Conceptualizing IT Service Management as a Management Control System for Business-IT Alignment

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Abstract

The present paper advances a new conceptualization of IT Service Management (ITSM) as a Management Control System. The paper develops a conceptual model on the organizational impacts of ITSM. The model argues that reaching the organizational objectives of ITSM implementations, that is, increased IT function productivity, customer satisfaction and IT function responsiveness, requires the fit (conceptualized as profile deviation) of five ITSM controls which include: 1) values, 2) planning, 3) rewards and compensation, 4) cybernetic systems and 5) administrative controls. This paper helps unpack the black-box of ITSM by theorizing on the mechanisms that generate outcomes for organization.

Keywords

IT Service Management, Management Control System, Business-IT Alignment, IS Controls

Introduction

Information Technology Service Management (ITSM) is an approach to the management of an organization’s information technology (IT) function. It encourages IT managers and staff to consider the contribution IT services make to the goals of the organization. It is a significant change from the traditional approach for management of IT, which viewed the IT function as a cost centre responsible for the management of the collection of hardware and software assets in a cost effective manner (Iden and Eikebrokk 2015). ITSM assumes that there exists a common set of activities performed within any organization’s IT function, and that these activities should be formally defined and managed as processes in order to increase their consistency and efficiency (Iden and Eikebrokk 2015).

It is not certain that the organizational benefits that result from the adoption of ITSM are sufficient to justify the effort and expense required for implementation. The continued diffusion of ITSM can be interpreted as evidence that it is providing a positive contribution (Drechsler 2013) such as greater customer satisfaction and service quality, as well as increased time and cost efficiency for the IT function (Drechsler 2013; Iden and Eikebrokk 2013; Shahsavari and Ji 2014). However, the empirical evidence on the positive organizational impacts of the adoption of the ITSM remains mixed. Moreover, most prior research does not explain the mechanisms through which ITSM generates the positive impacts and instead treats the ITSM as a “black box” (Drechsler 2013).

This paper proposes a conceptual model that can guide further research into the organizational impacts of ITSM. The model draws on research from Management Accounting, Control Theory, and Business-IT Alignment and proposes to conceptualize ITSM as a Management Control System (MCS) (Grabner and Moers 2015). The model uses the typology of control mechanisms (Malmi and Brown, 2008) to categorize multiple dimensions of management practices in support of ITSM, and suggests that understanding the impacts of these controls requires the examination of their interactions (Grabner and Moers 2013). Finally, using three perspectives on alignment (Henderson and Venkatraman 1999), this paper argues that the ITSM is a MCS that is implemented by IT managers to promote Business-IT alignment.
IT Service Management

ITSM is an approach to the management of an organization’s IT related activities that focuses on the contribution of a portfolio of IT services to organizational goals. There is no single authoritative text defining the ITSM approach; numerous proprietary and open source frameworks provide guidance to organizations that wish to adopt ITSM. ITSM is service-centric in that it presents the IT function as a provider of IT services that enable business processes. It is also process-centric as the ITSM frameworks contain complex collections of interconnected processes, with associated roles, objectives and metrics. There are ITSM processes to manage the entire lifecycle of IT services; although, in practice, many ITSM implementations focus on the operational processes.

The empirical evidence of the impact of ITSM on organizations has been mixed (Iden and Eikebrokk 2013; Shahsavari and Ji 2014). For example, Eikebrokk and Iden’s (2017) survey found a relationship for some, but not all, ITSM processes and a multi-dimensional “benefits received” dependent variable. The reasons suggested to explain the inconsistent results include: 1) difficulties in the identification and measurement of organizational impacts (Gacenga et al. 2010); 2) variation in the evaluation of benefits by different stakeholders (Mcloughlin et al. 2014); and 3) the amount of time required for implementations and for outcomes to emerge (Mcloughlin et al. 2014).

Another possible reason for the inconsistent results, one that will be the focus of this paper, pertains to an incomplete conceptualization of ITSM, as judged by definitions of ITSM used in prior research. In effect, most definitions of ITSM identify its process-centric nature (Galup et al. 2007; Marrone and Kolbe 2011; Mesquida et al. 2012; Shahsavari and Ji 2014; Trusson et al. 2014), but overlook the fact that ITSM involves many other management practices, described in the next section as controls. Further, definitions of ITSM as a management discipline (Mesquida et al. 2012; Shahsavari and Ji 2014) or approach (Trusson et al. 2014) do not highlight the interconnected nature of the ITSM controls. This paper defines ITSM as a management control system comprising a set of controls that are used to influence the performance of the IT function of an organization in its delivery of IT services to support the organization’s business objectives.

