential project issues.*" This led to Proposition 4.

Proposition 4: *Project information overload on the part of TM leads to moral hazard problems between TM and MM.*

These problems can lead to the selection of IS projects whose objectives do not align with the IS strategy and hence lower SPC. This led to Proposition 5.

Proposition 5: *Moral hazard problems between the middle management and the top management concerning project selection lead to lower SPC.*

The organization responds to this by proposing behavior-based contracts to middle management that include a standardized project proposal and project portfolio planning processes as well as a standardized project benefits analysis. The purpose of this is also to increase task programmability. Different mechanisms are implemented to monitor middle management's behavior. The organization invests in project information gathering activities to reveal projects' real benefits, strategic relevance, and risks. These include, for example, a project appraisal, project risk analysis, project concept phase, project requirements analysis, as well as a project benefits analysis and management. To reduce information overload on the part of TM, the project information and decision are also centralized: A central project management information system is established and decisions regarding resource management, project budgeting, and project approval are made on a multi-project level. A central project organization (project management office and project portfolio management committees) that is independent from the line organization is created to supervise these multi-project practices. We did not notice any agency problems between the central project organization and top management. This can be explained by the fact that the top management reduces the impact of possible new agency problems arising from the creation of the central project organization by avoiding complete work delegation and active involvement in project portfolio management. The contract offered to middle management as well as the contract monitoring mechanisms improve top management's access to accurate information, in which, in turn, leads to better project selection. A portfolio manager at Case company 5 pointed out: "[...] *After the project concept phase, I am fully aware of the possible options for a project. Then I communicate my preferences to the steering committee.*" This led to Proposition 6.

Proposition 6: *behavior-based contracts between MM and TM lead to better SPC by minimizing MM's moral hazard problems.*

The two agency relationships discussed below can be seen as transitive agency relationships. During the project execution phase, the project sponsor (part of middle management) acts as an agent of the top management, since the top management delegates project support tasks to the project sponsor. The agency problems between the project sponsor and project manager do not only arise due to opportunistic project manager behavior, but also due to shirking or a lack of competence on the part of the project sponsor. Hence, moral hazard problems between middle management and top management not only affect the project selection but the project execution as well. Therefore, every contract proposed to the project manager would be too risky if not accompanied by a contract specifying project sponsor behavior. The transitive character of the two agency relationships discussed above also suggests that top management should be involved in the IS project management process. Since project managers depend on project sponsors to realize IS projects' expected benefits, in addition to proposing IS projects, top management should propose adequate contracts that reduce the risks of middle management displaying shirking and opportunistic behavior. The lack of incentives to propose projects that are aligned with the IS strategy and to take on the role of the sponsor accentuates the agency problems in the project organization. Top management's failure to specify adequate contracts for middle management can thus be considered an antecedent for the emergence of agency problems between project sponsors and project managers. This led to Propositions 7a and 7b.

Proposition 7a: *Moral hazard problems between the PS and the TM lead to lower PS role commitment and thus to the emergence of moral hazard problems between PM and PS.*

Proposition 7b: *Competency deficiencies and lacking commitment on the side of the TM lead to moral hazard problems on the side of the PS.*

We also observe that organizations not only focus on controlling mechanisms to overcome IS project alignment problems in the project organization, but also invest in training and experience sharing programs for different project stakeholders and in project knowledge management measures. Thus, the sample organizations seem to believe that better IS project management knowledge on the part of project managers and other project stakeholders improves IS project alignment. In order to tackle the agency problems that minimize IS project alignment, organizations should not only specify adequate contracts between the different stakeholders, but also develop their project-specific role proficiencies.

