

Investigation of the Relationship between IT Governance and Corporate Governance

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Abstract: Given the ubiquitous nature of Information Technology (IT) in business operations, strategic congruence between IT governance (ITG) and corporate governance (CG) is important in achieving good governance and in improving firm performance. Whilst the literature refers to the existence of a relationship between these two constructs, this relationship remains largely unexplored from both a theoretical and a practical standpoint. Thus, the objective of this study is to provide a theoretical understanding of the relationship between ITG and CG and the constructs that contribute to/influence and impact this. We propose to investigate this using multiple case studies within the banking industry in Thailand, where to date little research on ITG has been conducted. Outputs arising from this research will be of interest to academics and practitioners alike. For academics it provides improved understanding about the relationship between ITG and CG, while for practitioners there is an opportunity to use this understanding to develop practical guidelines that can assist with maximising value creation from IT.

Keywords: IT governance; corporate governance; institutional theory; banking industry; Thailand

1. Introduction

Organisations depend heavily on Information Technology (IT) to shape their business strategies, assist with operations, enhance business value and achieve good governance. Given the large investments made in IT, proper governance is required to mitigate associated risks and ensure that desirable behaviour and business value flowing from IT are achievable (ITGI, 2009). In response the literature has emphasised the importance of strategic congruence between IT governance (ITG) and corporate governance (CG) (Estrada, 2010; Weill & Ross, 2004). ITG assists by ensuring that an enterprise's IT systems are able to deliver promised business benefits on time, within budget, and with appropriate quality (Van Grembergen & De Haes, 2009). Providing an organisation has a sound CG structure, this investment in IT can help improve firm performance (Ho, Wu, & Xu, 2011).

The existence of a relationship between these two constructs has been acknowledged in the ITG literature (Ko & Fink, 2010; Musson, 2009) through approaches like ISO/IEC 38500:2008 (the international standard concerned with CG of IT) (ISO/IEC 38500, 2008); COBIT 5 (the international framework for governing and managing enterprise IT) (ISACA, 2012); and the increasing shift from the term 'ITG' to 'enterprise governance of IT' (Van Grembergen & De Haes, 2010). However these attempts primarily focus on practices like the processes and mechanisms required to achieve the end result of involving the business in ITG. What remains an open question is what is the relationship between ITG and CG and what are the underlying factors that influence this relationship? As empirical studies have shown that ITG is commonly left as an activity isolated from CG (Raghupathi, 2007; Satidularn, Tanner, & Wilkin, 2011), establishing a robust and sustained relationship between ITG and CG is necessary as both play a significant role in value creation. Thus, the objective of this research-in-progress is to provide a theoretical understanding of the relationship between ITG and CG and the constructs that contribute to this relationship. Specifically the research will answer:

What is the relationship between ITG and CG and what constructs contribute to/influence/impact this relationship?

In answering this we will look at institutional pressures (e.g. shared norms) that may impact the way ITG relates to CG. As most ITG and CG principles and standards are developed in the U.S. and Europe where institutional pressures are different from those in developing countries, this study will focus on Thailand where to date little research into ITG has been conducted (Satidularn, et al., 2011). The remainder of the paper is

organised as follows: Section 2 presents the research framework, Section 3 details the research design, while Section 4 presents concluding comments.

2. Research framework

2.1 Current understanding about the relationship between ITG and CG

It is widely accepted among researchers and practitioners that ITG is a component of CG (Grant, Hackney, & Edgar, 2010; Wilkin, Campbell, & Moore, 2012). As shown in Table 1 below, the key concepts of ITG and CG are similar. In general both refer to a set of responsibilities and practices exercised by the board and executive management wherein the aim is to achieve organisational goals, attain maximum business value, ensure that risks are managed through appropriate internal controls and monitoring systems, and assure organisational stakeholders' interests are protected. The distinction is one of emphasis – ITG tends to focus more on IT-related issues, while CG emphasises enterprise-wide issues.

Table 1: A comparison of CG and ITG key characteristics

Corporate governance	IT governance
▪ Strategic direction	▪ Strategic alignment between business and IT
▪ Accountability, transparency and integrity	▪ Accountability/assign IT decision rights
▪ Roles and responsibilities of the board and governance structures	▪ Roles and responsibilities of the board/ leadership
▪ Risk management, control and compliance	▪ IT risk management and control
▪ Performance management	▪ IT system performance management
▪ Value creation	▪ IT value delivery/creation
▪ Shareholders and stakeholders' rights/equitable treatment of shareholders and stakeholders	N/A
N/A	▪ IT governance is a component of corporate governance
N/A	▪ Manage IT resources

