INDIAN INSTITUTE OF MANAGEMENT KOZHIKODE

Working Paper

IIMK/WPS/470/OB&HR/2021/08

July 2021

Intra- and inter-organizational controls in outsourcing: Controlees' perspectives

Simy Joy[1]

[1]Faculty Fellow, Organizational Behaviour and Human Resources Area, Indian Institute of Management Kozhikode, IIMK Campus PO, India, Kunnamangalam, Kozhikode, Kerala 673 570, India; Email - simyjoy@iimk.ac.in, Phone - (+91) 495 - 2809656

Intra- and inter-organizational controls in outsourcing: Controlees' perspectives

ABSTRACT

Control is central to effective IS development. In the past, when the projects were carried out within the organization, controls were primarily intra-organizational. With outsourcing, controls are both intra-organizational and inter-organizational, since the controlee (vendor project team) is controlled by controllers from their own (vendor managers) as well as external organizations (client managers). The current research on outsourced projects focuses only on the inter-organizational aspect of controls. We argue that when internal as well as external controllers with potentially conflicting goals try to implement controls to fulfil their own needs, it creates challenges for controlees. Based on a field study of teams that deliver IT services globally, this paper examines both intra- and inter-organizational controls operating in outsourcing contexts, and brings to light the specific challenges created by their simultaneous presence. In doing this, unlike the previous approaches that give prominence to the controllers' perspectives, this paper focuses on controlees' perspectives and resolution tactics they adopt. The results are summarized in an empirical model for intra- and inter-organizational controls in practice.

Key words: Control, intra-organizational control, inter-organizational control, controlees, IT services

INTRODUCTION

Control of Information System Development projects has been an area of interest for IS researchers for past two decades. Information System Development has changed substantially over this period – projects that were carried out internally are now outsourced - shifting research focus from conceptualization and implementation of controls in internal projects (Kirsch, 1997) to that in outsourced projects (Choudhury and Sabherwal, 2003). In the context of internal projects, controls are intra-organizational as both controllers (IS managers and/or clients) and controlees (project team) belong to the same organization, while in the context of outsourced projects controls are both intra-organizational and inter-organizational since the controlee (vendor project team) is controlled by controllers from their own (vendor managers) as well as external organizations (client managers). The current research on outsourced projects however, considers only the inter-organizational aspect of controls, as it is assumed that the intra-organizational controls exercised in this scenario will be similar to those in internal projects, and therefore may not offer any new insights (Choudhury and Sabherwal, 2003). On the contrary, we feel that intra- and inter-organizational controls in outsourcing context need to be explored together to yield new insights. It must be noted that the controllers here belong to two different organisations and may have divergent or even conflicting control needs. When they try to closely control the controlees with mechanisms to fulfil their particular needs, it could lead to situations where controls become excessive, inefficient, superfluous or conflicting. The controllers probably do not perceive it as a problem, but for controlees it poses daily challenges. They may choose to resolve them by negotiating the respective control systems, and this may lead to modifications in how these controls actually work. This paper pursues this line of enquiry by examining both intra- and inter-organizational controls operating in outsourcing contexts, and bringing to light the specific challenges created by their simultaneous presence. In doing this, unlike the previous approaches

that give prominence to the controllers' perspectives, this paper focuses on controlees' perspectives and resolution tactics they adopt. Based on a field study of teams that deliver IT services globally, we present the types of intra- and inter-organizational controls used, the issues arising out of their simultaneous existence, and controlees' responses that result in the modification of controls imposed. The results are summarized in an empirical model.

RESEARCH ON CONTROL IN IS

Much of the research on controls in IS has been with the purpose of identifying the types of controls employed, their antecedents and outcomes (Kirsch, 1997). The types of controls employed in IS research is based on Ouchi's (1979) and Eisenhardt's (1985) categorization of controls as outcome based (laying out parameters of the required outcome), behavior-based (specifying the exact processes and rules that must be followed when performing the task), clan/social control (group norms enforced by peers) and self control (values and motivations held by the individual). The outcome-based and behavior-based controls are considered formal control modes, and clan and self controls informal (Kirsch, 1997). Having compared the relative effectiveness of the different types of controls, researchers claim that they are not substitutable and organizations will benefit from having a portfolio of controls than one or the other (Ouchi, 1980, Kirsch, 1997, Choudhury and Sabherwal, 2003). The portfolios of controls employed in IS makes use of all modes and involve several mechanisms to implement each of them (Kirsch, 1997). Researchers exploring antecedents to control find that the choice of control modes is affected by several factors related to the task (task programmability, behavior observability), controller (formal authority, knowledge of behaviors required), organization structure (size, centralization) and environment (uncertainty, dyanamism) (Jaworski, 1988, Ouchi and Maguire, 1975, Kirsch, 1996).

We use a different classification of controls in this paper – intra-organizational control and inter-organizational control based on the location of controllers and controlees (Carlsson-Wall, Kraus

and Lind, 2011). Intra-organizational controls are used when both controller and controlee belong to the same organization and inter-organizational controls when they belong to different organizations. In this section, we review the IS control literature based on this classification and discuss the nature of controller-controlee relation and controller characteristics in each type. Table 1 provides a summary.

Insert Table 1

The early research on controls in IS projects view them as intra-departmental (e.g. Henderson and Lee, 1992). Controllers as well as controlees are part of the IS department. IS Manager is usually seen as the controller and the control as based on hierarchical authority. Some researchers recognize the team members' power to control each other, and control as having a social component (Henderson and Lee, 1992). This research shows that controls are exercised to manage both process and outcomes, and have impact on team performance (Henderson and Lee, 1992).

Later research acknowledges the involvement of client departments in system development (Kirsch, 1996, 1997). As client contacts step in to the controller's role along with IS managers, control begins to span departmental boundaries and becomes intra-organizational. Kirsch (1997) notes that control relationship that looked like a dyad is now more of a network consisting multiple controllers and controlees. The controllers are different in many respects and this affects their ability to exercise various types of control. To start with, the IS manager has formal authority over the controlees from IS project teams making the control hierarchical, user contacts from client departments are unlikely to have such authority, making their control relation lateral than hierarchical. Kirsch et al (2002) further examine the client-IS relationship specifically and find that many of the IS project leaders in their sample have direct reporting relationship with the client. But

that does not involve authority to reward the controlees as IS managers can, which researchers who take the agency theory perspectives claim is necessary for successful implementation of controls (Eisenhardt, 1985). Another crucial difference between the controllers from IS and client departments is in the amount of project related knowledge and skills that they have, and this affects their ability to exercise different types of control (Kirsch et al, 2002).Researchers who pursue this line of research find that controllers (both IS and client) make use of a portfolio of controls that consist formal and informal modes, and their choice of control modes depends on factors including task characteristics, role expectations, project related knowledge and skills (Kirsch, 1997, Kirsch et al, 2002).

With outsourcing, IS projects are taken to external vendor organizations, and control begins to span organizational boundaries and becomes inter-organizational. Researchers regard client organization as the controller and the vendor organization as the controlee (Choudhury and Sabherwal, 2003, Rustagi, King and Kirsch, 2008). Outsourcing scenario thrust additional challenges to clients in formulating and implementing controls. This include geographical distance and cultural differences (Harmancioglu, 2009), as well as a greater potential for goal incongruence as they belong to two different organizations and the resultant risk of controlee opportunism (Tiwana and Keil, 2010). Researchers have been interested in examining portfolios of control they use, evolution of the portfolios (Choudhury and Sabherwal, 2003), amount of different types of control in the portfolios and their antecedents (Rustagi et al, 2008) and outcomes (Tiwana and Keil, 2010).

