



EMPIRICAL RESEARCH

Blending bureaucratic and collaborative management styles to achieve control ambidexterity in IS projects

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Abstract

Managing information systems (IS) projects requires what we refer to as 'control ambidexterity', which is the use of different types of control to meet conflicting demands. This leads to the use of contrasting styles of IS project management and creates tensions in managerial practice, neither of which are well understood. We address this theoretical gap in our understanding based on an exploratory case study of an IS implementation project in the financial services industry. Adopting the lens of management styles as a meta-theoretical perspective, we sought to address two research questions: (1) Which management style(s) do IS project managers draw upon in practice and why? (2) What kinds of tensions result for IS project managers and team members from drawing upon contrasting management styles in combination – and how do IS project managers and team members deal with these tensions? Two contrasting styles of management emerged from our data – bureaucratic and collaborative – that are drawn upon by IS project managers to achieve control ambidexterity. Furthermore, drawing upon these two different styles in combination within the confines of a single project creates tensions. We explore these tensions and present an illustrative example of how IS project managers can deal with these tensions successfully in practice. Specifically, we find that they can be dealt with effectively by a tandem of two project managers who share responsibility for managing the IS project. The findings of this study have important implications for our understanding of control ambidexterity in IS projects.

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Introduction

The nature of information systems (IS) projects – the involved uncertainties, ambiguities, and dynamics – challenges project managers, and failure is a common occurrence (e.g., Xia & Lee, 2005; Conboy, 2010). This makes IS projects, as a kind of temporary organization that faces a myriad of challenges, a particularly interesting and fertile ground for exploring contrasting management styles and associated tensions (Eisenhardt *et al*, 2010). Prior research suggests that 'the ability to pursue two disparate things at the same time', characterized as ambidexterity, is critical for performance in such challenging contexts (Gibson & Birkinshaw, 2004, p. 210). An example is the need to combine formal and informal controls into an effective control portfolio (Kirsch, 1996; Kirsch, 1997). The central thesis of this paper is that the use of different types of control to meet

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conflicting demands, which we refer to in this paper as 'control ambidexterity', requires drawing from disparate management styles, which creates tensions in managerial practice. Little is known, however, about the contrasting management styles that are employed in IS projects, the tensions that result from their use, and how managers deal with these tensions in practice. It is this theoretical gap that we seek to address.

One of the dominant streams of research on managing IS projects has adopted an organizational control perspective, focusing on the use of different types of control in IS projects (Henderson & Lee, 1992; Kirsch *et al*, 2002; Nidumolu & Subramani, 2003). While this stream of research has emphasized the importance of managing projects through the creation of a control portfolio, it has largely ignored the challenges that are associated with mixing different types of control (e.g., formal and informal). Tiwana (2010) examines portfolio-level interactions between formal and informal controls and reports that 'informal control mechanisms strengthen the influence of formal behaviour control', but that they weaken 'the influence of formal outcome control mechanisms'. Tiwana's work is intriguing because it suggests that when we combine formal and informal controls into a portfolio we can get both complementary as well as substitutive effects, once again pointing to the difficulties and challenges that may result when managers attempt to combine formal and informal controls. However, Tiwana's work leaves open the question of how to achieve control ambidexterity, the tensions that result from this, and the ways in which these tensions can be managed.

Project management styles and tensions have been examined before in the context of new product development. Lewis *et al* (2002, p. 546) define management style as 'an underlying mode of thinking and behaving that in turn promotes a specific repertoire of actions that managers draw upon in contexts of varying complexity and uncertainty'. Their study suggests that the concept of management styles provides a useful lens through which to examine tensions in IS project management contexts. Using this meta-theoretical perspective, we address two research questions in this paper: (1) Which management style(s) do IS project managers draw upon in practice and why? (2) What tensions result for IS project managers and team members from drawing upon contrasting management styles – and how do IS project managers and team members deal with these tensions? On the basis of an exploratory case study of an IS implementation project in the financial services industry, we contribute to IS project management research and practice by (1) identifying two contrasting styles of management – bureaucratic and collaborative – that are drawn upon by IS project managers to achieve control ambidexterity; (2) explaining the control-trust, efficiency-commitment, and stability-flexibility tensions that result from juxtaposing these two contrasting styles; and (3) presenting an illustrative example of how IS project managers can deal with these tensions successfully in practice.

The remainder of this paper is structured as follows. In the next section, we review IS research that explores control in IS projects since our research questions address this body of knowledge. We then introduce the meta-theoretical lens that positioned our research design. In the third section we discuss our research approach, explaining both the data collection and analysis procedures used. In the Case Analysis and Commentary, we present the key findings of the study including the emerged conceptualizations of bureaucratic and collaborative management styles, the tensions that result from combining these styles in practice, as well as how managers dealt with them in the case study we analysed. The penultimate section discusses implications for research and practice as well as the potential and limitations of the techniques used. We conclude with a brief exploration of potential future research directions.

Theoretical background

In this research, we adopted the critical realist paradigm for conducting IS case study research with the primary objective of understanding how and why a phenomenon occurred, assuming the *emergence* of those explanations over time (Wynn & Williams, 2012). In conjunction with the emergence of our explanations over time, we identified the relevant problem domain literature on controlling IS projects and the appropriate theoretical lens of contrasting management styles, which we review and discuss in this section.

Controlling IS projects

In the IS literature, control is viewed from a behavioural perspective as an attempt to motivate individuals to act in a way that is consistent with organizational goals and objectives (Kirsch, 1996). Related to IS projects, project managers may act as 'controllers' by exerting control over project team members, also referred to as 'controllees' in that case, in order to ensure that they behave in accordance with project goals and objectives (Henderson & Lee, 1992). Because the project manager is usually held responsible for achieving the project's goals and objectives, controlling the project, that is, the individuals and teams that constitute the project organization, is a key task. Building upon the seminal work of Ouchi (Ouchi & Maguire, 1975; Ouchi, 1977; Ouchi, 1978; Ouchi, 1979; Ouchi, 1980), Eisenhardt (Eisenhardt, 1985; Eisenhardt, 1989a), and other scholars (e.g., Jaworski, 1988; Jaworski *et al*, 1993), prior IS research examining control behaviour in IS projects (e.g., Kirsch, 1997; Choudhury & Sabherwal, 2003; Chua *et al*, 2012) has distinguished between different types of control (i.e., formal and informal control) and different modes of control (i.e., behaviour control, outcome control, clan control, self control). This framework has been used to differentiate between specific control mechanisms (also referred to as 'controls' in the literature). An example is reviewing the status of a project that is provided by team members to ensure that project activities are in line with the project's

goals and objectives. Mechanisms underlying formal and informal control have also been categorized according to their focus. In the case of formal control, this includes controlling the behaviour that leads to a desired outcome (i.e., behaviour control), or controlling the outcome itself (i.e., outcome control). In the case of informal control, this includes creating shared values, attitudes, and ideals for the members of a group (i.e., clan control), or motivating individuals to control themselves (i.e., self control).

