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# THE ROLE OF FORMAL CONTROL IN FACILITATING CULTURAL CONTROL

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# THE ROLE OF FORMAL CONTROL IN FACILITATING CULTURAL CONTROL

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## **Abstract**

*Prior literature has produced two theoretically opposing perspectives on the relationship between clan control, a type of cultural control, and formal control. Some researchers view formal control as the antithesis of clan control, while others suggest that formal control facilitates clan control. In this research-in-progress paper, we argue that formal control and clan control can be both substitutes and complements, depending on the type of formal control used by the project manager. In particular, we suggest that the use of behavior control inhibits clan control, while the use of input and outcome control facilitates clan control. Suggestions for future work are discussed.*

*Keywords: IS project control, clan control, cultural control, formal control.*

# 1 Introduction

Software development projects bring together a group of people with specialized skills who must work interdependently on complex tasks. Accomplishing such tasks in the face of significant time constraints and uncertainty is a pressing problem for organizations. This uncertainty is even increased by the cultural context in which software development projects are embedded. For example, cultural national differences are one of the most frequently mentioned causes of project failure in the context of information systems (IS) offshoring (King and Torzadeh, 2008). Similarly, differences in organizational culture can lead to difficulties in effectively coordinating software development projects (Rai et al. 2009). As Leidner and Kayworth (2006) put it “Culture is often partially blamed when organizations experience failure” (p. 357). Studies in this tradition have in common that they view culture as an encompassing constraint. However, organization science has recently experienced a broad conceptual shift in how researchers think about culture. Instead of understanding culture as a constraint, culture is now more often treated as a pragmatic resource (Weber and Dacin, 2011). According to this view, culture, defined as the shared values and norms that influence behaviors and actions of social groups (Leidner and Kayworth, 2006), can be used to achieve desired objectives. This view of culture as a resource bears strong similarities to the concept of clan control. Similar to the resource view of culture, clan control emphasizes the role of shared values and norms in organizing the behavior of group members so that desired objectives are achieved (Ouchi, 1980).

Prior literature frequently emphasizes the benefits of clan control, especially in complex projects such as software development projects (Chua et al., 2012; Kirsch, 2004; Kirsch et al., 2010). However, little attention has been paid to the practices by which management can facilitate clan control. In contrast, previous research on clan control tends to emphasize the role of peer enforcement of norms and values (e.g., Eisenhardt, 1985; Jaworski, 1988; Kirsch, 1996; Ouchi, 1979).

We seek to make a first step in closing this research gap by investigating the role of formal control in facilitating clan control. Prior literature has produced two theoretically opposing views regarding the interplay between formal control and clan control. While some researchers view formal control as the antithesis of clan control (e.g., Cardinal et al., 2004), others suggest that formal control facilitates clan control (e.g., Chua et al., 2012). We argue that project managers can both facilitate and inhibit clan control by their use of different types of formal control. In particular, we suggest that the use of behavior control inhibits clan control, while the use of input and outcome control facilitates clan control.

The paper is organized as follows: We first introduce control theory and review prior literature. Next, we develop propositions regarding the role of formal control in exerting clan control. The paper closes with an outlook and suggestions for future research.

## 2 Theoretical Background

Control is defined as the set of mechanisms designed to motivate individuals to work in such a way that desired objectives are achieved (Kirsch, 1996; Jaworski, 1988). Prior research has distinguished between formal and informal control modes (Jaworski, 1988; Kirsch, 1997). The three formal control modes are distinguishable from each other by the timing of management intervention (Jaworski, 1988). Input controls are measurable actions taken by the management prior to implementation of an activity (Jaworski, 1988). Behavior control operates when management holds the individual responsible for following prescribed processes but does not hold the individual responsible for the outcome (Jaworski, 1988; Kirsch, 1996, 1997). In contrast, outcome control focuses on the outputs (both interim and final) regardless of the process (Jaworski, 1988; Kirsch, 1997). The two informal control modes are self and clan control. Self-control is reliant on an individual’s ability to monitor and control its own actions (Henderson and Lee, 1992). Clan control motivates behavior that relies on shared values and norms as well as the degree to which all members of a group are committed to

achieving shared goals (Ouchi, 1980). Each control mode can itself be implemented through multiple control mechanisms, which are combined into a so-called portfolio of controls (Choudhury and Sabherwal, 2003).

Exercising formal control is often difficult in IS development projects because of the challenge to specify desired individual behaviors and measuring individual contributions to project outcomes with adequate precision (Kirsch, 2004; Kirsch et al., 2010). Therefore, clan control often supplements or even replaces formal control in IS development projects (Kirsch, 2004; Kirsch et al., 2010). Indeed, many studies note the importance of clan control in driving complex projects (e.g., Chua et al., 2012; Kirsch, 2004; Kohli and Kettinger, 2004). Ouchi's (1979) control theory also suggests that clan control is more effective in contexts characterized by uncertainty than formal control. Another major advantage of clan controls is that they offer greater flexibility and lower implementation costs vis-à-vis formal control mechanisms (Tiwana, 2010). Despite the widespread recognition of the criticality of clan control, research on clan control is still in its infancy.