We argue that vendor project teams rather than vendor organizations as such are the controlees in outsourcing scenarios. Based on Yan and Louis' (1999) observation of boundary transcending organizations, the exposure of project teams is much higher to clients and their interactions with clients more direct, and this leads to direct control relationships between them than organizational level control relations. Further, we propose that the control relationship here is triadic than dyadic.

In addition to the controls by the client, the vendor organizations also put elaborate controls in place to manage and monitor their project teams (Upadhya, 2009). Thus the control relation involves two controllers (client and vendor managers) and a controlee (vendor project team).

Next, we argue for the simultaneous exploration of intra- and inter-organizational controls, though it is suggested that intra-organizational controls by vendor controllers are similar to those in internal projects and therefore may not offer new learnings (Choudhury and Sabherwal, 2003). Our argument stems from the fact that the primary purpose of laying down controls is to achieve goal congruence between the controller and controlee (Eisenhardt, 1985), and here two organizations with their own goals occupy the role of controllers, each putting controls in place to make the controlees comply. Clients and vendors are often thought to have 'adversarial' relation (Lacity, 2002) and the expected goal congruence between them low (Tiwana and Keil, 2010). Therefore, congruence of controls they design could be problematic. This may lead to some 'control loss' if these controls are conflicting, or excessive leading to inefficiency. Tiwana and Keil (2010) have reported a gap between 'attempted control' ('the extent to which a controller attempts to utilize a given control mechanism to influence controlee behavior') and 'realized control' ('the extent to which the controller is able to successfully exercise a given control mechanism') (Tiwana and Keil, 2010, p.13). In their comparative study of internal and outsourced projects, such gaps are more evident in outsourced projects. They attribute it to the lack of social and informational capabilities on the part of controllers, but we feel that presence multiple controllers may also be causing this.

We also advocate for incorporating controlee's perspectives in such explorations. According to agency theory, organizational members are agents with own preferences for action which may not align with that of the organization and the purpose of controls is to persuade them to pursue the organizational interests (Eisenhardt, 1985). Control in this view is means for achieving goal congruence. However, controlees' self-interests play a huge part in determining if and how much

they comply with the controls that controllers put in place, thus influencing their ability to realize controls. Critical theorists cognizant of the inherent power imbalance between employees and managers, regard control systems as structures and practices that seek to extract the controlees' submission and compliance, and maintain that the controlees are not really free in making their choices about pursing organizational goals (Jermier, 1998). On the other hand, scholars also claim that human actors under the most constraining systems are capable of exercising their agency (Giddens, 1979). Empirical research does show that controlees indeed exercise their agency through their acts of compliance, cooperation and resistance (Ezzamel, Wilmott and Washington, 2001). They create alternate control structures and practices (Carlsson-Wall, Kraus and Lind, 2011). Thus, it may not only be the controllers' actions, but also controlees' actions that affect the exercise of control. The controls in practice may not be same as the controls attempted by controllers, but modified by controlees when they are subjected to the controls. Such modification by controlees may partially account for the gap between the attempted control and realized control. The current empirical research has examined only modification of controls by controllers (Choudhury and Sabherwal, 2003, Kirsch, 1997). When there are multiple controllers seeking compliance of the same controlees, it may appear that they are subjected to over control (Upadhya, 2009), but it may lead to an increased exercise of agency, as reconciling the goals and resolving the potential clash of controls becomes the controlees' responsibility.

This paper seeks to address the above mentioned gaps and to contribute to the understanding of control in outsourcing contexts by presenting findings from a field study of teams that deliver IT services globally. Adopting a triadic view of controller-controlee relationships, it explores the intra- and inter-organizational controls under which the controlee teams operate, and how they negotiate and modify the control portfolios in their daily work. The paper is anchored in the views of the controlees as it is aimed at demonstrating their agency in modifying the controls attempted by the

external as well as internal controllers and thus influencing the realization of controls. The study that formed the basis of this paper had a larger scope, however only the findings that gave insights to the practice of control are discussed here.

METHODOLOGY

Research Method

Qualitative field study was the chosen method of inquiry as the intention was to record the practices in situ (Barley and Kunda, 2001). Data collection methods included field observation, interviews and the study of organizational documents and software systems.

Research Site

The research was conducted in a global IT services vendor headquartered in India (henceforth, referred to as Indian Services Company (ISC)). ISC was founded in 1980's and started global service delivery in 1990's. It is now among the top 5 IT services companies in India in employee strength and revenue, and enjoys a world-wide reputation. The services include development of customized software, software application maintenance and support, business process consulting, packaged software implementation, infrastructure management, software testing etc. The clients belong to the business domains of banking, financial services, insurance, telecom, manufacturing, retail, energy and transportation and are predominantly from North America and Europe. At the time of data collection ISC had 700+ clients and 97% of the revenue was from repeat clients.

Account teams are the most basic units of ISC that actually deliver services to the client. An account team is a dedicated team for a particular client to carry out all the services that the client sources from ISC. An account team typically consists of software engineers, team leaders and project managers. An account team may have members in a range of 5-500 depending on the 'size of the contract' and are usually grouped into sub-teams. 20-25% members of the account team will be physically located at the client's office in the client's location or the overseas offices of ISC.

Data Collection

Data collection was done in two phases. In the first phase, an in-depth study comprising of observation of a delivery team and interviews of its members was conducted. Access was granted to the internal documentations, meetings and software applications used by the team. Interviews of a second team that served a client from a different domain and geographic region also was conducted to generate data for comparison. In addition, interviews were conducted with senior managers as well as executives from support departments such as Quality, R&D and HR.

The first round of data analysis revealed some differences in the control structures and practices established in these teams. In order to make sure that the differences were not merely because of the domain and geographic differences of its clients, in the second phase of data collection, interview data was collected from two more delivery teams that served clients in the same domain and geographic region as the first team. The total number of participants in the end was 58, of which 32 were software engineers, 12 team leaders, 10 managers, and 4 support function managers/executives.

Data Analysis

Qualitative coding was employed to analyze the field notes and interview transcripts. The process began with open coding of practices. These codes were organized into a more parsimonious yet exhaustive tree structure based on the similarities and dissimilarities among the codes. Only the codes related to organizational control are used in this paper. These codes were further examined to identify the modes of control, purpose/motivation and antecedents related to intra- and inter-organizational controls adopted by internal and external controllers respectively. The issues and challenges caused by the interplay of both types of controls, the controlee responses to such issues and challenges and their impact on the control portfolios were separately identified.

FINDINGS

It was found that every team has been controlled by not only the parent organization, but also the clients, though in varying degrees. In this section, we first present the intra-organizational control portfolio employed by the parent and the inter-organizational portfolios by the clients, along with the goals that the controllers are trying to achieve and other antecedents affecting the choice of controls. We will then explain the issues and challenges they pose for controlees and how controlees resort to various tactics for modifying the controls.

Intra-organizational controls

Examination of the intra-organizational controls reveals a focus on profitability and reputation. IT services outsourcing is a human resources intensive industry. The profits are dependent directly on the efficient deployment of employees and their profitability. The reputation as a quality service provider is key to remain profitable since the largest proportion of the profits comes from repeat customers. The control modes and tools (See table 1) laid down by ISC appear to be meant to achieve these goals.

