

## **Arrangements for Information Technology Governance: A Theory of Multiple Contingencies**

*Johannes D, Business Advisory, Businessoft Consulting*

Business world today identifies a need of IT use. It is clear that IT is transforming the business. Since IT offers both opportunities and threats, effective IT governance is required to deliver IT benefits. Enterprises have to understand this issue deeply in wider business perspective in order to successfully implement IT. Effective IT governance can be achieved through enterprise's ability in identifying, analyzing and dealing with all related factors influencing IT governance arrangements. According to theory of multiple contingencies, an enterprise is subject to impact of some contingency forces by strengthening, weakening, or overriding their mutual effects on the IT governance mode. This paper is a critique about Sambamurthy and Zmud's research to examine IT governance mode based on this theory in relation to effective IT governance and management. They believe that this approach can be used to explain many different IT governance mode phenomena.

Sambamurthy and Zmud (1999) strongly argue that in practice, a mode of IT governance is determined by multiple rather than singular contingency force. They examine overall effects of some contingency forces on IT governance mode decision making. By identifying and understanding these multiple contingency forces and their complex interactions, an enterprise implements particular mode of IT governance in order to effectively organize and integrate all sources, thus solving major problems within its process. They acknowledged key factors influencing IT governance arrangement as contingency forces. Their research provides explanations of how different level of contingency forces play important roles in shaping IT governance arrangements. They argue that better understanding of this process will help an enterprise to develop suitable IT governance mode.

Their research indicated that outcomes rest critically on the interlinked particular mode of IT governance and its key determinants. They explored how these key determinants interact with the enterprise policy to shape IT governance mode. They argue that key determinants have potential to render particular mode of IT governance. Consequently, using particular mode that does not accommodate these key determinants, an enterprise will encounter major failures and disadvantages.

It is critical to examine the influencing factors of IT governance performance (Kakabadse and Kakabadse, 2001). Such factors were addressed by Sambamurthy and Zmud as determinants of the modes of IT governance arrangements. These determinants are corporate governance, economies of scope and absorptive capacity. Corporate governance consists of overall governance mode and enterprise size. Economies of scope include exploitation strategy for scope economies and diversification mode and breadth. Absorptive capacity is seen as line IT knowledge. However, Starre and Jong (1998) have different determinants in examining the influence, such as the country where the enterprise is established, the enterprise size, ratio of IT costs versus operational costs, the intensity which IT is used in the company and corporate governance structure. Some determinants identified by Starre and Jong (1998), such as the enterprise size, corporate governance structure and ratio of IT costs versus operational costs, could not be used to predict the outcomes. Sambamurthy and Zmud's thesis about reinforcing, conflicting and dominating contingencies could be used to explain these phenomena, thus providing better understanding in seeing the importance of key determinants and its relevancy with the outcomes.

Sambamurthy and Zmud's research reinforced the validity of multiple contingencies theory. This theory offers three different characteristics –reinforcing, conflicting and dominating contingencies– identifying different level of impact for each determinant and its overall influences. Since it is assumed that enterprises carefully consider multiplecontingency

forces of IT governance mode, effectiveness of IT governance is determined by their ability in choosing particular mode of IT governance that suits these contingencies forces. Consequently, this particular mode of IT governance offers the best way exploiting potential benefits of IT and managing its risks.

Sambamurthy and Zmud (1999) argue that both reinforcing and dominating contingencies will force enterprises to adopt either a centralized or decentralized IT governance mode. An enterprise deals with reinforcing contingencies when multiple contingency forces exhibit similar influence on IT governance mode. In dominating contingencies, there are major contingency forces influencing IT governance mode. Ignoring these major contingencies, an enterprise will encounter high costs and high rates of failure. On the other hand, they argue that conflicting contingencies will force enterprises to adopt a federal mode of IT governance, where particular IT decisions and projects are centralized and others are decentralized. An enterprise deals with conflicting contingencies when multiple contingency forces having conflicting influence are salience. As a result, a centralized or decentralized IT governance mode will not be suitable.

As Kakabadse and Kakabadse (2001) argue that integration between IT governance and business is crucial in successfully achieving enterprise goals, Sambamurthy and Zmud's argument support this thesis by focusing enterprise awareness in exhibiting IT governance regarding its business. Sambamurthy and Zmud (1999) argue that executive managements consider impacts of particular mode of IT governance to its organization and business activities. They concluded that executive managements also acknowledged the need to integrate diverse interests within organization by critically and carefully analyzing and evaluating these determinants and possible modes of IT governance.

In addition, they believe that further development and evolution of business and technology will alter the nature and salience of multiple contingency forces, demanding reevaluate and restructure of IT governance arrangement. They suggest senior executives have to play important role in this process regarding effective IT governance. Similarly, Gaynor (2002) believes that executive managements have to continuously evaluate their responsibilities and roles to provide effective IT governance with meaningful integration with corporate governance.

It is also essential that boards and executive managements recognize potential IT risks (Machin, 1998 and Payne, 1998). Both Machin (1998) and Payne (1998) argue that IT risk management also needs to focus more on the wider business issue and IT governance has not been treated separately from business core. Using outcomes from their research, Sambamurthy and Zmud (1999) believe that senior executives responsible for IT governance arrangements must be vigilant in understanding these salience and their implications of multiple contingency forces impacting their enterprises. Furthermore, they believe that senior executives must realize the need of making adjustments in IT governance in order to maintain a dynamic alignment with their organization and business nature.