Research on controlling IS projects has also found that formal and informal controls have to be combined into a control portfolio (Kirsch, 1996; Kirsch, 1997; Choudhury & Sabherwal, 2003; Kirsch, 2004). For example, Chua *et al* (2012) find that the use of formal controls plays a critical role in successfully enacting informal controls, specifically clan controls. Furthermore, Tiwana (2010) presents an empirical study of formal and informal controls in IS outsourcing projects and explores whether the two types of control function as substitutes or as complements. Tiwana's (2010) study provides important insights into the combination of formal and informal controls in a mixed control portfolio by examining which modes of formal control (i.e., behaviour and outcome control) should be combined with informal clan control in order to leverage the complementary effects of formal and informal controls on the fulfilment of project goals and development flexibility. While his study provides some empirical evidence for which modes of formal and informal control should be combined to enhance project performance, it does not examine the difficulties of combining disparate approaches to control (e.g., formal and informal control) in IS project management practice. As formal controls are oriented towards improving accountability and focus on enforcing previously defined plans and goals, and informal controls are used to create shared norms and values, and are based on trust as well as people strategies (Ouchi, 1979; Kirsch, 1996), tensions may result from combining the two types of control. Understanding and managing these tensions is not well understood in the literature. As Tiwana (2010, p. 88) notes: "This issue of how formal and informal control mechanisms interact within a single project (portfolio-level interactions) remains neglected despite the simultaneous prevalence of both".

In summary, our understanding of control behaviour in IS projects has advanced considerably during the last two decades. Although these advances illustrate that there are very different approaches to controlling IS projects in practice, there is still a significant gap in our understanding about achieving control ambidexterity, the resulting tensions, and how such tensions can be managed. The theoretical lens provided by research on management styles serves particularly well to address this theoretical gap.

Contrasting management styles and tensions in project management

In their study of project management in new product development, Lewis *et al* (2002) conceptualize manage-

ment style as a repertoire of actions entailing a specific mode of thinking and behaving that managers draw upon differently, depending on contextual and situational requirements. Their work was inspired by Quinn (1988), who proposed to extend contingency studies of management by focusing research attention on managerial capabilities or styles. Applied to the IS project management context, different behavioural approaches to managing the project, or motivating and ensuring that individuals act in a way that is consistent with the project's goals and objectives (Kirsch, 1996), may exist, and we refer to these as different management styles. The concept or 'lens' of management style is particularly relevant to the context of projects when characterized as temporary organizations, because they typically do not provide the structural conditions to exercise hierarchical control common in more permanent line organizations. As a result, project managers, or teams of project managers, may need to draw upon contrasting management styles and exercise control ambidexterity in order to compensate for the lack of formal authority over project team members. Management style is particularly pertinent to IS project contexts, because IS projects take place in a context that is constantly changing due to the high levels of complexity and uncertainty typically involved in IS development (Xia & Lee, 2004; Xia & Lee, 2005). As a result, IS project managers, or teams of IS project managers, may need to recurrently adapt their management style or draw upon different styles to deal with this challenging context.

The use of different management styles gives rise to different and potentially contradictory actions that may be taken to deal with particular problems that arise when executing a project. In this way, the repertoire of actions suggested to the manager by drawing on one particular management style may be at odds with the repertoire of actions suggested by another style upon which the manager also draws. The same type of tension may result when a group of managers share responsibility for an organizational task and draw upon different management styles due to conflicting demands and orientations. As a result, tensions, defined as 'elements that seem logical individually, but inconsistent, even absurd when juxtaposed' (Smith & Lewis, 2011, p. 382), may be produced due to contrasting or even contradictory suggestions for behaviour, which is not uncommon in complex settings such as IS projects that frequently involve dealing with multiple competing demands simultaneously (Tiwana, 2010). The cognitive and behavioural limitations of individuals often lead to limiting oneself to a single style that fits best with individual beliefs and skills. In practice, however, there may be benefits to blending multiple management styles, provided that there is a way to deal with the resulting tensions (Raisch *et al*, 2009). Our review of the literature shows that little is known about which management style(s) IS project managers use in practice and how they deal

Table 1 Steps and tasks of the SPS approach of Pan & Tan (2011)

<i>Steps (multiple iterations possible)</i>	<i>Tasks</i>
Step 1: Access negotiation	<ul style="list-style-type: none"> • Negotiate access to the site • Identify an interesting case
<i>Framing cycle</i>	
Step 2: Conceptualizing the phenomenon	<ul style="list-style-type: none"> • Review relevant domain literature to identify gaps • Identify candidate theories • Develop a mental concept of the phenomenon
Step 3: Collecting and organizing the initial data	<ul style="list-style-type: none"> • Collect initial data, including qualitative interviews • Organize initial data through open coding and breaking down the data into themes
Step 4: Constructing and extending the theoretical lens	<ul style="list-style-type: none"> • Select an appropriate guiding theory • Be sensitive to 'surprising' data
<i>Augmenting cycle</i>	
Step 5: Confirming and validating data	<ul style="list-style-type: none"> • Assure that there is sufficient data to gather the evidence to transform/extend the theoretical lens • Ensure the validity of the data collected through multiple interpretations and triangulation of different data
Step 6: Selective coding	<ul style="list-style-type: none"> • Craft an interesting theoretical case story line • Capture the key concepts, categories, and relationships through selective coding of the data
Step 7: Ensuring theory–data–model alignment	<ul style="list-style-type: none"> • Recursively iterate between existing theories, data, and the emergent model/analysis to ensure that the three dimensions are aligned
Step 8: Writing the case report	<ul style="list-style-type: none"> • Establish a clear chain of logic and structure for writing the case report

with any resulting tensions that arise from the use of contrasting styles.

