

Impelling the Efficacy of IT Authority Practices over Directing Committees and Communication Strategies

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Abstract: Information technology (IT) governance performs involve efforts by officialdom's leadership to influence IT-related verdicts through the location of decision rights and the organization of decision processes. Our focus is on two specific aspects of IT power: IT directing committees and IT-related communication strategies. Accepting an inductive research strategy inspecting qualitative data, we provide suggestion on the influence of these governance practices from three small-/medium-sized organizations. While each firm showed a centralized IT governance stance, differences in these firms' IT steering committees and governance-related communication policies were found to explain changes in the firms' IT use outcomes. Implications from our findings are presented in the form of proposals informing future research.

Keywords- IT governance; IT use; steering committee; senior management involvement; communication practices; small- and medium-sized enterprise (SME)

I. INTRODUCTION

Organizations design and organize information technology (IT) governance mechanisms as a means of justifying, directing and coordinating an organization's IT-related decision making. Well-designed and arranged IT governance mechanisms are anticipated to produce IT-related assessments, actions and assets that are more tightly connected with an organization's strategic and tactical intents. Such governance mechanisms are directed to a variety of IT-related issues, including but not limited to the way by which critical IT decision procedures are carried out, the procedures put in

place to guide these decision methods, and the task of liabilities and participation rights concerning these decision procedures. A governance mechanism said integral to an effective system of IT authority is the IT directing committee, or a body encompassed of senior executives/managers organized to supervise and coordinate IT-related activities. While prior research has encouraged and stated the beneficial effects of IT directing committees in leveraging the use of IT in support of business purposes, experiential examination of the nature and impact of IT directing committees remains rather limited. The key research objective of this study is to better understand the nature of effective IT steering committees. A second element of IT governance practice that we consider influence an organization's possibility of adopting significant value from its asset in and use of IT is the way by which IT related strategies, guidelines and events are communicated to employees. Consistently, we expect that the manner by which IT governance policies, guidelines and procedures are distributed across an organization will be perceived to influence the organization's success in arranging IT. As little prior information systems study has examined IT governance-related communication practices, an ancillary research objective is to better understand the nature of effective IT governance communication policies. While most research on IT governance has been steered within large enterprises, we chose to examine small- and medium-sized

enterprises (SMEs) exactly because smaller organizations are likely to possess simpler organizational structures and decision methods compared with those of larger enterprises, thereby allowing for a greater transparency (and interpretability) of the nature and effect of IT governance practices. Another benefit resulting from examining IT governance within the SME framework is that we also evaluate the extent to which what has been learned about IT governance from studies of larger initiatives might be generalized to SMEs. In the succeeding sections, we first provide outlines of what is currently known about IT authority, IT directing committees and the SME context. We next describe three phenomenon's, and then use interpretations drawn from within and across case analyses along with existing theory and the logic of initiation to propose research propositions regarding current IT governance practices related to steering committees and the propagation of IT policies, guidelines and procedures. We accomplish the paper with the discussions of what was learned as well as the effects of these learning's for research and practice.

i. IT Governance:

The goal of IT governance is to direct and manage an organization's IT-related decisions and actions such that anticipated activities and outcomes are realized. The design of IT governance systems comprises three primary issues: defining which IT-related decisions are to be addressed through governance mechanisms, defining which entities are allocated decision rights for these decisions and the nature of the verdict rights, and defining how related decision procedures are to be arranged such that the appropriate individuals are involved and that these individuals recognize the inferences of possible actions to all investors. Research on IT governance can be traced back to the 1960s with scholars examining, among other issues, the nature of IT governance, essential options for IT governance and the drivers of IT governance structural forms. Prior research has also made very clear the intricacies associated with planning and carrying out actual systems of IT governance. Effective IT governance practice is focused at certifying that authorized policies,