Some of the outcome based controls are for ensuring quality of work and completion of milestones on time, both of which were required to maintain their reputation with clients. The quality department provides a list of indicators to the teams and the teams are asked to submit periodic reports on how they are doing on those indicators. Similarly, milestones and timelines are laid out for each project. There are also controls to ensure profitability. Before bidding every project, estimates are done and the potential profit from the project is calculated. Only when the potential profits are above a certain margin the teams are allowed to bid. Close monitoring of the time spent by each employee on each task is also is mandated to ensure maximum possible utilization of human resources and their productivity.

The focus of behavioral controls also is on quality of work, timely completion of the projects,

human resources utilization and profitability. In order to ensure the quality of work, process templates are prepared by quality department that specify each step to be followed for delivering different types of services/projects. These templates insist on the use of standards and checklists, periodic reports and meetings. At the beginning of every project, the team is supposed to draw up a process framework based on the templates. Status meetings are held to track project progress. Roles are created in the organizational hierarchy to enforce the controls. One of the software engineers in each team has to act as a Configuration Controller who is responsible for ensuring process compliance. The quality of the work performed by the software engineers is supposed to be verified by the team leaders, and the project progress and efficient utilization of human resources by project managers. Quality department representative is assigned to each team to monitor quality indicators and process compliance. Random audits of process, quality, configuration control and usage of software tools are undertaken to check if the teams are following the mandates given. Several kinds of integrated information systems are implemented organization-wide for tracking purposes. It includes an integrated project management system (tracks the project plan, milestones, budgets, resource utilization etc.) and a centralised time tracking tool (tracks the time spent by each employee on each type of tasks which is used for productivity calculations). In addition, performance appraisal, promotions and career paths are used as opportunities to reinforce the ideal behaviors.

ISC expends tremendous effort to influence the social control norms among employees. There is a conscious attempt to build and sustain common corporate culture and work values. The corporate training programmes also contribute to this. Several competitions and awards are instituted where teams have to compete against each other. This is meant not only to strengthen the common identity of the team but also to be an avenue to communicate what kind of norms will make them winners. Several comparative indices on various aspects of team performance are created and published.

Some of these indices are included in the performance measurement of higher level project managers. Teams are encouraged to have their own portals on the intranet where they showcase their achievements. The success stories are highlighted in the corporate intranet. The hope is such comparisons with other teams will create increased pressure for the teams to accept norms promoted by the organization. Results from client satisfaction surveys are used for this purpose as well. A dedicated HR expert who meets with the team periodically, promotes the desired behavioral norms. ISC has an elaborate knowledge management portal where the employees share their learning and this is expected to disseminate common social norms.

ISC tries to influence employees' self control by actively promoting an employee identity (ISCian is the term used to refer to an employee) which exemplifies the ideal work values (ISCian is portrayed as competent, professional, hardworking and dependable). This identity is hoped to shape their image of themselves as software professionals. ISC tries to create awareness about professional standards through trainings and knowledge management portals and anticipates that this will lead the employee to exercise appropriate self control.

The team members expressed the view that the intra-control mechanisms instituted by ISC were much more elaborate than those in smaller IT services companies and attributed it to the differences in resources. As a large service company ISC possess human and material resources to create organizational units and roles for control purposes (e.g. large quality and HR department with dedicated representative for each service delivery team), invest in integrated information systems (e.g. integrated project management systems and time tracking tools) and culture building (e.g. constant organizing of trainings, activities, competitions and campaigns). A smaller player may lack such resources.

Inter-organizational controls

The teams feel that it is not the same concerns that drive every client's desire for control. Almost all

clients want to ensure quality and timely delivery of work. But, only the clients who are on time and material contracts (where price depends on person-hours spent) may aim to control costs, while those on fixed price contracts may not. The clients whose outsourced work is dependent on sensitive or strategic data or proprietary software tend to be more concerned about security than others. The common components of the client control portfolios are listed in table 1.

In the beginning of projects, functional specifications are drawn out that lay out the performance expectations from the output. Teams are asked to prepare design documents that demonstrate how different elements of the project output will meet these expectations. The quality is checked by the client-side representatives upon delivery. Service Level Agreements specifying error tolerance levels and accompanying penalties are another tool for controlling quality. Detailed project plans, timelines and delivery schedules are resorted to ensure timely completion of work. The clients who seek active cost control call for information on effort (person-hours spent) and variances. The contracts could include sanctions for not meeting with various outcome specifications. For example, in customer support projects, if the response time or resolution time for 4 or more 'major' customer service requests exceeds the agreed on time, there will be cuts to the vendor pay or result in non-renewal of contract.

The behavioral controls of quality include demanding adherence to a specific development methodology (e.g. waterfall model or agile methods) and certain processes or process frameworks. This includes the use of a number of standards and checklists that they insist that the teams follow while performing the work, and installation of IT based tracking tools to collect information from the team on progress made. In addition, periodic reports are sought and regular meetings held to constantly watch if the team is on track. Some clients send their managers for occasional vendor site visits, during which they address the vendor team members to reiterate the behavioral expectations that they have from them. Some clients take it to a more formal level by engaging

external auditors to check if the team members are following the stipulated processes (e.g. security audit). Though a rare practice, there are vendors who go for a greater integration of teams from both sides (by assigning vendor team members to roles in the client teams and vice versa) and this becomes a powerful tool for conveying and enforcing behavioral controls. Clients with multi-sourcing arrangements (those who engage multiple vendors) may compare the performance of all their vendors on outcome as well as behavioral control indicators, which is aimed to induce greater compliance.

Though the common understanding is that it is more difficult to influence the social norms within teams with respect to work, clients seem to influence their development. Client may leave signals about how important the teams' contributions are to them strategically. In the initial project handover meetings, trainings and client visits they may assert the norms that used to be followed by the client and advocate for their adoption by the team members. Most teams have some of their members 'onsite' at the clients' locations, and in some rare cases they are made part of client teams as well. Client interactions with these members are much more frequent and intense. The expectation is that the norms that these members internalise will be passed over to the offsite team members as well. There are clients who try to have a say in the selection of key personnel to the team so that they can have teams that they think will have the right kind of norms. They also try to retain team members who they see as critical in influencing the work norms.

Just as the parent organization, the clients also may try to shape the self control exercised by the team member, though to a lesser degree. This is by having a greater involvement in selection and/or training of team members where attempts are made to clearly communicate what it means to be a competent professional.

In the teams under study as well as the previous teams that the participants belonged to, there is a great degree of variation in the level of controls attempted. Several factors were identified by team

members as seen to be influencing this. They included client's technical expertise, level of outsourcing experience, availability of resources to design control systems, and strategic importance they attach to the outsourced work. Clients with more technical expertise and outsourcing experience resort to very elaborate outcome and process controls compared to others. Clients with more resources expend them in laying out extensive behavioral and social control tools. The strategic importance of the outsourced work increases clients' desire to shape social and self controls as a way to achieve outcome and behavior controls.

Team level practices in response to intra- and inter-organizational controls

The setting up of intra- and inter-organizational control mechanisms by the parent and the clients give rise to various challenges for team members. The realization of control depends on how the teams respond to these challenges. The practices that the team members reported are summarised below.