There are a number of cases documented in the management literature that explain how successful managers learn to deal with tensions, drawing upon contrasting styles according to changing contextual and situational requirements (Jelinek & Schoonhoven, 1990; Laufer, 1997). In a study of project management, Shenhar & Dvir (1996) examined different styles of management including activities of control, communication, and evaluation, arguing that the choice of styles also depends on project characteristics such as scope and uncertainty. The authors call for 'proper adaptation of managerial attitudes and ... better selection of managerial tools. Such an adaptive approach may increase the probability of project success and contribute to better organizational effectiveness' (Shenhar & Dvir, 1996, p. 629). However, their study does not provide detailed insights into how drawing upon different managerial styles in combination can be achieved successfully in practice.

Contemporary IS and organizational research suggests that in general, rather than an either/or approach, a both/and approach is needed to deal with today's business challenges. An example of such an approach is combining formal and informal controls into a mixed portfolio (Tiwana, 2010). While recent advances in the management literature have enhanced our understanding of tensions and contrasting management approaches (Smith & Lewis, 2011), there is still a significant knowledge gap in

terms of how these concepts apply to the domain of IS project management. In particular, little is known about blending contrasting IS project management styles and dealing with the resulting tensions.

Research design

For this research project, we adopted the Structured–Pragmatic–Situational (SPS) approach for conducting case studies in IS research (Pan & Tan, 2011). The SPS approach is based on extensive case study research and publishing experience and builds upon the strategies of inductive derivation of new theoretical insights from case data (Eisenhardt, 1989b). Further, it is an approach that aligns well with the critical realist stance adopted in this study that focuses on constructing an explanation of how and why a phenomenon occurs in practice in an emergent way (Wynn & Williams, 2012). Critical realism also recognizes 'the contribution that research methods from [positivism and interpretivism] paradigms can make' (Mingers, 2004, p. 97) and combining them for pragmatic ends with the aim of generating 'a useful model of reality' (Van de Ven, 2007, p. 59).

The SPS approach consists of the eight steps and associated tasks shown in Table 1. Below we explain the outcomes of these tasks with an emphasis on the iterative 'framing' and 'augmenting' cycles (Steps 2–4 and 5–7, respectively). We focus on these cycles because they are central to understanding the emergence, relevance, and validity of our theory.

Table 2 Primary initial data as part of the framing cycle

<i>Role of interviewee</i>	<i>Number of interviewees/ interviews</i>	<i>Average length of interviews</i>	<i>Experience level</i>
Project manager or sub-project manager	22	1.2 h	Project managers or sub-project managers had between 5 and 25 years of professional work experience, with an average of 8 years. The majority of them were formally trained in standard project management methodology. The average number of years in the role of project management was 6
External project stakeholders (two project auditors and one member of the project management office)	3	1.0 h	External project stakeholders had between 5 and 19 years of professional work experience, with an average of 10 years. The member of the project management office had extensive project management experience, while the two auditors' background was business domain related

We defined the core objective of this research project as developing a better understanding of how to manage and control IS projects, knowing that there are still many gaps in our understanding, including the careful combination of formal and informal controls into a balanced portfolio. In 2009, we negotiated access to the case organization (a large European bank) and identified an interesting case (Step 1) involving an IS implementation project run by two project managers with shared responsibility for the successful outcome of the project. We then entered the 'framing cycle'. In our review of relevant literature in the area of IS project management (Step 2), we identified Tiwana's (2010) study on control interactions (one of the identified candidate theories), which subsequently proved useful in developing a mental concept of the phenomenon. We began collecting and analysing data (Step 3) based on an initial set of 25 interviews with project managers, sub-project managers, and other stakeholders. All interviews conducted in this research followed guidelines for qualitative interviewing by Myers & Newman (2007). This included, for example, recognizing the fact that our subjects are creative interpreters who could contribute to our understanding, as well as being flexible in the interviews and allowing for improvisation when unexpected but interesting issues emerged. This approach to interviewing is also consistent with Charmaz (2006, p. 29), who suggests that intensive interviewing and gathering rich data requires keeping the interview 'informal and conversational', which depicts very accurately how we conducted our interviews.

The core theme that emerged from our initial interviews was that the structural mechanism of running IS projects in a tandem of two managers was viewed as being a particularly effective way of dealing with disparate demands and issues that surfaced during the project. These initial interviews, conducted by the first author of this paper together with a research assistant, lasted between 1 and 1.5 h each, and all interviews were

tape-recorded, transcribed, and open-coded using Atlas.ti (Muhr, 2008) (Table 2).

During these interviews, we encountered a 'surprising observation' (Step 4), that is, the structural mechanism described above created a context in which it was possible to blend different management approaches or styles. In parallel to identifying this key theme from 'within' our case, we read widely on different candidate theories (during iterations through Step 2), including control theories and frameworks from different management domains, which was also important for identifying the most adequate 'framing'. In accordance with the SPS approach, our framing cycle (Steps 2–4) was iterative in nature and our execution of Steps 2–4 was intertwined. The outcome of these iterations through our framing cycle was selection of contrasting management approaches and styles as the theoretical perspective or guiding lens (Step 4).

Having reached a stage of 'theoretical confidence', we entered into the subsequent iterative 'augmenting cycle' (Steps 5–7), conducting 14 additional interviews between November 2009 and July 2010 with the two principal project managers of our single case and other involved sub-project managers (Step 5). These interviews were also tape-recorded, transcribed, and analysed through selective coding (Step 6).

Table 3 summarizes the primary data collection that occurred during the 'augmenting cycle', which served as the foundation for much of the analysis presented in this paper.