procedures and strategies are observed with across multiple organizational domains and the multiple executive levels associated with these domains. Current governance mechanisms must carefully balance the existing pressures toward centralization and decentralization that consistently play out within organizations. As described by Brown and others, integrated IT decision making tends to produce enterprise-wide efficacies but sub-optimizes with regard to local work units; while distributed IT governance tends to improve with regard to local work units but yields enterprise-wide inadequacies. Such enterprise-vs.-local pressures are a regular theme of the IT governance research. It is well renowned that an effective system of IT governance must be directed toward inducing the formal and informal behaviors of individuals engaged with IT-related decision procedures. Prior information systems research has consistently perceived the value of regular interactions between IT and business managers/professionals. In particular, it is generally believed that the extent to which organizations are able to use IT effectively in supporting both their plans and day-to-day operations entails the building of strong relationships between senior IT executives and senior business managers. A very powerful approach to build and then reinforce such informal relationships is through collaboratively involving the battered individuals in formal decision procedures such as those related with IT governance. In summary, present information systems research examining IT governance practices has dedicated on the examinations of how different structural measures and interpersonal relationships function in balancing the enterprise vs. local work unit tensions that encompass IT-related decision making and action.

ii. IT Directing Committees:

IT steering committees are regularly encouraged as effective governance mechanisms for supporting IT-related decisions and actions with an organization's tactical and operational priorities. As typically described, the IT steering committee is a formal body that meets on a regular basis to discourse specific IT-related issues, and whose members

interact during these discussions to ensure that represented interests and views are heard. In core, an IT steering committee functions as a 'board of directors' for precise spheres of IT-related activities in setting policies, sharing resources, observing performance and otherwise enabling inter-unit organization. Without steering committees, individual managers are left to decide isolated issues as they arise, and those individual actions can often be at odds with each. Firms using IT steering committees have been found to display greater business executive attention to IT-related activities, a greater obligation to IT planning practices, and a forward-looking IT project portfolio. In addition, steering committees can prove vital in establishing the tone of business-IT relationships.

The design (i.e., specifications of intent, the specific activities to be undertaken, who contributes in these activities and how these activities are to be carried out) of IT steering committees fluctuates considerably. Some prior research has been focused at understanding the nature of effective IT steering committees. It has been perceived that steering committees largely encompassed of enterprise-level applicants stress enterprise regulation and efficacy in arranging IT assets and abilities, while steering committees largely encompassed of operating area contributors focus on how best to allocate IT assets and skills in improving operational performance. To summarize, IT steering committees serve to direct, organize and provide lapse regarding specific IT-related activity domains through the creation of media involving executives, managers and experts holding contrary vested interests and views. While the value of using IT steering committees is generally recognized, limited information systems research exists on their design.

II. The SME Context

Generally, the term SME applies to firms employing fewer than 500 workers. The organizational (i.e., institutional and managerial) structures of SMEs are dissimilar from those of large enterprises in a number of important ways. Along with flat organizational structures and simple organizational

processes, SMEs tend to show rich information networks (employees at all levels are likely to cooperate with one another on a regular basis) and a high degree of internal transparency (employees at all levels are likely to be more conscious of others' work assignments and roles, perspectives and taken decisions) thus allowing synchronization in the absence for formal rules and events. The SME owner/CEO has significantly more personal influence over a firm's plans, tactics and operations than her peers in larger enterprises as well as significant personal chance to engage in decision processes across the firm. As a result, although a flat, informal organizational arrangement is likely to exist, decision making tends to be quite unified around the owner/CEO, which provokes centralized IT governance structures.

Relative to larger enterprises, SMEs tend to be inhibited regarding their legacies of financial resources and IT capabilities, stimulating many SMEs to maintain quite small internal IT groups and to make widespread use of wrapped solutions, third-party service suppliers and external consultants. Always, the work processes and decision processes connected with this internal IT group tend to be less mature, lacking both precision and consistency, compared to IT groups in larger organizations. As a result, the overview of new IT-enabled business solutions often occurs in an uneven manner without regular, strategic precaution. To summarize, SMEs are associated with a number of features that distinguish them from larger organizations. The decision structures of SMEs tend to be integrated, flat and informal. Financial restrictions limit their abilities to invest in IT. Finally, the internal IT groups of SMEs often lack process maturity and a long-term focus.