Controls Theory and MCS

In IS research control mechanisms are “the specific actions in an IS process that aid management in achieving organizational objectives” (Cram et al. 2016 p.219). Controls are selected and implemented by a controller (the IT manager) specifically to encourage the controlee (IT employees) to act in ways that align with the desired outcomes of the organization. There are certain issues with past research into IS controls. The first is the narrow breadth of controls examined; Cram et al. (2016) found that 90% of articles on IS controls investigated controls in only three processes (IS development, IS outsourcing and IS security), which they map to six of the 37 processes presented in one ITSM framework. As processes differ in their inputs, activities and outcomes, it is not certain if insights from prior research on controls in three IS processes are transferable to controls in other IS processes.

A second issue is the tendency to study controls in isolation rather than investigating their interaction. The operation of individual controls may be affected by the presence of other controls. Where the control are interdependent and have been selected and implemented by the organization to work as a coherent group they are referred to in the Management Accounting literature as a Management Control System (MCS) (Malmi and Brown 2008). Empirically, if there are complementarity or substitution effects among the controls but they are examined in isolation, any observed relationships may be spurious as outcomes could be generated by another, unmeasured control (Grabner and Moers 2013).

A third issue with current IS control research is in the study of controls at the level of control mode. These control modes – behavioural controls, outcome controls, clan control, and self-controls (Kirsch et al. 2002) – are differentiated by the object or target of the control, that is, the controlee’s behaviour or outputs, or the controlee in relation to a group or themselves. Certain controls do not fit easily into one of the four control modes. For example, management may promote certain values and culture within the organization. This ought to be considered a control if it is done to influence employees to work towards organizational objectives, but it is not clear how this promotion of values by management fits into the four control modes.
There are other ways to categorize controls, including the typology of MCS controls developed by Malmi and Brown (2008) (table 1). This typology categorizes the controls by the nature of the practice rather than the target of the control. The five categories of controls are: values, planning, rewards and compensation, cybernetic systems, and administrative. Prior research has identified aspects of ITSM implementations that can be interpreted as controls; Table 1 also describes how these can be mapped to each of the categories of controls from the Malmi and Brown (2008) typology. The definition of ITSM as a MCS indicates that the controls are mutually reinforcing and that they operate to promote the organizational objectives of IT managers. The specific organizational objectives that can motivate the adoption of ITSM are described in the next section.

<table>
<thead>
<tr>
<th>Category of control (Malmi and Brown 2008, p. 291)</th>
<th>Practices Observed in ITSM implementations</th>
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<tbody>
<tr>
<td><strong>Cultural controls: Values, beliefs and social norms</strong></td>
<td>A core principle of ITSM is the focus on delivery of IT services to support customer requirements. In addition, Pollard and Cater-Steel (2009) found a relationship between organizational culture and ITSM implementation success.</td>
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<tr>
<td><strong>Planning controls: Long-range and action-planning</strong></td>
<td>Most ITSM frameworks identify specific processes to support planning in the IT function (Sallé 2004).</td>
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<tr>
<td><strong>Rewards and Compensation controls: rewards and sanctions to influence controlee effort</strong></td>
<td>A wage premium is paid to individuals who possess a formal ITSM certification or who have experience with ITSM (Galup et al. 2016 2016).</td>
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<tr>
<td><strong>Cybernetic controls: IS that report on process performance to allow management to develop process improvements</strong></td>
<td>ITSM implementations are supported by specialized software tools to direct employee activity (Trusson et al. 2014); these tools provide information on process performance that IT managers can use to guide process improvement (Marrone and Kolbe 2011).</td>
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<tr>
<td><strong>Administrative controls: Structures, policies and procedures that direct employee behaviors</strong></td>
<td>ITSM frameworks recommend the definition of decision rules for approving changes to IT services and responding to requests for IT services. The ITSM frameworks stress the definition of formal procedures and policies to govern each process.</td>
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Table 1. ITSM characteristics as controls