Effective IT governance insists thoughtfully IT domains and IT governance mode (Weill, Broadbent and Blosch, 2003). Such decision is crucial because can easily create values or failures. Adopting right IT governance can reduce complexity in making decisions about IT projects. Sambamurthy and Zmud (1999) argue that adopting IT governance mode using multiple contingency forces approach is important. Right IT governance arrangement will effectively organizing, managing, integrating and controlling IT projects and business.

However, this research has some weakness that have been addressed by Sambamurthy and Zmud, such as subjectively assessment of these contingencies forces, researcher's bias, limited data and relatively small number of case sites. There is a strong tendency for enterprises to distort these contingencies and their salience. It is also possible

that enterprises might not identify all contingency forces in the face of unforeseen contingencies. There is might be in the form of hidden contingency forces which leads to adverse selection of IT governance mode. Furthermore, all future contingencies were not accounted for in their research. Enterprises must have limitation to specify every possible contingencies and actions to be taken for each contingency specified. Such limitation will be greater if the nature of contingency forces change more rapidly. In some cases, multiple contingency approaches will outweigh the IT benefits. Another weakness is difficulties in measuring these contingencies since its impacts will be different to each enterprise. It is also difficult to measure how conscious these enterprises adopting IT governance mode because of their contingencies forces. The more conscious an enterprise, the more effective will be the IT governance arrangement. Such model that can be used as designing effective IT governance framework is addressed by McKay, Marshall and Smith (2002). Uncertainty and complexity make it also very difficult and expensive to identify and measure all possible contingencies.

Implications for both research and practice have been acknowledged by Sambamurthy and Zmud. Their study provides a robust conceptual mode using multiple contingencies theory to understand the way of enterprises select particular IT governance mode. They also identified three major determinants that have to be examined in designing IT governance mode. However, further study has to be done in order to have better understanding and provide more robust idea. Enterprises can use their study and suggested approach in adopting particular mode of IT governance using multiple contingencies theory, thus providing them with effective IT governance.

I believe that IT governance is very important issue and currently relevant not only to IT people but also executive managements. Therefore, they should be responsible for developing effective IT governance. Moreover, the alignment of IT and corporate governance is another issue that should be well addressed since not many boards and executive management are aware of it. This may result in high rates of failure in developing IT projects or integrating IT to the business itself. However, I believe that the importance of key determinants in shaping IT governance mode has different roles to organization regarding the need and meaning of IT values. Such enterprises that have higher level of these values will obviously realize the importance of key determinants in shaping IT governance mode. On the other hand, enterprises that have lower level of these values not necessarily realize its importance. These enterprises might adopt particular mode of IT arrangement with less correlation with this theory. Such phenomenon is addressed by Starre and Jong (1998). One reason for these outcomes is lack of understanding the importance of these issues. Another reason is developing IT governance using this suggested approach could outweigh IT benefits since IT has less risks, impacts and relevancy to the business, thus might lead to ineffective IT governance.

I believe that there will be increased need and complexity of IT use in business world. There will be greater disadvantages not using IT as business tools. This situation will push toward the importance of effective IT governance using suggested approach based on theory of multiple contingencies.

### **Reference List**

IT Governance Institute (2003), "IT Governance Executive Summary", [URL: <http://www.itgovernance.org/itgovexecsummary.pdf> (Accessed: 20/03/03)].

IT Governance Institute (2003), "Board Briefing on IT Governance", [URL: <http://www.itgovernance.org> (Accessed: 20/03/03)].

Gaynor, Donard (2002), "IT Governance", Accountancy Ireland, Vol. 34, Iss. 4, p. 28.

Kakabadse, Nada Korac and Kakabadse, Andrew (2001), "IS/IT Governance: Need for An Integrated Model", Corporate Governance, Vol. 1, Iss. 4, pp. 9-11.

Machin, John (1998), "IT Revolution versus Boardroom Evolution", Balance Sheet, Vol. 8, Iss.2, pp. 38-41.

McKay, Judy, Marshall, Peter and Smith, Lisa (2002), "Steps Towards Effective IT Governance: Strategic IT Planning, Evaluation and Benefits Management".

Nigel, Payne (1998), "IT Governance and Audit", Accountancy SA, January 2003, p. 35.

Salvatore, D. (2001), "Managerial Economics in a Global Economy", Harcourt College Publishers, Forth Worth, USA.

Sambamurthy, V and Zmud, Robert W. (1999), "Arrangements for Information Technology Governance: A Theory of Multiple Contingencies", MIS Quarterly, Vol. 23, No. 2, pp. 261-290.

Starre, Danny and Jong, Berend de (1998) "IT Governance and Management", Research Memoranda of Nolan Norton Institute, [URL: <http://www.nnc.kpmg.nl/3intell/pages/rm/pdf/govern.pdf> (Accessed: 20/03/03)].

Weill, Peter, Broadbent, Marianne and Blosch, Marcus (2003), "How to Achieve Effective IT Governance?", FT.com, Jan 12, 2003.