Negotiation and redefinition

Control structures sometimes are interpreted as unchangeable once created and they will defeat their own purpose if changed. However, the nature of work performed by the delivery teams has an inherent need for flexibility, that static controls (especially outcome related) do not allow for. Even when clients have functional specifications that both parties agree to, it is possible that they do not capture exactly what they want. Sometimes the clients' business processes undergo changes requiring corresponding changes in the functionalities. Thus, the specification of how the final outcome should look like is likely to change as the project progresses. The project plans, time lines and milestones also will need to change in tandem. In customer service projects, Service Level Agreements are considered almost cast in stone. But, sometimes the team members working on the issue discover that the root cause of the issue does not lie in an application that is outsourced to them but to another vendor. All this requires the team to constantly monitor whether each task that

they are going to undertake lies within the scope of the contract and if the outcome controls applied are still appropriate. If not, they negotiate with the client for redefining the controls. It is crucial that the team does it because of the penalties that the vendor will have to bear otherwise.

The team similarly engages in negotiations with the parent organization in favour of the client. For instance, the stipulation of the parent company is that the team should not bid for a new project unless the estimated profit margins are above a certain level. However, the project managers negotiate with the parent to accommodate projects that are crucial for the clients' business and the use the surplus profits gained from other projects to compensate for the shortfall. The long term relationship building is the objective here.

Streamlining

In the attempt to devise best possible controls, the vendor and client lay out elaborate control systems especially for behavioral controls. Sometimes they are very similar though the exact steps in the processes may differ. The quality department of ISC requires that detailed process frameworks are drawn out for each project before the team starts working on it and supplies templates. The client (especially one with years of experience and/or has multiple vendors) also may prescribe their own process frameworks. As a policy, ISC allows the team to map both frameworks and do away with processes that the client has an equivalent for. This helps the team to adopt the best elements of processes from both sources. The teams in this study are found to examine various processes, combine some, discard some, develop new ones, and adopt processes from third parties depending on the specific project needs. Streamlining to the full extent is not possible when either ISC or the clients insist that certain steps or processes must be followed as they as they have defined even if it meant repetition.

Prioritization

A problem with having two controllers is that the team could end up with just too many processes

even after stream lining. A large majority of these processes are thought of as designed to satisfy management's need for control and to provide them with information, than to help the team complete the task. Following all the processes is bound to create delays as they require completing a number of checklists, documents and reports, and the time required for this is not accounted for while drawing up the project timelines and delivery schedules. As a result, the team members tend to follow a scheme of prioritization in following processes. Top priority is given to processes that contribute to quality of work, those that provide them with real-time feedback or ones with attached rewards or penalties, and the least priority for those that are time-consuming formalities with no major consequences to the work and/or for the team, client or vendor. For example, every team diligently follows the processes for code review and testing (review and testing of the programs written by one member by other(s) to identify and fix bugs) as it is central to ensuring quality of work. But many of them do not conduct defect prevention meetings (meetings where all the bugs/defects encountered in the project, their root causes, solutions, and plans to avoid similar defects in future are discussed) at the end of the project as stipulated. The working style of the teams is such that when a bug/defect is identified, it is immediately discussed with the team members and when a solution is discovered that is shared too. In that case, a post-project defect prevention meeting becomes a mere formality rather than something that provides real-time feedback. In completion of reports, priority is given to those required by the client than by the parent.

Buffering

As mentioned above, control processes are information intensive. They involve creation of a number of artefacts (reports, documentations, standards, checklists etc) and involve ceremonial procedures (meetings and audits etc.). Following all of them is extremely time-consuming. In fact, the team members joke that if they followed every single control process, there will be no time left

to do the actual job. In order to tackle this, teams have devised an internal buffering mechanism. The software engineers who actually did the programming (i.e. the actual delivery of IT services) are kept away ('buffered') from most of the documentation that control mechanisms demanded. The team leaders and the project managers take it upon themselves to keep up with all documentation and control processes. They say they have to somewhat 'protect' those who do the service delivery from process overload if work has to be done on time. The involvement of engineers is sought only when the process is directly related to their work. Even then, rather than involving all of the software engineers only one or two of them will be assigned with the responsibility, and they undertake it on a rotational basis. For example, the engineers who work on customer support projects take turns to prepare the weekly reports comparing their performance against service level agreements and have meetings with the clients to discuss them.

Reclamation of self control

Every team member in this study expresses a need for self control. They follow their own personal control mechanisms as they feel alienated from their work without them. For instance, ISC has a centralised time management system which every employee is supposed to keep open on their computers while they work and record the time they take for each task. A software engineer recalled a project manager checking how many in their team actually used it and found only two among twenty six of them did. In the interviews, every one of them talked about their own means for time management – some used just a diary or a notepad, while others had their own excel sheets. They said that they felt disconnected with the standardised way that the centralised system defined their jobs and had to device something based on how they viewed them and their own logic of how to organize tasks. Similarly, ISC has integrated project management systems, but every project manager has their own excel sheets and macros for tracking the project. An examination of the team directories on the LAN revealed a number of excel sheets or tools created by old members

for planning or tracking purposes, none of which was being used by the existing members through they were for the same purposes. It seemed every new member had to create control tools on their own to feel comfortable to use them. Information from self control tools were fed into the formal control tools when it was demanded.

DISCUSSION

The study thus describes the intra- and inter-organizational controls laid out by the internal and external controllers as well as the process by which the controlees modify these controls. It shows that while laying out controls, both internal and external controllers make use of portfolios of control modes, and choice of these portfolios is affected by a set of antecedents. It also reveals how controlees experience simultaneous existence of intra- and inter-organizational controls, and why and how they modify the control modes used. Figure 1 is an empirical model that summarises the findings. While the first part of the model that explains the choice of control portfolios largely affirms findings from previous research, the second part that explains the modification of controls by the controlees adds to the current knowledge and is the real contribution of this study.

The first part of the model depicts intra- and inter-organizational controls and their antecedents. A review of the control modes and tools that make up intra- and inter-organizational control portfolios shows that both internal and external controllers resort to very similar mechanisms. Previous research into intra-organizational control portfolios (Kirsch, 1997) and inter-organizational control portfolios (Choudhury and Sabherwal, 2003) confirms that this is not surprising. Tiwana and Keil (2010) have found that internal and external controllers however vary in the extent to which they rely on each of the modes in their portfolios. In their study, external controllers relied more on outcome, behavior and social controls than internal controllers, while internal controllers made use of self control more extensively that external controllers. Although we could observe variations among external controllers in the tools they employed, a greater exploration of the patterns in

control portfolios and underlying rationales was not possible given our research method and sample. The fact that both internal and external controllers chose to employ portfolios of controls than singular methods to achieve their control objectives indicate that they believe in their synergy. Previous studies by Ouchi (1980), Kirsch (1997) and Choudhury and Sabherwal (2003) also have found similar synergistic applications of control portfolios, and suggest that the modes of controls may not really be substitutable and their effectiveness may be dependent on their synergy.