In addition, we collected and analysed secondary material, which included steering committee meeting slides and project manager meeting minutes, as well as a large document containing the organization-wide standards for project management. The second author played the role of devil's advocate, constantly questioning the interpretations and analysis of the first author. This prompted detailed discussions over the validity and

Table 3 Primary data collected during the augmenting cycle

Role of interviewee	Number of interviewees	Number of interviews	Average length of interviews	Experience level
Project manager	2	4 (both project managers were interviewed twice)	1.7 h	Both project managers had >20 years of professional experience; one had >15 years of experience managing IS projects. The other had >3 years of project management experience and >15 years of experience working in a line organization
Sub-project managers and team members	9	10 (one project manager was interviewed twice)	1.2 h	Project managers or team members had between 5 and 25 years of professional work experience, with an average of 10 years. The majority of them were formally trained in standard project management methodology. The average number of years in the role of project manager was 7

credibility of the case analysis to ensure theory–data–analysis alignment (Step 7). Following Charmaz (2006), we kept the interviews ‘informal and conversational’, which allowed us to gather very rich data as we went through multiple iterations of the ‘augmenting cycle’. Over time, this yielded new insights with regard to the nature of bureaucratic and collaborative management styles in IS project management, the tensions that can result from combining these styles within the context of a single project, and how such tensions can be resolved in practice. This enabled us to craft the theoretical framing for our case analysis, which focuses on the blending of contrasting management styles in IS projects.

Through constant comparisons between what emerged from our data and existing theory and literature, we gained confidence over time in the veracity and novelty of our findings and their potential to contribute to knowledge. We then moved to the final step (8), writing the case report. We adhered to the structure proposed by Pan & Tan (2011), and in the sections that follow we present the case description, followed by our analysis and discussion.

Case description

Our case involved a large IS implementation project in a European bank. The goal of the project was to provide the foreign branches of the bank with a new standardized software applications platform, thus enabling them to be prepared for future business requirements. The project, which involved 150 internal organizational members and 20 external consultants, was initiated in October 2007. By the end of 2010, the new platform was successfully rolled out and implemented in all foreign branch locations.

Interestingly, the standard project management *modus operandi* in this bank was that IS projects were led by groups of two people, one from business and one from IT. The overall project structure consisted of a tandem of two project managers with joint responsibility for the overall project, five sub-projects (led by two sub-project managers each), a project management office, quality assurance managers from each of the five project sub-domains,

a steering committee and further stakeholders. In our investigation of project management behaviour, we were particularly interested in how the two project managers in our case study interacted with each other and whether they gravitated towards the same or different management styles. Thus, we asked our interviewees to describe the use of controls and other types of actions or behaviours involved in managing the IS project. What emerged early from our data was that there were indeed contrasting management styles used within the confines of this single project. One of two project managers in our case (who we will refer to as PM-B hereafter) preferred a more bureaucratic management style, while the other project manager (who we will refer to as PM-C) preferred a more collaborative management style.

Case analysis and commentary

The core theme that emerged from our data was that the two project managers in our case study drew upon two contrasting management styles, that is, bureaucratic and collaborative. We further observed that by drawing upon these two contrasting management styles; *tensions* were produced that were experienced by both the project management team and other project members or stakeholders. Our case study provides an illustrative example of how the ‘tandem project management structure’ helped project managers deal with these tensions, enabling them to achieve control ambidexterity.

In the remainder of this section, we explain the two contrasting management styles that emerged from our case analysis, the tensions that resulted, and how these tensions were addressed.

Bureaucratic management style

The *bureaucratic management style* is defined here as a mode of thinking and behaving that is aimed at ensuring that project members act in a way that is consistent with the organization’s pre-determined project goals and objectives. This style is drawn upon primarily to execute formal controls, as illustrated by the subsequent case analysis. We observed two interrelated sub-categories of control-related

actions in this category. The first involved monitoring, tracking, and evaluating project progress against planned goals, milestones, and deliverables to achieve transparency and accountability. The second involved making decisions and providing direction to project team members to enable efficient progress on key project activities and tasks. The first sub-category of actions is concerned with control-related information generation, transmission, and evaluation, while the second sub-category is concerned with concrete influencing, directing, and decision-making actions based on the former. To understand the first sub-category of actions under the bureaucratic management style, consider the following explanation from PM-C:

There are formal aspects and human aspects. With regards to the formal aspects there is the overall project governance board where we also have to report to. We also have a project plan with milestones and interdependencies. Once a month we report upon the status of the project. And then most important to us are the go-live dates where we use control mechanisms to track in detail the deliverables according to the timeline.

Several characteristics of this first sub-category emerge from our data. First, actions in this sub-category have the purpose of generating, transmitting, and evaluating project information that is required as a foundation for ensuring that project members act in a way that is consistent with project goals and objectives. This is illustrated by the use of words such as 'reporting', 'status', and 'tracking'. Second, those actions include both activities that occur inside the project (e.g., monitoring and tracking the progress of the project according to the previously defined plan) and outside the project (e.g., formal reporting of the project status and evaluation activities at the board and top management levels). Third, the information processing activities in this sub-category are based on previously defined plans and desired outcomes, which is illustrated by the use of words such as 'plan', 'milestones', 'deliverables', and 'go-live dates'. This characteristic bears similarities with the notion of plan-based project management in which milestones are monitored to compare progress to predetermined standards and goals (e.g., Jelinek & Schoonhoven, 1990; Eisenhardt & Tabrizi, 1995). Overall, the use of such actions resembles a bureaucratic management perspective with an emphasis on vertical, or hierarchical, lines of communication. This is illustrated by the use of such words as 'formal' and 'governance', but is also inherent in such phrases as '... report to ...'.

The above explained control-related actions relate to the idea of controlling IS projects by ensuring that project members behave in accordance with project goals and objectives. As such, they provide the necessary information for the second sub-category of actions observed in the bureaucratic management style, which deals with decision making and providing direction to project team members. These actions enable efficient progress on key

project activities and tasks. The following statement by PM-B provides an illustrative example of such direction:

I have a big personal organizer in which I also have a carefully prepared sheet of paper for each meeting [with sub-project managers] in which I document what are from my perspective the key points to be discussed in this meeting. Which decision would I derive from each discussion point? Which type of response do I expect from my sub-project managers to a certain deadline? [...] Basically I make use of the same control mechanisms that a line manager would also use to manage his business unit or division, with the difference that we [project managers] don't have any disciplinary rights.