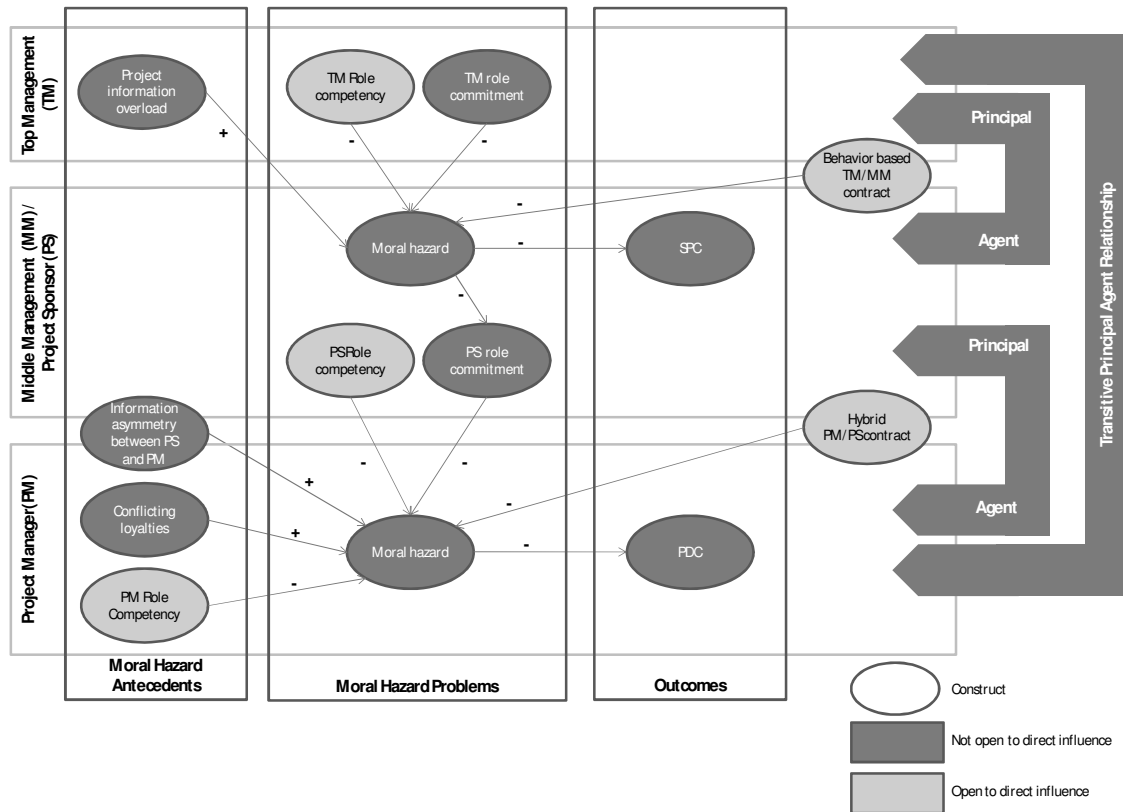


Figure 1. Findings

5 Theoretical Integration

Our findings are in line with Fama and Jensen's (1983) assumption that, by separating decision ratification and monitoring (i.e. decision control) from decision initiation and implementation (i.e. decision management), one can minimize agency problems along the decision process. Furthermore, our research supports the assumption that information asymmetry leads to moral hazard (Mishra et al., 1998). Moreover, prior research supports our assumption that project sponsors have a particularly important role in IS project alignment. For instance, Müller (2003) states the importance of a cooperative relationship between the project manager and project sponsor for project success.

Furthermore, prior research supports our assumptions that standardized PM practices benefit IS project alignment: Milosevic and Patanakul (2005) claim that standardized project management may increase project success in high-velocity industries. They found that standardized project management processes, organization, and information management systems and tools are critical to project success. In addition, many scholars note the importance of project selection guidelines' mediating role in aligning project portfolios and strategy (e.g., Cooper et al., 2001; Crawford et al., 2006).

Our findings show that mature project monitoring processes in the case companies led to greater administrative overheads on the part of the project managers. This maturity can lead to new agency

problems between project managers and project sponsors, since project management monitoring maturity can lead to project managers displaying shirking behavior with the intention to symbolically follow the PM guidelines as suggested by Jenkin and Chan (2009). This could explain why our case organizations opted for hybrid contracts and not exclusively behavior-based contracts with project managers. Even if the project managers follow the project management guidelines symbolically, they are interested in successfully managing the project to get the performance-related rewards. Jenkin and Chan (2009) also suggest that “executing, change, and learning through heedful interrelating and knowledge in practice” are more important for IS project alignment than planning and process maturity. This explains why our case companies invest in both establishing efficient contracts between the project stakeholders and training and knowledge management activities.

Finally, AT argues that agents seek to hide information in order to preserve information asymmetry. However, the organizational information processing literature qualifies this position and claims that the data is available to the principals, who face information processing and equivocality problems (Daft and Lengel, 1986). This is in line with our findings on information overflow with regard to TM: Inefficient information structures – and not agent opportunism – is the cause of information asymmetry between TM and MM and the observed centralization of project management structures is an attempt to establish efficient information structures.

6 Limitations and Contributions

Our work contributes in three ways: First, we investigate agency problems in IS project alignment and formulate a set of propositions concerning the triggers of these agency problems and their impact on IS project alignment. Second, we make suggestions on how to design contracts that minimize moral hazard and foster project alignment. Third, we identify transitive principal agent relationships in which the lack of project management knowledge and commitment of the top management leads to shirking behavior on the part of the project sponsor that, in turn, results in moral hazard problems between project sponsors and project managers. Organizations should therefore not only consider eventual shirking and opportunism on the part of project managers, but also on the part of project sponsors (as part of middle management). The identification of transitive principal agent relationships could be a significant contribution to and a valuable extension of agency theory. However, further research (especially in other contexts) is required for a better specification and description of this phenomenon. The results of our research have immediate implications for project management: We make suggestions on the design of monitoring and control systems for middle managers and project managers as well as on incentives for the project managers. In addition, we point out the role of project management training and education not only for project managers but also for project sponsors and top managers. Finally, we call attention to the fact that project management is an issue that concerns top and middle management.

Nevertheless, our work has several limitations. The most important limitation is that we were unable to interview top managers in our case company as well as the limited number of middle managers we interviewed. To strengthen the validity of our findings and overcome this problem, we collected data from different informants and various data sources and performed data triangulation as recommended by Eisenhardt (1989b). In its current state, our research still has some limitations regarding its generalizability as it focuses on the German-speaking financial services industry (Gibbert et al., 2008). However, having followed common prescriptions for conducting a case study based on grounded theory research, we are confident that we have achieved a high level of analytical generalizability with our findings (Eisenhardt, 1989b; Yin, 2009; Strauss and Corbin, 1990). Another limitation is the use of retrospectively collected data. To remedy this, we are currently studying the ongoing contract implementation between the internal project stakeholders at a large professional service firm. We hope that this will provide us with rich longitudinal data to confirm our model without the bias of retrospective accounts (Leonard-Barton, 1990). Further research can also investigate transitive agency relationships in different contexts in order to develop a formal theory on such relationships.

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