Past research has discovered that characteristics of the task, controllers and organizations (Jaworski, 1988, Kirsch 1996, Ouchi and Maguire, 1975) influence the choice of control portfolios. Additional factors such as strategic importance of the outsourced work and geographical distance affect inter-organizational controls in particular (Harmancioglu, 2009). Tiwana and Keil (2010) however claim that all these factors are likely to affect the realized control (i.e. the extent to which the controller is able to successfully exercise a specific control mode) and not the attempted control (i.e. the extent to which the controller would like to use a control mode). In this study, we find that the controller's attempt to employ a certain control mode is indeed affected by these factors. Although all IT service tasks are not high on outcome measurability and task programmability (Ouchi and Maguire, 1975, Eisenhardt, 198), research into software development has resulted in development of standards and frameworks (e.g. Capability Maturity Model® Integration (CMMI^{SM}), Version 1.1, 2002) that are widely adopted in the industry. In addition, over the years the industry has evolved its own conventions for outcome and behavioral controls (e.g. Service Level Agreements, Goo, 2010). These are incorporated into both intra- and inter-organizational controls, especially outcome and behavioral controls. Technical expertise of client managers does affect their ability to install and exercise inter-organizational controls (Rustagi, King and Kirsch, 2008), but such expertise varies from manager to manager. Availability of organizational resources is crucial in the development of tools for control. ISC being a large resource-rich organization seems to have helped

in laying down extensive intra-organizational controls – both formal and informal - as Jaworski (1988) predicts. External controllers benefit from the extent of experience they have had in dealing with other organizations. Here, the extent of outsourcing experience (Choudhury and Sabherwal, 2003) client organizations have had, helps them tailor the control portfolios. Strategic importance of the outsourced work also has considerable impact in deciding the extent of control the external controllers want to exercise (Harmancioglu, 2009), especially in adopting social control mechanisms. Tiwana and Keil (2010) suggest that it is the motivation for exercising controls that really differentiates intra- and inter-organizational controls and identify anticipated transaction hazards as the specific motivation. According to them, external controllers anticipate higher transaction hazards and hence employ more control mechanisms compared to internal controllers. In this study, we see that the internal controller has installed as many or more controls as some of the external controllers. We find that there are certain goals that both controllers want to achieve by adopting each control mode and tool – profitability and reputation for ISC and quality of work, timely completion, cost and security for clients. This makes us believe that just as the external controllers are motivated by the goal of reducing risks and realizing the full benefits of the relationship, the internal controllers also are motivated by the same goals, though the risks and benefits are different from their perspective. These motivations also form part of antecedents to the choice of control portfolios.

The second part of the empirical model reveals the process by which the controls are modified. It brings to light the issues caused when intra- and inter-organizational controls are implemented simultaneously, the responses adopted by the controlees and the resultant changes to the control portfolios. The study shows that concurrent imposition of controls by internal and external controllers result in the following issues. The first issue is that the imposition of very specific controls, especially outcome controls, introduces rigidity and inflexibility, which hinders rather

than aids realization of control objectives eventually. This is often the case of work, the outcomes of which are not clearly foreseeable in the beginning. Such work will benefit from having controls that are flexible and dynamically defined. For example, past research has shown that requirement volatility is an inherent feature of IT services and having rigid outcome controls in fact adversely affect performance (Tiwana and Keil, 2010). Also, when trying to meet the rigid outcome controls by one controller affects the other controller's goals, goal incongruence becomes much more prominent. Reconciling of goals becomes essential for their relationship to work. The second major issue is the similarity especially in the control processes used by internal and external controllers. They may have very similar, yet separate processes to achieve the same aim. This affects overall work efficiency as it takes time to ensure adherence to all processes, but does not really contribute to the quality or timely completion of work. Controls in such cases exist for control's sake, than to aid work performance. The third issue arises when particular control mechanisms in the portfolio start to defeat each other's purpose. Controllers tend to use portfolios of mechanisms (Choudhury and Sabherwal, 2003, Kirsch, 1997), each of which may have one or more aims. Closely following one mechanism may prove to be hindering to the goals that the other mechanisms seek to achieve. This affects effectiveness. This can happen even among the mechanisms in the portfolio employed by the same controller. But when it involves the goals of two controllers whose relation is based on power imbalance, it also raises the issue of whose goals are more important. The fourth issue revealed in the study is that of overall process overload. The reliance of control mechanisms on information gathering (Eisenhardt, 1985) makes them process heavy. It is problematic even when there is only one controller who tends to impose large repertoire of controls, and becomes worse in scenarios with two controllers as it doubles the load straight away. In case of IT services, internal controllers tend to implement controls specified by process frameworks such as CMM (Capability Maturity Model® Integration (CMMI[SM]), Version 1.1, 2002), which are documentation heavy

(Upadhya and Vasavi, 2006). For them, following such established frameworks in the industry is a matter of proving their legitimacy (Guerrero and Eterovic, 2004, Upadhya and Vasavi, 2006). The external controllers also employ their own process frameworks and tracking mechanisms. It is an issue of trust as well for them (Tiwana and Keil, 2010, Vlaar, Van den Bosch and Volberda, 2006). This leads to control being an end in itself, rather than the completion of work or its quality. The fifth issue is the alienation of controlees from the work they do. Critical theorists have documented that controlees tend to feel alienated when the ownership and control of their work is taken away from them. The sense of alienation could be more severely felt by knowledge workers who are spurred on by intrinsic motivating factors related to work (Nair and Vohra, 2010). Researchers have warned that the control panopticon (Sewell andWilkinson, 1992) that exists in IT services and outsourcing industries (Upadhya, 2009), disempowers the controlees and reduces them to mere cogs in the wheel.

Why do controlees feel the need to respond to these issues? Why don't the controllers resolve them between them? The nature of triadic control relationships in situations involving intra- and inter-organizational controls is such that the controllers engage with each other mainly at strategic level, where as they engage with the controlees at operational level. The controllers' direct interactions with each other take place during initial negotiations and conclude with signing of the contract (may take place again for renegotiating or terminating the contract). All specificities of operational level control portfolios do not form part of these strategic level discussions. The operational level controls by both controllers are often designed independently of each other and imposed directly on the controlees. The effects of the interaction of control portfolios may not be directly visible to the controllers where as controlees feel it every day in their daily work. Because of the power imbalance between controllers and controlees, the latter are not in a position to completely disregard the controls (Jermier, 1998), and hence resort to various tactics to resolve the resultant

issues. Each tactic leads to modification of some modes of control more than the other.

The tactics discovered in this study are discussed below, and propositions are put forward with respect to controlees' involvement in the modification of control portfolios in scenarios where intra- and inter-organizational controls are in action. The first issue of rigid inflexible controls is faced with attempts to renegotiate the controls with both internal and external controllers and get them redefined. In doing so, they seek to reduce the rigidity in controls that ultimately is harmful for realization of the true purpose of establishing controls, and reintroduce flexibility and dynamism in controls as well as the process of defining controls. Outcome controls tend to be more rigid and are treated as cast in stone when they are part of contractual stipulations (Kern and Willcocks 2002, Mingay and Govekar, 2002). They are followed up using more stringent tracking mechanisms than the behavioral controls. As a result, controlees are required to push for open renegotiation in order to alter them, where as in case of behavior controls, the controlees may be to bring in changes even without the controllers knowing as observability is low.

> *Proposition 1: When outcome controls are rigid and inflexible in such a way that it affects the purpose of establishing controls either by internal or external controllers, the controlees may seek to renegotiate with the relevant controller and redefine them.*

The issue of similarity of intra- and inter-organizational controls leading to repetitions of time consuming procedures that are non-value adding may happen often in case of behavioral controls that are process-based. The controlees in this scenario compare the processes employed by both controllers and streamline them. This not only enhances efficiency by removing non-value adding steps, but also makes the overall controls more effective as they tend to blend the most useful processes from both controllers. Inefficiencies will remain if the controllers refuse to accept the streamlined version and insist on their own original controls.