The quote provides insights into the bureaucratic mindset of PM-B who views his main responsibility as vertical coordination. This type of control behaviour is closely associated with the hierarchical control mode (Ouchi, 1980), with the important difference that the project manager does not have any disciplinary rights over its team members. Furthermore, it bears similarities with the notion of directive control from the project management literature (Shenhar & Dvir, 1996; Lewis *et al*, 2002). The project manager is keen to instruct and support the project team with key issues that need managerial attention. Furthermore, as illustrated by the mentioning of deadlines, the goal is also to ensure that targeted progress is made on key tasks and activities and that the project remains on track. The two types of control-related actions discussed above (i.e., (1) monitoring, tracking, and evaluating planned progress and (2) taking decisions and providing direction) are closely interrelated and go hand in hand. This is illustrated by the following statement by PM-B:

One of the key control mechanisms, from my perspective, is the personal conversation with the sub-project managers, either in our weekly telephone conferences in which everyone participates or in bilateral meetings that we [the two project managers] have with each team during the week. These appointments are for me the most useful instrument to (1) receive critical information, (2) evaluate this information as far as possible, and (3) derive recommendations, decisions, orders, and requests therefrom. [...] We also create protocols from key meetings and conferences where we document key points, which decisions need to follow and what kinds of responses I expect and when from my sub-project managers.

Information gathered by the project management team that is related to the status and progress of the project provides the necessary basis for deriving directive actions such as taking an informed decision or making targeted adaptations to the project plan. We have several examples for such adaptations in our case study, one of which is illustrated by the following quote from PM-B:

We had these intensive corporate negotiations about a merger ... the new merger project of course would receive high priority in the organization. We were facing a serious resource issue and even though our pre-defined plan

involved going live with the new system in the first location by April, we realized already back in December/January that we would never meet this target ... we had to shift our milestone to June.

In summary, the bureaucratic management style as explained above is focused on ensuring behavioural consistency with project goals and objectives, and is therefore particularly suitable for the execution of formal controls (Kirsch, 1997). In contrast, the other style that emerged from our data deals with enabling effective collaboration among project members and stakeholders, which entails a different mode of thinking and behaving. As will be explained later, a central thesis of this paper is that due to contrasting demands and requirements the bureaucratic and collaborative management styles need to be combined effectively to achieve control ambidexterity and thereby successfully manage IS projects.

Collaborative management style

The *collaborative management style* is defined here as a mode of thinking and behaving that is aimed at enabling effective collaboration among project members and stakeholders to achieve project goals and objectives. We find that this style is drawn upon primarily to execute informal controls. In our case, this management style involved two interrelated types of actions. First, building shared understanding among project members and stakeholders to achieve a common social basis for collaboration. Second, promoting participation and gaining commitment among project members and stakeholders to foster effective collaboration. The first type of actions is related to the goal of socialization, which is a prerequisite for effective collaboration, while the second type of actions focuses more specifically on engaging project members and stakeholders to actually collaborate with each other. PM-C explained the first type of actions:

We have weekly bilateral meetings with the sub-project managers in the different work streams as well as regular joint workshops. The personal exchange is indispensable ... besides maintaining good relationships with our project team, we also try to reach and recurrently re-establish consensus with our project sponsors. To me this is a very important issue, to inform the business stakeholders and obtain their view on the project.

As illustrated by this quote, the focus of these collaborative actions contrasts with the above explained bureaucratic management style. In particular, they are not targeted towards achieving and maintaining consistency in behaviour and progress with the project plan or objectives. Rather, they are targeted towards establishing personal relationships, consensus, and shared understanding, which are paramount for effective collaboration among project members and stakeholders. Similar to the control activities associated with the bureaucratic management style, actions associated with the collaborative management style are also relevant both inside the project (i.e., focusing on shared understanding with

internal project members) and outside the project (i.e., focusing on shared understanding with external project stakeholders). Furthermore, they are consistent with the concepts of 'clans' (Ouchi, 1980) and 'trust' (Bradach & Eccles, 1989) in emphasizing 'people strategies' that are the focus of informal controls (Kirsch, 1997). What emerges from our data is that these actions related to shared understanding among project members and stakeholders were taken to enable effective collaboration towards the achievement of project goals and objectives, rather than ensuring individuals' behavioural consistency, which is the focus of the contrasting bureaucratic management style. Thus, the underlying modes of thinking and behaving, that is, the management styles, that are drawn upon by IS project managers to execute formal and informal controls, respectively, are fundamentally different. In the collaborative management style, emphasis is given to shared understanding. The following quote by PM-B provides an illustrative example of how project members' individual viewpoints were 'scanned' or 'collected' as part of an effort towards building shared understanding:

We organize regular workshops with our sub-project managers and key team members ... and at the end of each workshop we have a kind of feedback round in which everybody has the possibility to express personal viewpoints or perceptions. We write down individual comments on paper cards and put them on a pin board. This provides us with a kind of sentiment barometer and I think this is helpful. Typically such things as 'I feel terrible because of x', 'I don't agree with x', or 'x was really great' will be said. Sometimes very emotional things come out of this process, for example 'big fear to go live'.

Another way in which the collaborative project management style manifested itself in our case study was through actions targeted towards promoting participation and obtaining commitment from project members and stakeholders. This is illustrated by the following statement by one of the sub-project managers:

Project management is not always directive where I say this is the way we will go and please go down this route [addressing the project team]. Rather, [our project managers] frequently play close attention to gaining the commitment of all sub-project managers in the team ... so that every one of us has the possibility to make an individual contribution to the decision that the project managers will take.

This illustrates further the nature of the collaborative management style, which rests upon the human assumption of collectivist cooperation that is known from stewardship theory and the notion of goal alignment or trust (Sundaramurthy & Lewis, 2003). Furthermore, it bears some similarities with the notion of participation that has been examined in past project management and leadership research (e.g., McDonough & Barczak, 1991). A participatory management approach rests upon the idea of enabling the project team to make more of its own

decisions or participate in project management decisions. As illustrated by the quote above, this notion of participation also emerged from our data and we found this to be an integral part of a collaborative project management style in which a collaborative approach can also be effectively implemented by allowing for some degree of participation, thereby increasing commitment.