**Business-IT Alignment**

The controls of a MCS are imposed to assist managers to achieve desired organizational outcomes or organizational goals (Chenhall 2003). The specific organizational outcome suggested as motivating the implementation of the ITSM-MCS is to improve Business-IT alignment as described in Henderson and Venkatraman’s (1999) Strategic Alignment Model (SAM). The SAM depicts alignment between four domains; as ITSM is a process based approach to managing IT operations it would be considered part of the IS infrastructure and process domain (Kashanchi and Toland 2006). The SAM provides four perspectives on alignment, three of which involve the IS infrastructure and processes domain. Each type of alignment suggests a different role for the IT function along with a different measure of performance. Prior ITSM research has identified organizational impacts that can be matched to the performance measures of the alignment perspectives (Iden and Eikebrokk 2013).

According to the first alignment perspective, Strategic Execution Alignment, the objective of the IT function is maximizing cost-effectiveness in the delivery of IT services. In ITSM implementations, the creation of standard roles and processes can increase transparency within the IT function, which allows improved coordination that can generate lower costs and faster service delivery (Iden and Eikebrokk 2013). In the second alignment perspective, Technology Transformation, performance of the IT function is gauged by the technology leadership it provides in support of the business. The focus of ITSM is the delivery of IT services to support business objectives (Shahsavarani and Ji 2014). ITSM implementations have been associated with improved working relationship between IT and business (Gacenga et al. 2010), and increased flexibility and adaptability of IT services that increases the responsiveness of the IT function to changing business...
needs (Gacenga et al. 2010; Mesquida et al. 2012). The final alignment perspective is Service Level Alignment. Using this perspective, performance is assessed in terms of client satisfaction. Customer satisfaction and customer orientation are two frequently reported benefits of ITSM implementations (Iden and Eikebrokk 2013). The service orientation of ITSM focuses the attention of the IT function on organizational goals and the need to deliver services that meet customer needs.

Conceptual Model

The proposed conceptual model of the organizational impacts of ITSM is described in Figure 1. The factors in the model exist at the organizational level. The inputs in this model are the ITSM controls imposed by managers on the IT function, sorted into categories provided in the typology of control mechanisms (Malmi and Brown 2008). The organizational outcomes are the three identified in the previous section derived from the SAM (Henderson and Venkatraman 1999), i.e., improved productivity of the IT function, increased client satisfaction and improved responsiveness of the IT function to business needs. The relationship between the controls and their impacts is determined by the fit between the controls. As a MCS, the ITSM control mechanisms are implemented to operate as a coherent unit (Grabner & Moers 2013); however, there may be negative synergies where the presence of one control inhibits the operation of another. As there are multiple input variables that interact, and there are criterion variables against which to assess the performance of the interactions, we conceptualize and operationalize the relationship between controls and their outcomes as fit as profile deviation (Venkatraman 1989). This specification allows for the possibility that multiple configurations of controls can achieve each of the desired organizational objectives.

![Conceptual Model Diagram]

**Figure 1 Conceptual Model**

The intention of this article is to support future empirical research on ITSM by providing a precise definition ITSM and a conceptual model of the impacts of ITSM implementation. Additional work is underway to operationalize the concepts identified in the model, including the identification of profiles of interactions among the controls. This work includes a review of the most recent empirical research on ITSM in order to identify manifestations of the controls and outcomes suggested in the conceptual model. The review will also isolate the combinations of controls that have appeared together in individual cases, leading to testable hypotheses. The operationalization of concepts from past research will contribute to the improvement of this model. The model can then be tested in future case studies or surveys, which can explicitly search for evidence of each of the categories of inputs and outputs.

This research is expected to make three contributions. First, it will advance theorizing in ITSM research by suggesting characteristics of ITSM that generate outcomes for organizations (Drechsler 2013). The second contribution is to advance the study of controls in IS research. The model provides a distinctive view of IS controls and will consider controls applied across the full range of processes used within the IT function.
The final contribution is to advance research on Business-IT alignment by suggesting ITSM as a mechanism for promoting alignment at the operational level. Past research has suggested that the implementation of ITSM can improve Business-IT alignment; however, Iden and Eikebrokk (2013) have suggested for more research that would apply a theoretical framework to develop our understanding of how this is achieved.

REFERENCES