> *Proposition 2: When the intra- and inter-organizational controls for achieving the same*

goals are similar, they controlees may seek to match and streamline them.

Addressing the third issue of controls defeating each others' purpose poses a major dilemma for controlees when controls are irreconcilable. They have to decide which and whose goals are more important, and accordingly decide which controls they must adhere to. They engage in prioritization of goals and controls. This happens mostly in case of behavioral controls, than outcome controls which require renegotiation with controllers. The priority attached by controlees to different control mechanisms may differ from the priority envisaged by the external and internal controllers. The prioritization however is guided by certain principles. The impact of controls in on work – specifically quality and timely completion – is a major factor. Also considered is the power imbalance between the client and vendor. Controls imposed by the client may be more closely followed than those by the parent organization.

> *Proposition 3a: When the control mechanisms in the intra- and inter-organizational control*
> *portfolios defeat each other's purpose, controlees may prioritize the controls.*

> *Proposition 3b: While prioritizing the controls, controlees attach higher priority to controls*
> *that contribute to the quality and timely completion of work than those that do not.*

> *Proposition 3c: While prioritizing the intra- and inter-organizational controls, controlees*
> *attach higher priority to controls imposed by the more powerful controller.*

The fourth issue of process overload becomes a huge burden for controlees because it affects the efficient and effective deployment of the limited human resources. In response, they differentiate between core work and control work, and allocate human resources in such a way that there are enough people and capacity to do the core work. They restrict the control work to certain people. Such channelling of overload ensures better utilization of human resources. This internal buffering mechanism regulates the exposure of the team members to the control mechanisms, and reduces the stress for employees by curtailing the task repertoire they are held responsible for.

Proposition 4: When the process overload on controlees on account of controls affects the efficient utilization of human resources, the controlees create an internal buffering mechanism that exposes various controlees to controls only selectively.

The last issue discovered in this study – that of alienation - is strong when controlees find themselves under constant monitoring by internal and external controllers all the time. They seek to combat alienation by reclaiming the control. They replace some of the formal controls with individually designed mechanisms. This helps them to claim ownership of work, making it more personal. Although this results in redundancy of controls, it gives the controlees better job satisfaction and sense of fulfilment. This is critical in industries such as IT and other knowledge industries where employee turnover on account of job dissatisfaction is high (Egan, Yang and Bartlett, 2004). It must be noted that in the reclamation of self-control, the controlees do not question the spirit of controls; it is the ownership of controls that is questioned. Formal controls that originate with the controllers are replaced with controlee-driven self controls. Controllers may view this as subversive – especially external controllers who tend to anticipate non-compliance from controlees outside of their own organizations and therefore impose more controller driven mechanisms (Tiwana and Keil, 2010). However, self controls do not equate to lack of controls, evidenced by the fact that performance of external controlees was not really affected by the inability of external controllers to realize controls (Tiwana and Keil, 2010).

Proposition 5: When intra- or inter-organizational controls make controlees feel alienated from their work, they may seek to replace formal controls in part by self-controls.

Crucial to this model is the agentic behavior displayed by the controlees in modification of controls. It is their attempts to resolve challenges arising from simultaneous existence of intra- and inter-org controls that result in the modifications to controls in practice to a large extent. Agency of controlees is acknowledged in literature (Ezzamel, Wilmott and Washington, 2001, Upadhya,

2009). According to scholars who take agency theory perspective, controlees engage in such opportunistic behavior to protect their self-interest (Eisenhardt, 1985, Tiwana and Keil, 2010). In this study, we see the simultaneous existence of intra- and inter-organizational controls creating threats to the self-interests of controlees by causing process overload and alienation (Upadhya, 2009), and controlees trying to reduce them. But, we also find that rest of the issues that spur them on to modifying controls – i.e. need for flexibility, similarity in controls, multiple controls defeating each others' purpose - do not arise from needs to protect their self-interest, but are concerned more with the controllers' self-interests. Even though controlees do not always have personal incentives to argue for flexible controls (Tiwana and Keil, 2010), in this study they are observed to do it. Also, when intra- and inter-organizational controls are similar they set out to streamline them, increasing the overall efficiency for both internal and external controls. Similarly, when controls begin to defeat each others' objectives they start to prioritise on behalf of both controllers. In doing all this, the controlees are essentially striving to achieve congruence of goals of both controllers and not merely acting out of their self-interests. For this, they follow the spirit of the controls than letter. According to Flamholtz, Das and Tsui (1985), achieving goal congruence is more important for effectiveness, than closely following outcome or behavioral controls. Thus we see that the modifications do result from the controlees exercising their agency, but they do it not only on their behalf, but also on behalf of their controllers. They almost become mediators reconciling the interests of both controllers, and transform the controls into something that can satisfy goals of all parties.

CONCLUSION

The purpose of this paper was to extend the existing knowledge about organizational controls, by going forward from the predictive models on control modes, their antecedents and outcomes to examining how exercise of controls takes place in practice. Majority of the current studies takes the

controller's perspective, while this study brings to surface the controlee's perspective. It also takes into account the existence of intra- and inter-organizational controls which is a reality in many of the current day organizations. In addition to bringing the intra- and inter-organizational control portfolios and their antecedents to light, the in-depth field study helped to describe and explain the process by which controls are modified. The implications of the findings for theory and practice are discussed below.

Implications for theory and future research

The concept of control has been refined considerably by the research over years in order to achieve greater conceptual clarity. The notions of attempted and realized controls (Tiwana and Keil, 2010) are examples of such refinement. These notions make it clear that control modes and tools laid out by controllers indicate only the attempted control and it is different from the actual control that they are able to realize. Modification of controls, especially by controlees, as discovered in this study can account for the gap between the two. The researchers in future may benefit from differentiating between attempted, modified and realized controls. Such nuanced understanding of the concept may prove to be helpful in explaining the seemingly confounding results.

It further offers clarity to the role of controllers and controlees in designing and exercising controls. While the controller has a greater role in designing the attempted control mechanisms, the controlee are found to have an equally important role in modifying controls. Controlees' role is often under-explored in the functional management studies. Although critical management studies explore controlee responses, the focus is on the opportunities for resistance that it offers the controlees. This study shows that, in addition to protecting their self-interests, the controlees are capable of protecting the interests of the controllers as well.

The study is contribution to the currently scant literature on the simultaneous impact intra- and inter-organizational controls. By recognizing the presence of internal and external controllers, the

study shifts the conceptualisation of the controller-controlee relation from a dyad to triad. It surfaces the challenges that arise when both internal and external controllers attempt to exercise control over the same tasks and controlees. The practice based approach of the study has been helpful in identifying the specific types of challenges as well as tactics adopted to address each one of them. The future researchers may find such categorisation helpful in determining the constructs that they want to focus on while designing their research. However they must bear in mind that this categorization is based on findings from IT industry and may be influenced by the specific characteristics of IT work.

This study was exploratory and based on a few teams from a single organization. The sample limited the examination of variation among different types of internal and external controllers as well as of the relative strength of intra- and inter-organizational controls. The relation of modified controls with realized control and control outcomes is another unexplored area in this study. In order to ensure the generalizability of the results, studies involving larger samples and predictive models may be necessary.