As illustrated by the analysis presented so far, the bureaucratic and collaborative management styles that emerged in our case study represent contrasting modes of thinking and behaving, each drawn upon for different purposes (one for the use of formal and the other for informal controls). While the exercise of both management styles in combination appears to be useful and necessary to achieve control ambidexterity, tensions result as project managers attempt to draw upon them within the context of a single project.

Bureaucratic–collaborative tensions

The bureaucratic management style resulted in behaviours used to track and evaluate activities (related to the use of formal controls), while the collaborative management style resulted in behaviours used to build shared understanding and commitment (related to the use of informal controls). Juxtaposing these two different styles of project management behaviour to achieve control ambidexterity resulted in three different types of tensions: (1) control-trust, (2) efficiency-commitment, and (3) stability-flexibility tensions. The first type of tension was experienced primarily by IS project team members and resulted from the simultaneous need to control people's behaviour (e.g., their progress on key work activities or deliverables) and maintain good working relationships. The control-trust tension is illustrated by the following statements from two sub-project managers:

We had a situation in a critical project phase when the project management team was becoming very pushy. We experienced that in each discussion. I mean this control aspect really hit the roof if you know what I mean, trust was way down and the whole situation led to a defensive reaction on behalf of the project team. They said 'we don't want to be controlled in such a way'.

... sometimes you simply have to trust in your team. If you control too much, for example if I ask the project member every week about the progress and reasons for possible delays, then one day the response is 'what do you actually want from me? You know I'm working on the topic as hard as I can already'. I've had that situation in the past and that's not good for the relationship.

As the above quotes illustrate, the bureaucratic management style that favours the use of formal controls may under certain circumstances be at odds with the focus and goals of the collaborative management style that seeks shared understanding and commitment. The control-trust tension observed in the project we studied is consistent with tensions reported in prior research on organizations (e.g., Das & Teng, 1998; Inkpen & Currall, 2004; Costa &

Bijlsma-Frankema, 2007) and IS (e.g., Sabherwal, 1999; Poppo & Zenger, 2002; Rustagi *et al*, 2008; Goo *et al*, 2009). The second tension that emerged in our analysis was between efficiency and commitment. This tension was experienced primarily by IS project managers as the following quote from a sub-project manager illustrates:

This is a recurring issue for the project management team ... how much do I have to invest in creating consensus, something that takes time, needs a lot of coordination, detailed discussions and so on and when can I afford to execute control in a directive manner with the risk that I will miss some important issues or that my decisions are not supported by all ... the big risk is when this happens, then I might even have a good roadmap or solution, but without commitment and eventually even strong resistance ... I believe that our project managers have always found a good way how to find the right balance. However, sometimes this element of gathering commitment was stressed too much and certain critical situations demanded a more directive style in which the project managers define guidelines and boundaries to pave the way for advancing more quickly towards achieving the project's goals.

This emphasizes the tension that results from combining a bureaucratic management style that results in activities oriented towards achieving efficiency, and a collaborative management style that results in activities oriented towards achieving shared understanding and commitment. There appears to be a trade-off between progressing efficiently according to formal plans and the exercise of formal control vs progressing 'safely' based on nurturing relationships and achieving collaboration through the use of informal controls. The demanding environment in which IS projects are typically carried out seems to require control ambidexterity and a careful blending of bureaucratic and collaborative styles that 'fit' the respective types of control (i.e., formal and informal).

The third type of tension that emerged from our data was between stability and flexibility. While there is certain value to be gained from having a stable set of project objectives and a plan that will enable reaching those objectives, project execution is often messy and full of unforeseen contingencies that arise, requiring some degree of flexibility on the part of the project team. This tension between stability and flexibility was experienced primarily by IS project managers, and is described by one of our informants:

Project plans are important ... but retaining some degree of flexibility is actually critical. Certainly you get the project running with the help of a project plan and the definition of goals or objectives but on your way the requirements or general conditions might change. You must then be able to react to these changes in a targeted way. If the norms allow you to do this, then that's ok, but on the other hand you sometimes have to develop creative solution strategies that at the end of the day help you achieve the project goals.

This type of tension reflects the need to execute an IS project based on a stable set of goals, objectives, and associated project plans while simultaneously being agile

and flexible to change plans and adapt to changing circumstances as the need arises during the course of the project. In summary, the contrast between the two IS project management styles (bureaucratic and collaborative) manifests itself in practice through control-trust, efficiency-commitment, and stability-flexibility tensions.

The bureaucratic management style, as conceptualized in this paper, places a stronger emphasis on formal control, efficiency, and stability by focusing on achieving behavioural consistency with pre-defined goals and objectives. In contrast, the collaborative management style emphasizes trust, commitment, and flexibility by building shared understanding among project participants and supporting the use of informal controls.

In the following section, we explain how project managers in our case dealt with these tensions between the bureaucratic and collaborative management styles, and how they effectively blended the two styles.

Blending bureaucratic and collaborative styles

As explained above, the core theme that emerged from our data was that the two project managers in our case study drew upon two contrasting management styles (bureaucratic and collaborative) in order to ensure that project participants acted in a way that was consistent with project goals and objectives, while also enabling effective collaboration among them. However, by drawing upon the bureaucratic and collaborative management styles, tensions were created that needed to be managed effectively. We learned from our case study that the tandem project management structure enabled bureaucratic and collaborative styles to be combined in such a way as to manage these tensions. In order to understand how this was done, consider the following statement from one of the sub-project managers:

The good thing is really that we have a dual project leadership, two project managers, who complement each other quite well ... they complement each other well by having very different personalities that represent the whole range from high degree of formalism to flexibility. When one of them is stressed or at the point of losing his or her balance, then the other steps into the breach and maybe searches for a compromise.

Thus, what we found in our case study is that each member of the project management tandem adopted different management styles: PM-B exhibited behaviours consistent with a bureaucratic management style, while PM-C exhibited behaviours consistent with a collaborative management style. That is not to say that PM-B never exhibited behaviours that were consistent with a collaborative management style or that PM-C never exhibited behaviours that were consistent with a bureaucratic management style. However, it was clear that each gravitated towards a particular style and drew upon modes of thinking and behaving consistent with that style. Thereby, the two project managers seemed to complement each other extremely well, as

illustrated by the following comment made by a project stakeholder:

I would expect that if only [PM-B] would be leading the project, then the project would advance much faster, but on the negative side, many would be overwhelmed and there would be a lack of commitment ... on the other hand, if only [PM-C] would lead the project then things would take much longer, because you would be discussing much more ... I wouldn't want to judge what is actually better in case we needed to decide. With [PM-B] I would get a working system as a result, with [PM-C] I would get the system with the highest possible acceptance ... I believe that [PM-C] would gather more commitment, but s/he would also need more time. For [PM-C] the issue of receiving support and commitment from all is extremely important. For [PM-B] it's rather about having clearly defined goals and objectives and wanting to achieve them.