III. SPECIFICATION OF CONSTRUCTS

Following Bourgeois & Eisenhardt, we acknowledged four potentially important constructs from the literature that were related with our research questions: IT governance structure, senior management involvement in IT governance processes, IT governance communication policies and practices, and

success in IT use. A description of constructs helps shape the research design and analysis, and permits constructs to be composed and measured in a more reliable fashion than would otherwise occur. Brief accounts of these constructs are now provided.

i. IT Governance Structure:

IT governance structure deals with the decision-making structures (or, decision loci) assumed for IT-related decisions. Previous IT governance studies indicate that the three most predominant governance structures are centralized, decentralized and hybrid structures. With centralized governance structures, IT decisions imitate a top-down, enterprise-wide perspective. With dispersed governance structures, IT decisions reflect a bottom-up, local work unit perspective. While the centralized and decentralized governance structures by definition are mutually exclusive, an organization's serious IT decisions can also be arranged through a third type of governance structure, the hybrid structure, also denoted to as the federal mode. Hybrid governance structures can refer to a range of alternative structures, most typically; collaboratively appealing participants holding enterprise-wide perceptions with applicants holding local perceptions, concurrently using unified governance structures for some IT decisions and dispersed governance structures for other IT decisions, or applying both of these designs.

Prior research specifies that the integrated and decentralized governance structures tend to be linked with distinct advantages and disadvantages. With centralized structures, IT decisions are accomplished from an enterprise-wide view, ideally producing operational efficacies, economies of scale and scope, and enterprise-wide collaborations but suppressing local sovereignty and frequently producing ideal responses to local needs. With dispersed structures, IT decisions ideally provide the local control necessary to achieve flexibility and customization in responding to customer and economical requirements but at higher operational costs credited to dismissals regarding IT

assets and solutions. Hybrid governance structures, if well-designed, provide the potential for gaining the advantages from centralized and decentralized governance structures while reducing allied disadvantages

ii. Senior Management Involvement in IT Governance Processes:

Senior management contribution refers to firms' senior executives individually engaging in decision-making processes regarding IT-related issues. This involvement finds participating senior managers act together with one another in framing and then thinking IT-related issues and occurs through formal and informal pathways. Formally, these senior managers interact through their participation on established IT governance bodies, such as IT steering committees, that shape and direct IT-related plans, policies and actions. Informally, these senior managers interact while carrying out their day-to-day work tasks. Advantages exist for senior managers to become engaged with IT decision making both formally and informally. Organizations frame and device formal policies, guidelines and procedures as a means of handling with environmental hesitation so as to reduce the uncertainties and risks otherwise met. Casual interactions, however, provide for a flexibility that is often valued in being able to quickly adapt to fluctuating circumstances. Experimental evidence exists that indicates creating formal policies, guidelines and procedures are allied with improved IT-related organization act.

iii. IT Governance Communication Strategies and Practices:

Extensive organization science research has made clear the value of collective mental models in enabling two or more interacting individuals to cooperate efficiently. In order for a common understanding of apt IT-related behaviors to frame the interactions of individuals involved in IT-related activities, it is necessary that these strategies, guidelines and procedures regarding authorized IT behaviors be broadly dispersed. IT-related policies, guidelines and procedures can be interconnected to an organization's members through a variety of communication channels, each of which is

considered by distinguishing attributes. It is expected that the nature of the communication channels being used will impact the success achieved by an organization from its IT deployments.

iv. Success in IT Use:

There are numerous ways of evaluating organizational success in IT use. Following Edmondson, we consider efficiency and breadth of IT use. Efficiency of IT use refers to the extent to which cost and throughput advantages increase in the deployment of IT possessions and capabilities. Breadth of IT use imitates the extent to which IT possessions and capabilities are used in supporting work processes across the organization. Underlying the breadth of IT use construct are two different contexts: breadth in current IT use, and breadth in potential IT use. 'Current use' positions work processes currently empowered or supported via IT, and 'potential use' references work procedures not currently enabled or supported via IT but for which IT enablement/support is desirable.

IV. DATA ANALYSIS

Our search for outlines in the collected data focused on accepting both how IT governance practices were related with success in using IT and how the relationships various across the three case sites. Table 1 provides the results of investigating the implied interview data. Our discussion of data patterns draws from these coding results as well as from interviewees' remarks.