Implications for practice

The study highlights the needs for controllers to be cognizant of the simultaneous existence of intra- and inter-org controls. While deciding on the controls they want to implement, they need to actually consider the other sources and types of control and judge the impact they may have on work (whether it is helping or hindering) and workers (stress and other decision dilemmas). They may want to separate the controls into essential and desirable ones to minimise the negative impact. Also, controls must be seen as dynamic and not static. Both intra- and inter-organizational controls may need to be revised based on past experience. Making controlees part of the revision process may be beneficial in establishing realistic measures. Controllers must feel greater confidence in the ability and willingness of the controlees to be part of designing controls by the fact that they do act

beyond their self-interests. We do hope that the findings will take both theory and practice forward in conceptualising and implementing controls in contemporary organizations.

REFERENCES

Athreye, S. S. 2005. The Indian software industry and its evolving service capability. *Industrial and Corporate Change*. Oxford University Press.

Barley, S. R., & Kunda, G. 2001. Bringing work back in. *Organization Science*, 12(1): 76-95.

Carlson-Wall, M., Kraus, K., & Lind, J. 2011. The interdependencies of intra- and inter-organisational controls and work practices – The case of the domestic care of the elderly. *Management Accounting Research,* 22: 313-329.

Choudhury, V., & Sabherwal, R. 2003. Portfolios of control in outsourced software development projects. *Information System Research*, 14 (3): 291-314.

Coad, A. F., & Cullen, J. 2006. Inter-organizational cost management: Towards an evolutionary perspective. *Management Accounting Research*, 17 – 342-369.

Egan, T. M., Yang, B., Bartlett, K. R. 2004. The effects of organizational learning culture and job satisafaction on motivation to transfer learning and turnover intention. *Human Resource Development Quarterly,* 15 (3)- 279-301.

Eisenhardt. K. E. 1985. Organizational and Economic Approaches. *Management Science,* 31 (2): 134-149.

Ezzamel, M., & Willmott, H. 1998. Accounting for teamwork: A critical study of group-based systems of organisational control. *Administrative Science Quarterly*, 43(2): 358–396.

-., - & Worthington, F. 2001. Power, control and resistance in the "factory that time forgot". *Journal of Management Studies*, 38 (8): 1053–1079.

Fayol, H. 1949. *General and Industrial Administration.* London: Sir Isaac Pitman & Sons, Ltd.

Flamholtz, E. G., Das, T. K. & Tsui, A. S. 1985. Toward an integrative framework of organizational control. *Accounting, Organizations and Society*, 10 (1): 35-50.

Giddens, A. 1979. *Central Problems in Social Theory*. London: Macmillan.

Goo, J. 2010. Structure of service level agreements (SLA) in IT outsourcing: The construct and its measurement. Information System Frontiers, 12: 185-205.

Guerrero, F., & Eterovic, Y. 2004. Adopting the SW-CMM in a small IT organization. *IEEE Software*, 29-35.

Harmancioglu, N. 2009. Portfolio of controls in outsourcing relationships for global new product development. *Industrial Marketing Management,* 38: 394-403.

Henderson, J. C. & Lee, S. 1992. Managing I/S design teams: A control theories perspective. *Management Science*, 38 (6): 757-777.

Jaworski, B. J. 1988. Toward a theory of marketing control: environmental context, control types, and consequences. *Journal of Marketing*, 52: 23-39.

Jermier, J. M. 1998. Critical perspective on organizational control. *Administrative Science Quarterly*, 43(2): 235-256.

Kern, T., & Willcocks, L. 2002. Exploring relationships in information technology outsourcing: The interaction approach. *European Journal of Information Systems*, 11(1): 3–19.

Kirsch, L. J. 1996. The Management of Complex Tasks in Organizations: Controlling the Systems Development Process. *Organization Science*. 7 (1): 1-21.

Kirsch, L. J. 1997. Portfolios of control modes and IS project management. *Information Systems Research,* 8 (3): 215-239.

Lacity, M. 2002. Lessons in global information technology outsourcing. *IEEE Computing,* (Aug): 26-33.

Langfield-Smith, K., & Smith, D. 2003. Management control systems and trust in outsourcing relationships. *Management Accounting Research*, 14, 281-308.

Leifer, R. & Mills, P. K. 1996. An Information Processing Approach for Deciding Upon Control Strategies and Reducing Control Loss in Emerging Organizations. *Journal of Management*, 22 (1): 113-137.

Mingay, S., & Govekar, M. 2002. ITIL's service-level management strength is in integration. TG-15-3491. Stamford, CT: Gartner Group.

Ouchi, W. 1979. A Conceptual Framework for the Design of Organization Control Mechanisms. *Management Science*, 25: 833-848.

- 1980. Markets, bureaucracies and clans. *Administrative Science Quarterly,* 25 (1): 129-141

- & Maguire, M. N. 1975. Organizational control: Two functions. *Administrative Science Quarterly*, 20 (4): 559-569.

Nair, N., & Vohra, N. 2010. An exploration of factors predicting work alienation of knowledge workers. *Management Decision*, 48 (4): 600 – 615.

Rustagi, S., King, W. R., & Kirsch, L. J. 2008. Predictors of formal control usage in IT outsourcing partnerships. *Information Systems Research*, 19 (2): 126-143.

Sewell, G., & Wilkinson, B. 1992. Someone to watch over me: Surveillance, discipline and the just-in-time process. *Sociology*, 26 (2): 271–289.

Software Engineering Institute. 2002. *Capability Maturity Model® Integration* (CMMISM), Version 1.1.

- & Hald, K. S. 2006. The emergence of boundaries and accounting in supply fields: The dynamics of integration and fragmentation. *Management Accounting Research,* 17: 288-314.

Tiwana, A. & Kiel, M. 2010. Control in internal and outsourced software projects**. *Journal of Management Information Systems,* 26 (3): 9–44.

Upadhya, C. 2009. Controlling offshore knowledge workers: Power and agency in India's software outsourcing industry. *New Technology, Work and Employment*, 24 (1): 2-18.

- & Vasavi, A. R. 2006. ***Work, culture and sociality in the Indian IT Industry: A sociological study.*** Report submitted to Indo-Ducth Program for Alternatives in Development

Vlaar, P. W. L., Van den Bosch, F. A. J., & Volberda, H. 2006. On the evolution of trust, distrust, and formal coordination and control in interorganizational relationships: Towards an integrative framework. ERIM Report series *Research in Management,* ERS-2006-035-STR.