Our finding with regard to two different individuals adopting different managerial styles to meet different requirements and achieve complementary outcomes parallels the discussion in organizational ambidexterity research about the capability to pursue different, contrasting things simultaneously (March, 1991; Gibson & Birkinshaw, 2004; Raisch *et al.*, 2009). As suggested by this literature, organizations, including such temporary organizations as projects, need to frequently excel at different things by adopting a both/and, rather than an either/or, approach. In our case, this means executing both formal and informal controls successfully and thereby achieving control ambidexterity. From our case study, we learn that achieving this not only requires blending very different management styles but possibly even different personalities. The following statement by PM-C illustrates this:

[PM-B] and I, we are two totally different types of people. Each of us brings along a unique element. I would say that I have this human sensitivity, able to understand others, talk with people, that's my thing. Controlling and tracking and becoming angry, that's more his part. We know this from one another and maybe we even make use of these differences effectively. These are the totally different personalities that the two of us have. In total, it's a mix. Neither one of us would be able to convey this bandwidth of personalities each by ourselves.

This finding parallels the discussion in the organizational ambidexterity literature about the difficulties for individuals to pursue disparate things at the same time because they may require different approaches, skills, and capabilities (Raisch *et al.*, 2009). It also illustrates the practical difficulties that an individual manager faces in balancing the competing demands of controlling a project while simultaneously building and maintaining relationships, or executing formal and informal controls in combination (Tiwana, 2010). The following statement by PM-B from our case explains this further:

We have a good police officer and we have a bad police officer. The good police officer, that's [PM-C], and the bad police officer, that's me. [...] For example, when we have a

critical issue in the project I would say: no, I want to have the issue resolved by a certain deadline. That's where I am the tougher person of us two, which doesn't mean that I am better than [PM-C]. In critical situations even not at all. I clearly have to admit. I have heard from third parties more than once that the combination is necessary. I am deeply convinced that when [PM-C] would lead the project all by herself it wouldn't work that well. The same if I would lead it all by myself. That is maybe the most important and unspoken success factor of this project, that at the end of the day the two program managers understand themselves very well and coordinate things well.

The explanation given by PM-B not only illustrates how the two project managers complemented each other in the project we analysed, it also suggests that contrasting management styles may need to be exercised within a single project to achieve more successful outcomes.

Beside the combination of different skills and personalities for blending the two management styles (bureaucratic and collaborative), our case findings also suggest that cooperation is needed among project managers to achieve the right balance and successfully combine the two styles. Consider the following statement by PM-C:

Actually we have some kind of a balance between the two of us, the way in which we understand ourselves and get along with each other. We sometimes also have a conflict because we are so different and each one of us has a different viewpoint on certain issues. In such cases we fight it out between the two of us. But then the door stays closed. We focus on conveying a shared picture about us externally to the project members, despite our differences.

Dealing with conflicts is clearly a requirement for the successful combination of contrasting management styles. This is likely to be especially important when employing project manager tandems as a structural mechanism for combining disparate management styles. The need that we observed among PM-B and PM-C to closely communicate and coordinate to resolve such conflicts is akin to what has been labelled as integration in the literature on organizational tensions and ambidexterity (Raisch *et al.*, 2009). Illustratively, this is explained by the following remark from a sub-project manager:

If we would only have [PM-B], everything would be much more formal. If only [PM-C] would be there, we would be discussing things much more intensively and communicating more or we would be searching even more for consensus ... in most cases the two take a step towards each other and then you have a compromise. With that situation many of us can live much better than knowing only one direction.

Our findings on blending bureaucratic and collaborative management styles also illustrate how the above-explained tensions are addressed. For example, by embodying bureaucratic and collaborative styles, the project management team also gave their project team the dynamic capability to draw upon both kinds of

managerial resources as a problem solving toolkit, depending on the current situational requirements:

[PM-B] and [PM-C] are two totally different types of people. Exactly as different are the ways in which they lead us ... the management style of [PM-C] is much smoother and with [PM-B] it's much more about questions and answers, yes, no, it's more formal. Both entails advantages and disadvantages ... at some point in time you also need to get a result. That usually takes too long with [PM-C]. But on the other hand, maybe others would say that with [PM-B] things get decided to quickly. But to some extent we also make use of these differences. If we need a conversation then we frequently go to [PM-C]. If on the other hand we need a tough decision then we would usually ask [PM-B].

Thus, the above-explained tensions between the bureaucratic management style – focused more on formal control, efficiency, and stability – and the collaborative management style – focused more on trust, commitment, and flexibility – were dealt with in our case not only through conflict resolution within the project manager tandem structure, but also by project members seeking out the resource with the appropriate style to deal with the particular problem at hand.

Discussion

The key objective of this paper was to examine contrasting management styles in IS project management, the nature of resulting tensions, and how they can be dealt with. The concept of management style served as a guiding lens to develop novel insights, grounded in the data of a real-world IS case, about the use of two contrasting management styles in IS project management: bureaucratic and collaborative. On the basis of what emerged from our data, the bureaucratic management style emphasizes ensuring behavioural consistency with pre-defined project goals and objectives and focuses on formal control, efficiency, and stability. The collaborative management style emphasizes enabling effective collaboration among project members and stakeholders and focuses on trust, commitment, and flexibility. Overall, our findings support the notion of control ambidexterity and illustrate that disparate management styles are needed in combination to achieve that, which creates tensions that are extremely difficult to cope with by a single project manager. However, we also find that these tensions can be dealt with effectively by a tandem of two project managers who share responsibility for managing the IS project.