4.1. IT Success:

As a group, the three organizations accomplished best in terms of the efficiency in IT use, next with respect to current breadth in IT use and least regarding latent breadth in IT use. We did observe variances in these organizations' relative success in arranging IT. Pharmacy did best regarding both the efficiency of IT use and the breadth of current IT use, but was very inadequate in its breadth of potential IT use. Both interviewees from effective areas indicated efficient use of IT within the organization. In total, five effective areas were identified as currently using IT: payroll, HR, security, operations and

Intranet. None of the interviewees identified potential future uses of IT. HealthCare performed discreetly well in all three performance categories and was observed best regarding the breadth of potential IT use. Most aspirants reported average performance on IT efficiency. In addition, two functioning areas were identified for potential IT use: clinical services and financial. Agriculture was observed to perform moderately well concerning efficiency in IT use as reflected in the following comments. We got people who come up with lots of good ideas to let us do better within the division. Director of Agricultural Division, Agriculture However, we observed Agriculture to have narrow performance regarding current breadth of IT use (in two areas: conducting research projects and dissemination of research outcomes) and very limited performance (no identified operating areas) concerning potential breadth of IT use.

4.2. Senior Management Involvement in IT Governance Processes:

Interviewees showed senior managers were involved with IT decision making at all three sites through formal governance bodies such as IT steering committees, through informal ways via personal relationships sophisticated by the CIO, or both. Both official and informal senior executive involvements were observed at Health-Care and Pharmacy, whereas informal senior management participation alone was observed at Agriculture. Formal IT steering committees enable joining senior managers to meet regularly to discuss debate and subsidize to IT decisions thus providing a periodic mechanism through which the CIO cooperates with other senior managers. As defined below in the remarks from the HealthCare CIO, HealthCare's IT steering committee entailed of the CO Officers including the CIO. Divisional/operating senior managers had limited direct contribution in setting IT-related directions for HealthCare. Through the IT steering committee, the COs at HealthCare formally sees and takes action on IT-related issues. The IT steering committee is made up of the CEO, the COO, the CFO, and the CIO. We jointly make those decisions. Periodically, depending upon the issue or project,

we have people come in and participate. But it's senior level managers (who are associated with a specific project) that participate. Our goal is to mainly give guidance and direction for technology in the company. An IT steering committee also existed at Pharmacy.

Although decision rights were held by the CIO, divisional/ operational senior managers were directly engaged in IT decision processes through interfaces and discussions enabled via this committee. Unlike HealthCare, however, enterprise-level senior management other than the CIO had limited direct participation in setting IT-related directions for pharmacy. They do have a committee that when people look at diverse systems and select overall IT resources, we have a committee made up of different functional areas. The committee has somebody from manufacturing, quality, maintenance, IT, and accounting. The nature of that group is to look at the various anxieties on IT. One issue that we had is one group wants to do one thing, and they have effects on each other, and they didn't know they did. So IT creates this board so that everybody would know what's going on, and everybody has input to what projects will be worked on, where we are going to spend our resources. The committee meets once a month. As was observed with Agriculture, however, not all SMEs establish formal steering committees for IT decision making. Nevertheless, the CIO benefits considerably from interacting with business peers in bring into line the business and IT.

V. ASSOCIATED PROPOSITIONS

Proposition 1: Administrations applying integrated IT decision structures will be observed to exhibit proficiencies in IT use.

Despite the cohesion of centralized IT decision structures observed with the case sites, variances were observed in the relative success in IT use realized by these three firms. We now draw general inferences associated with the manner by which variations in both senior management

involvement in IT governance and IT governance communication policies are associated with success in IT use.

Proposition 2: Comprising senior managers both formally and informally in IT-related decision processes will produce greater levels of achievement in IT use than will only involving senior managers informally in these decision processes.