Yan A. & Louis, M. R. 1999. The migration of organizational functions to the work unit level: Buffering, spanning, and bringing up boundaries. *Human Relations,* 52 (1): 25-47.
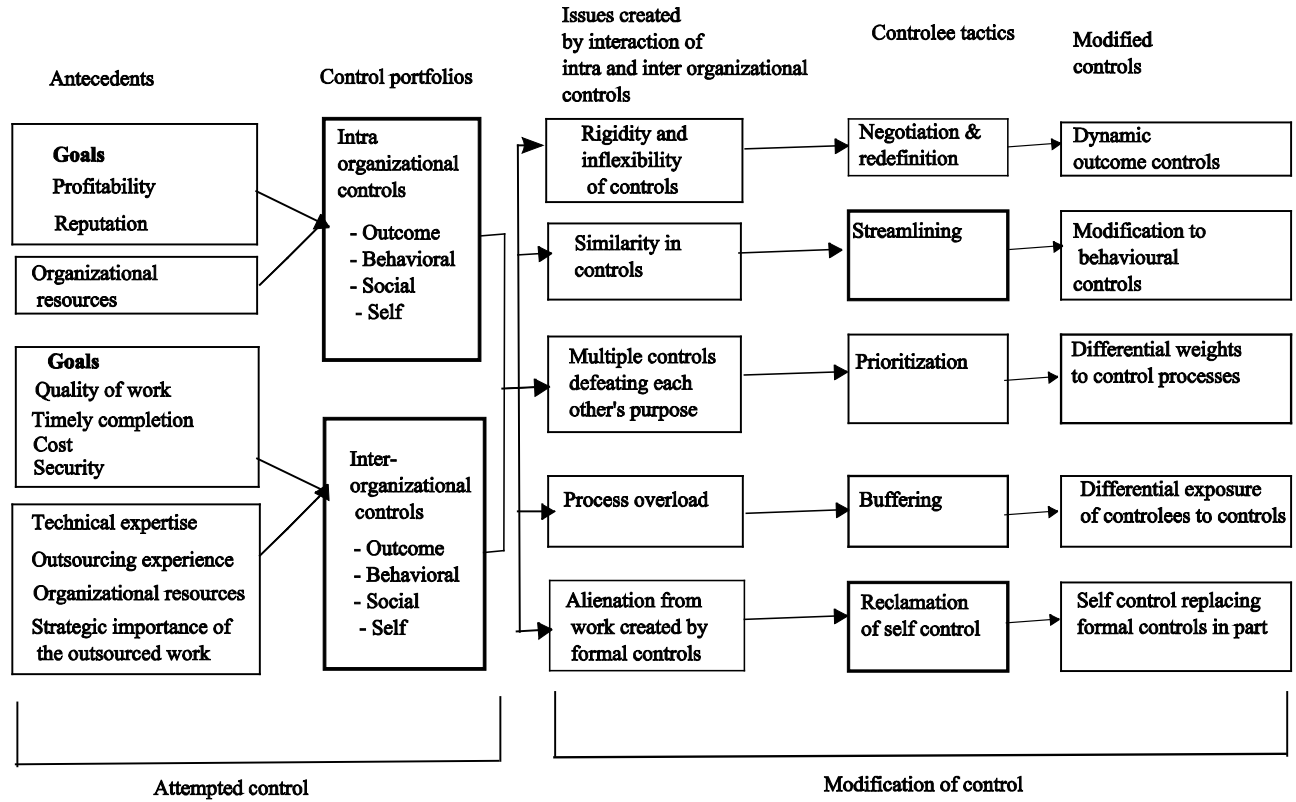
Table 1. Summary of research on controls in IS

Type of IS project	Internal		Outsourced	
	Early conceptualization	*Later conceptualization*	*Current conceptualization*	*Proposed conceptualization*
Location of work	IS department	Across IS and client departments	Vendor organization	Vendor organization
Conceptualization of control	Intra-departmental	Intra-organizational	Inter-organizational	Intra- and inter-organizational
Controlees	IS project team	IS project leader/team	Vendor organization	Vendor project team
Controllers	Members of IS department	Members of IS and client departments in the client organization	Client organization	Members of vendor and client organizations
Controller-controlee relation	Dyadic	Network	Dyadic	Triadic
Controller characteristics	IS manager – possesses formal hierarchical authority, technical know	IS manager – possesses formal hierarchical authority, ability to reward, project related knowledge Client – lack of hierarchical authority, inability to reward, less project related knowledge	Client –less project related knowledge, remote location, cultural differences, greater potential for goal incongruence	Vendor managers - possesses formal hierarchical authority, ability to reward, project related knowledge Client – lack of hierarchical authority, inability to reward individuals, but can impose sanctions to vendor organization, less project related knowledge, remote location, cultural differences, greater potential for goal incongruence
Research focus	Types of controls used (Outcome, behavior), impact on performance (Henderson and Lee, 1992)	Portfolios of controls used (Outcome, behaviour, clan, self), amount of controls used, predictors, outcomes (Kirsch, 1997, Kirsch et al., 2002)	Portfolios of controls used, evolution of controls (Choudhury and Sabherwal, 2003) Predictors, outcomes (Rustagi et al, 2008) Comparison of controls in internal and outsourced projects (Tiwana and Keil, 2010)	Effect of simultaneous presence of intra- and inter-organizational controls Agency of controlees

Table 2.Intra- and Inter-organizational controls

	Intra-organizational controls	Inter-organizational controls
Goals	Profitability, reputation	Quality of work, timely delivery, cost control (depending on contract type), security (depending on data sensitivity)
Modes of control and tools	Outcome control - Quality metrics - Milestone reports - Profit targets - Human resources usage tracking	Outcome - Functional specifications - Design documents - Project plan and timeline - Client testing - Service level agreements - Budget/ effort tracking - Sanctions
	Behavioral control - Process frameworks - Regular meetings (Status update, defect prevention) - Dedicated roles (Team Leads, Project Managers, Quality expert, Configuration controller) - Audits (Process/Quality/Tool usage/ Configuration control) - Integrated Project Management system - Centralised Time Tracking Tool - Performance appraisal - Promotion/career progression - Bonus	Behavioral control - Development methodology - Process framework - Standards and checklists - Tracking tools - Regular meetings - Periodic reports - Site visits - Audit (e.g. security) - Comparison of all vendors - Including vendor team members in the client teams
	Social/clan control - Corporate culture building - Training - Competitions/awards - Comparative indices (PICK index, tool index) - Client satisfaction surveys - Team portals - Dedicated HR expert - Performance appraisal	Social/clan control - Clear signals about vendor's strategic importance - Handover meetings/ trainings - Client visits - Interactions with onsite personnel - Influencing the vendor team structure - Selection/retention of key personnel
	Self control - Shared employee identity (ISCian) - Awareness building/training about professional standards - Knowledge sharing portal	Self control - Involvement in the selection of key personnel - Communication about acceptable professional conduct
Other antecedents	Organizational resources	Technical expertise Outsourcing experience Organizational resources Strategic importance of outsourced work

Figure 1. Empirical model for intra- and inter-organizational controls in practice

Antecedents

Goals
Profitability
Reputation

Organizational resources

Goals
Quality of work
Timely completion
Cost
Security

Technical expertise
Outsourcing experience
Organizational resources
Strategic importance of the outsourced work

Control portfolios

Intra organizational controls
- Outcome
- Behavioral
- Social
- Self

Inter-organizational controls
- Outcome
- Behavioral
- Social
- Self

Issues created by interaction of intra and inter organizational controls

Rigidity and inflexibility of controls

Similarity in controls

Multiple controls defeating each other's purpose

Process overload

Alienation from work created by formal controls

Controlee tactics

Negotiation & redefinition

Streamlining

Prioritization

Buffering

Reclamation of self control

Modified controls

Dynamic outcome controls

Modification to behavioural controls

Differential weights to control processes

Differential exposure of controlees to controls

Self control replacing formal controls in part

Attempted control

Modification of control

Research Office
Indian Institute of Management Kozhikode
IIMK Campus P. O.,
Kozhikode, Kerala, India,
PIN - 673 570
Phone: +91-495-2809238
Email: research@iimk.ac.in
Web: https://iimk.ac.in/faculty/publicationmenu.php