Contributions and implications

In this research, we set out to address two research questions. Our first question was: *Which management style(s) do IS project managers draw upon in practice and why?* Thus, the first theoretical contribution of this paper is the conceptualization of two contrasting styles of IS project management (bureaucratic and collaborative), which extends existing knowledge on controlling IS projects and achieving control ambidexterity. Our findings illustrate that IS project managers may draw upon different management

styles, thus exhibiting particular modes of thinking and behaving, which in turn is associated with the use of different types of control. In particular, we find that a bureaucratic management style is drawn upon primarily for the use of formal controls, whereas a collaborative management style is drawn upon for the use of informal controls. Furthermore, because bureaucratic and collaborative management styles entail very different modes of thinking and behaving (with the former geared towards ensuring behavioural consistency and the latter geared towards enabling effective collaboration), they also require different skills, capabilities, and personalities, which may explain the difficulty of achieving control ambidexterity and combining formal and informal controls into a mixed portfolio for any particular project (Kirsch, 1997; Choudhury & Sabherwal, 2003). Finally, our insights about the two contrasting styles of IS project management extend IS project control theory (e.g., Choudhury & Sabherwal, 2003; Kirsch, 2004; Raisch *et al.*, 2009; Chua *et al.*, 2012) by shedding light on the contrasting nature and underlying differences in basic orientations exhibited by the use of formal and informal controls.

A key theoretical implication of these findings is that in order to advance our knowledge of controlling IS projects further, more research attention must be given to the contrasting styles of IS project management to shed new light on the use of formal and informal controls, their effective combination within a single project, and the required skills, capabilities, and personalities. Advancing our knowledge towards these ends may also provide important insights for the practice of managing IS projects, which requires control ambidexterity.

Our second research question was: *What kinds of tensions result for IS project managers and team members from drawing upon contrasting management styles – and how do IS project managers and team members deal with these tensions?* Thus, the second theoretical contribution of this study lies in identifying several tensions that are involved in managing IS projects when individual project managers, or project manager tandems as in our case, draw upon contrasting styles of management. We identified three types of tensions: (1) control-trust tensions, which reflect the overarching contradiction between ensuring behavioural consistency with pre-defined project goals and objectives and enabling effective collaboration by developing trust-based relationships; (2) efficiency-commitment tensions, which reflect the conflicts generated by simultaneously controlling the project for efficiency gains and establishing consensus and commitment among project members and stakeholders; and (3) stability-flexibility tensions, which reflect the contradictory demands between ensuring stability for the execution of pre-defined objectives and associated project plans and being flexible enough to make adaptations when circumstances change during the process of executing the project. With the identification and examination of these tensions, we contribute to IS project management literature, which has identified different

managerial approaches, without, however, examining in detail the tensions that result from juxtaposing contrasting styles. Our findings also suggest that the structural mechanism of project manager tandems can be a useful means of dealing with these tensions.

In this paper, we present an illustrative case example of how IS project managers can deal with the tensions associated with drawing upon bureaucratic and collaborative management styles to achieve control ambidexterity. An interesting finding is that it took two project managers in the case study we analysed to effectively deal with these tensions. This extends prior studies that have examined the inherent difficulties of effectively combining different managerial approaches in practice (e.g., Choudhury & Sabherwal, 2003; Cardinal *et al.*, 2004; Kirsch, 2004). The findings of our case study illustrate that one of the reasons for these difficulties is that different management styles require distinct skills and capabilities. This parallels the discussion in organizational ambidexterity literature on the constraints and limitations of individuals to take on very different tasks at the same time (Raisch *et al.*, 2009). To pursue both/and approaches (Tiwana, 2010), organizational designs and structures are necessary, such as the tandem project management structure in place in our case organization. To the best of our knowledge, prior IS research has only studied tandem project management structures in the context of offshored software development projects (Kaiser & Hawk, 2004). In this context, the tandem structure is leveraged for joint client-vendor project and relationship management. However, our study is among the first to examine such tandem structural mechanisms in in-house IS projects. In addition, we are not aware of any study that has examined the role of such a tandem project management structure for dealing with tensions that result from combining two different styles of management.

Limitations and future research

A limitation of our study is that we focused on an organization that applied the tandem approach to achieving control ambidexterity, and therefore we cannot comment on the feasibility of what has been called in the literature individual-level contextual ambidexterity (Gibson & Birkinshaw, 2004; Raisch *et al.*, 2009). According to this literature, a single individual should potentially be able to simultaneously draw upon contrasting management styles and adapt his/her actions dynamically based on changing situational and contextual requirements. However, in our case study, it took two IS project managers to achieve control ambidexterity. Thus, the question of whether a single individual is able to achieve control ambidexterity (i.e., whether control ambidexterity can be an individual-level phenomenon in practice) deserves further investigation. Finally, we observed two contrasting styles of IS project management that are associated with the use of formal and informal controls, but as these findings are based on a single case study there might be other styles.

Conclusions

The key argument put forward in this paper is that managing complex tasks, such as IS projects, in organizations requires control ambidexterity and that disparate management styles must be exercised to achieve that, which creates tensions. While prior research had shown that the use of different types of control is needed in IS projects to meet conflicting demands, a theoretical gap existed regarding the contrasting management styles that are employed to accomplish this, the tensions that result from their use, and how managers achieve control ambidexterity and deal with these tensions in practice. In addressing this theoretical gap, we found that the different management styles, that is, bureaucratic and collaborative, that are drawn upon in combination to execute formal and informal controls are frequently at odds with each other and create tensions, that is, control-trust, efficiency-commitment, and stability-flexibility tensions. This offers an explanation for the known difficulties of combining formal and informal controls. Achieving

control ambidexterity by drawing upon contrasting styles of management and dealing with the resulting tensions is extremely difficult for a single project manager. Our study suggests that one way to achieve control ambidexterity is through a tandem of project managers.

Future research has potentially much to gain from studying contrasting management styles in different IS contexts, including IS project management. The lens of contrasting management styles that managers draw upon to achieve control ambidexterity is particularly suitable for generating rich empirical findings about the underlying modes of thinking and behaving entailed with the execution of formal and informal controls. Furthermore, this lens helps to understand the nature of these tensions, who is affected by those tensions and why, and how to deal with them. Such insights hold the potential to inform both the theory and practice of IS management. Much can be gained by exploring further the nature of control ambidexterity in IS projects and how single project managers can develop this capability.

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