When firm's senior managers are connected through both fundamental and relational embeddedness, a consistency in organization-wide IT norms and values is more likely to arise as IT-related decisions and actions are essentially adjusted in meeting and coordinating across the needs of specific work units. Enterprise standards about IT use are more likely to reflect a combination of enterprise and local perspectives, and an enterprise-wide understanding of the position of IT and how IT should be used is shaped. With a steady enterprise perspective framing IT use decisions, gains in a firm's efficiency of IT use is more likely to be perceived through a greater leveraging of installed IT assets, and gains in a firm's breadth of IT use is more likely to be observed through a keen diffusion of ideas, experiences and expectations regarding IT deployment. These arguments lead to our second proposition

Proposition 3: Greater participation of enterprise-level senior managers in IT governance processes through IT steering committees will increase the breadth of potential IT use.

Evidence from our study also shows that who is involved in formal IT steering committees is also important in elucidating variation in an organization's success in using IT. As reported, pharmacy overtook HealthCare with both the efficiency of IT use and the breadth of current IT use but not with the breadth of potential IT use. At HealthCare, enterprise-level senior managers contributed in the IT steering committee whereas at pharmacy operational/functional senior managers contributed. While enterprise-level senior managers are likely more knowledgeable than operational-level senior managers about enterprise-wide IT issues, they may lack deep knowledge of how IT can be and is being used within

operating units to improve these units' performance. Further, as they hold an enterprise-wide view and have access to enterprise resources, enterprise-level senior managers are better positioned to explore, dissect and direct new uses of IT; we thus state the above proposition 3.

Operational executives, on the other hand, are anticipated to have a deeper understanding of local issues (IT-related and otherwise) but lack a broad, enterprise view regarding IT use. Given that operational senior managers are dedicated on meeting current operational and budget performance targets, it is expected their primary objectives in exploring, separating and directing IT use will focus on already-installed and currently-being -implemented applications targeted at augmenting operating area performance. As a result, we expect that,

Proposition 4: Greater contribution of operational-level senior managers in IT governance processes through IT steering committees will progress the breadth of current IT use.

It is also remarkable that while Agriculture used more channels to communicate IT policies, guidelines and practices than did HealthCare, Agriculture was found to show lower success than HealthCare regarding current and potential breadth of IT use. What Agriculture did not consume were electronic channels, whose use was perceived with both HealthCare (email) and pharmacy (email and Intranet). Very possibly, it is the greater availability of electronic channels that may have amplified the likelihood that IT governance policies, guidelines and procedures are attended to and useful by individuals in stimulating and framing IT-related decisions and actions. In other words, the more available are IT governance strategies, guidelines and procedures, the more likely it is that organizational members will be aware of senior managements' and others' prospects regarding the potential for using IT to support work activities as well as the processes to be followed in making IT-related decisions. With such responsiveness, organizational members will use IT broadly, which is likely to generate network externalities and increase the areas in which IT can be used. Network externalities will

also create new opportunities for leveraging existing IT platforms. Therefore, we expect that:

Proposition 5: Communicating IT governance strategies, guidelines and practices through electronic communication channels will mend the breadth of IT use.

VI. CONCLUSION

The suggestion from this study leads us to the following conclusions. First, we authorize an anticipation that IT governance structures in SMEs would tend to be integrated rather than decentralized or hybrid. Second, in inspecting the formal/informal nature of SME IT steering committees, we expose the value of creating formal governance mechanisms along with simplifying the development of personal relationships across an organization's IT and business senior managers. Third, we perceived that the senior manager's participating on a SME IT steering committee formed differences in the perceptions adopted and the concerns addressed by these committees. Stated most simply, IT steering committees comprised of executive-level participants seemed to adopt a broader, longer-term alignment while committees comprised of operating-/functional-level executives appeared to adopt a narrower, shorter-term orientation. Finally, we perceived that the SMEs whose IT governance policies, guidelines and procedures were generally distributed to and easily retrieved by organizational members tended to exhibit greater success in IT use.

Many, perhaps most, IT-related decisions are taken outside of prohibited governance negotiations and instead are largely framed, situated and exercised within senior managers' day-to-day work practices. If certified IT strategies, guidelines and practices have not been widely spread or are not readily accessible, then it is less likely that reliable frames of reference will be applied by individuals involved in IT-related decision making. Through our examination of IT governance practices in SMEs, we have created a number of new intuitions regarding senior manager involvement in IT governance and concerning the manner by which IT governance strategies, guidelines and procedures as well as the

taken IT governance verdicts are communicated to structural members. We genuinely hope that these notions prove to be of interest and use to researchers interested in better understanding the value-adding nature of the IT governance mechanisms being positioned by organizations in order to better align IT-related verdicts with current operative goals and with future approaches.