Previous research has focused almost exclusively on how team members exercise clan control across peer relationships. For example, Choudhury and Sabherwal (2003) note that in clan control "each member effectively functions as both controller and controllee" (p. 292). Similarly, Harris et al. (2009) note that "Clan control relies on self control and subtle peer-to-peer signals rather than on formal control by legitimate authority" (p. 403). Here, team members draw on social capital assets to facilitate clan control within the team (Kirsch et al., 2010). However, the control literature remains rather silent on the role of management in facilitating team-based clan control. One exception is the recent study by Chua et al. (2012), which suggests that management can use formal controls to build social capital and thus promote clan control.

### **3 Propositions**

Prior literature highlights the role of the project manager in facilitating clan control (Kirsch et al. 2002; Turner and Makhija, 2006). An essential characteristic of project managers is that they have a higher level of organizational authority, vis-à-vis the team members, which allows them to also exercise formal controls in response to various antecedent conditions (Kirsch et al., 2010). A recent study by Chua et al. (2012) suggests that, by using its formal authority, management can exercise formal controls to build social capital and thus promote clan control. Hence, Chua et al.'s (2012) findings suggest that formal control and clan control are complements. However, prior literature has also brought forth a theoretically opposing perspective which argues that formal control is the antithesis of clan control (e.g., Cardinal et al., 2004). In our article, we develop the idea that input and outcome controls act as facilitators to team-based clan control, while behavior controls act as barriers to team-based clan control.

Chua et al. (2012) emphasize the role of formal control in building social capital and thus facilitating team-based clan control. For example, they describe how outcome controls such as the institution of a peer voting system facilitates clan control within the team. The peer voting system increased interdependency between team members, thereby leading to increased communication and interaction. This in turn enhanced social capital and thus facilitated clan control. In addition, input controls can be used to promote clan control within the team. For instance, the project manager may remove uncooperative team members to ensure fairness and reciprocity (Chua et al., 2012). Similarly, project manager can use their authority to select team members for specific values, thereby facilitating the growth of desired work norms. This view of input control is also consistent with Kirsch et al. (2010), who suggest that the use of input control may increase social capital, which could then facilitate team-based clan control. Thus, both outcome and input controls may be used to foster interaction and communication between team members. High levels of interaction and communication in turn increase social capital and promote clan control (Kirsch et al., 2010; Turner and Makhija, 2006). Therefore, we suggest:

*Proposition 1: Greater use of outcome and input control facilitates team-based clan control.*

Apart from using their formal authority to exercise outcome and input control, project managers may also use their authority to exercise behavior control. Behavior control predefines how individual team members must accomplish their tasks (Kirsch, 1997). The strong directives that follow from the formal prescription of behavior under a regime of behavior control will likely impede high levels of team member interaction and stifle collaborative team efforts. However, high levels of interaction are an important prerequisite to clan control (Kirsch et al., 2010; Turner and Makhija, 2006). Furthermore, both behavior controls and clan controls are very communication-intensive (Rijsdijk and van den Ende, 2011). This tension may require a trade-off, where clan control is suppressed by the use of behavior control. This perspective is also supported by Rijsdijk and van den Ende (2011), who state that “process controls [i.e., behavior controls] tend to conflict with clan control” (p. 877). Therefore, we suggest:

*Proposition 2: Greater use of behavior control impedes team-based clan control.*

## **4 Conclusions and Outlook**

This research-in-progress paper aims at making a first step in exploring the project manager’s role in exerting team-based clan control in software development projects. We argue that formal controls can both act as a facilitator and barrier to team-based clan control. We propose that if the project manager uses behavior controls, team-based clan control will be hampered. However, if the project manager uses input or output controls, team-based clan control will be facilitated. The explanation presented in this paper is that behavior controls represent rather tight controls, leaving little room for the exertion of team-based clan control; in contrast, input and outcome controls are considered rather loose control forms as they leave the responsibility for task execution to those conducting the actual work, thereby facilitating team-based clan control. At this point it has to be noted that Chua et al. (2012) also found behavior controls to facilitate clan control. However, the behavior controls described in their study (e.g., introduction of a common modelling language) used a rather hands-off approach to control. Thus, our proposed relationships between loose/tight formal control and clan control remain valid.

The literature on control (e.g., Kirsch, 1996, 1997) highlights the critical link between the effective design of controls and the organization’s task environment. Thus, it may be worthwhile to consider task uncertainty as an additional variable potentially influencing team-based clan control. For example, it might be that higher levels of task uncertainty hamper the use of tight controls, while fostering the use of loose controls. This might explain why studies in the context of complex projects have found formal controls and clan controls to be complements, while studies in the context of mature organization settings have found formal controls and clan controls to be substitutes.

Our study also bears some similarities to the concept of control transmission. In his seminal work on control transmission, Ouchi (1978) examined how control is exercised on different levels of a multitier hierarchy. However, Ouchi has focused on formal controls and excluded informal controls (e.g., clan control). Furthermore, Ouchi’s study has been conducted in the context of traditional hierarchical organizations characterized by clear lines of authority and direct and immediate control. However, in temporary organizations, such as software development projects, the conditions for control can be very different due to high levels of task and environmental uncertainty. Thus, in a next step, we aim at empirically investigating the control transmission phenomenon in the context of software development projects, including formal as well as informal control mechanisms.

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