REFERENCES:

- [1] Agarwal.R and Prasad (1998). The Antecedents and Consequents of User Perceptions in Information Technology Adoption Decision Support Systems 22, 15-29.
- [2] Armstrong CP and sambamurthy V (1999) Information technology assimilation in firms: the influence of senior leadership and IT infrastructures. *Information Systems Research* 10(4), 302-327.
- [3] Bianchi C (2002) Introducing SD modeling into planning and control systems to management SME's growth: a learning-oriented perspective. *Systems Dynamics Review* 18(3), 403-429.
- [4] Bostrom RP and Heinen JS (1977) MIS problems and failures: a socio-technical perspective, Part I - the cause. *MIS Quarterly* 1(3), 17-32.
- [5] Bourgeois LJ and Eisenhard KM (1988) Strategic decision processes in high velocity environments: four cases in the micro computer industry. *Management Science* 34(7), 816-835.
- [6] Brown AE and Grant GG (2005) framing the frameworks: a review of IT governance research. *Communication of the Association for Information Systems* 15, 696-712.
- [7] Brown CV (1997) examining the emergence of hybrid IS governance solutions: evidence from a single case site. *Information Systems Research* 8(1), 69-94.
- [8] Brown CV and Magill SL (1998) Conceptualizing the context-design issue for the information systems function. *Organization Science* 9(2), 176-194.
- [9] Cannon-bowers JA, Salas E and Converse SA (1993) Shared mental models in expert team decision making. In *Current Issues in Individual and Group Decision Making* (CASTELLAN NJJ, Ed.), pp. 221-246.
- [10] Granovetter M (1992) Problems of explanation in economic sociology. In *Networks and Organizations: Structure, Form, and Action* (NOHRIA N and ECCLES RG, Eds), pp 25-56, Harvard Business School Press, Boston, MA.
- [11] Huang R, Zmud RW and Price RL (2009) IT governance practices in small and medium-sized enterprises: recommendations from an empirical study. In *Information Systems - Creativity and Innovation in Small and Medium-sized Enterprises* (DHILLON G, STAHL BC and BASKERVILLE R, Eds), pp 158-179, Springer, New York.
- [12] Kearns GS and Sabherwal R (2007) Antecedents and consequences of information systems planning integration. *IEEE Transactions on Engineering Management* 54(4), 628-643.
- [13] Sambamurthy V and Zmud RW (1999) Arrangements for information technology governance: a theory of multiple contingencies. *MIS Quarterly* 23(2), 261-290.
- [14] Weill P and Ross JW (2005) .A matrixed approach to designing IT governance. *Sloan Management Review* 46(2), 26-34.
- [15] Zmud RW, Boynton AC and JACOBS GC (1986).The information economy: a new perspective for effective information systems management. *Data Base* 18(1), 17-23.

Table 1: Comparison Table

FACTORS	HEALTHCARE	AGRICULTURE	PHARMACY
Governance	IT decisions were together made (centralized) by corporate managers and the CIO.	IT decisions were made (centralized) by the CIO only	IT verdicts were made (centralized) by the CIO only
Formal senior management involvement	Corporate executives & the CIO were involved through a formal IT steering committee	There was no use of an official IT steering committee	The CIO & regional executives were involved through a formal IT steering committee
Informal senior management involvement	Corporate executives were engaged with the CIO through individual interactions	Divisional executives were engaged with the CIO through particular interactions	Divisional executives were involved with the CIO through personal interactions
IT governance communication channels (policies, procedures)	communication is through email & word of mouth	communication is through paper forms, formal meetings & word of mouth	communication is through Intranet, paper forms, formal meetings & word of mouth
Breadth of Potential IT use	Two areas of probable use of IT, demonstrating moderate breadth of potential use	Zero areas for potential use of IT, representing very limited breadth of potential IT use	Zero areas for probable use of IT, indicating very limited breadth of potential IT use