As shown (see Table 1), whilst ITG is not directly addressed in the key characteristics of CG, implicit through risk management and control, and board responsibilities, is that ITG activities are part of CG (ASX, 2010; Khongmalai, Tang, & Siengthai, 2010). Within ITG the roles and responsibilities of the board reflect how ITG addresses its relationship to CG through oversight of the strategic alignment between business and IT, risk management, and IT resources management (Andriole, 2009; Huang, Zmud, & Price, 2010). Consequently the literature concerned with exploring the relationship between CG and ITG is largely limited to an assumption-based explanation. Further it is commonly explained on the basis of tight integration between IT and business (Brandas, 2011; Van Grembergen & De Haes, 2009), and the implication of CG laws like the Sarbanes-Oxley Act (SOX) that demands IT controls over financial reporting systems (Damianides, 2005). Accordingly the claimed relationship between ITG and CG has rarely been theoretically and empirically examined and validated. Thus, we propose to use institutional theory as a lens to explain this relationship.

2.2 Theoretical underpinnings

Institutional theory focuses on how an organisation's structures and actions are influenced by the wider social environment (institutional pressures) in which an organisation operates (Scott, 2008; Tolbert & Zucker, 1983). These pressures (see Table 2), such as social norms, shared cultural values, and regulatory requirements, may have an impact on an organisation's actions (DiMaggio & Powell, 1983) and the governance practices deployed, which shape an organisation's actions towards its ITG and CG.

As Table 2 suggests, institutional pressures do not work in isolation, rather in different combinations (Scott, 2008). This implies that the degree to which ITG is related to CG may result from a different combination of institutional pressures. By nature CG is likely to be exerted predominantly by regulatory pressures. Thus, the nature of CG and its practices tend to be constrained by laws and regulations. In contrast, the nature of ITG and its practices are primarily shaped by normative pressures. Although laws and regulations such as SOX may have an indirect impact on ITG through the imposition of IT controls, there is limited legislation that directly regulates ITG (Nguyen, 2007; Wayne, 2005). Consequently, frameworks and standards such as COBIT 5 and ISO/IEC 38500:2008 generally guide the nature of ITG and its practices. When these practices conflict with an

organisation’s shared beliefs, it is possible that cultural-cognitive pressures can guide an organisation’s reaction towards ITG and CG. Figure 1 presents an overview of the possible theoretical relationship between ITG and CG.

Table 2: Institutional pressures identified by Scott (2008)

Institutional Pressures	Description	Examples in a CG/ ITG Context
▪ Regulatory	Rules, laws, and sanctions that guide and regulate the behaviour of organisations	▪ SOX (U.S.) ▪ Basel II (Europe)
▪ Normative	Roles and responsibilities expected of organisations and individuals	▪ OECD principles of corporate governance ▪ COSO Enterprise Risk Management ▪ Corporate governance of IT standard (ISO/IEC 38500:2008) ▪ COBIT 5 (Business Framework for the Governance and Management of Enterprise IT)
▪ Cultural-cognitive	Shared understanding and culture developed over time through social interactions amongst participants. This shapes the behaviour they perceive as appropriate	▪ Expectation of trust and reliability, and moral codes

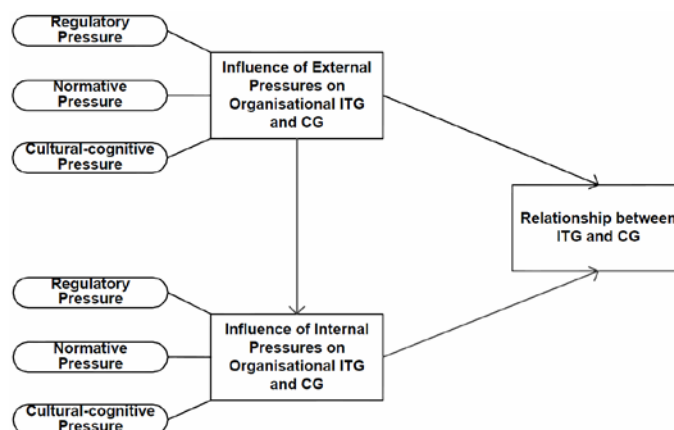


Figure 1: Theoretical relationship between ITG and CG

3. Research design

The study will be executed two phases (see Table 3). Phase 1 entails development of a theoretical model that portrays the relationship between ITG and CG: Phase 2 entails validation of the model. Herein the focus will be the banking industry because this industry is highly dependent on IT and is among the first industries to use IT in their operations. Thus it is likely to have more mature IT and more concrete ITG frameworks (Chiasson & Davidson, 2005). As the banking industry is subject to high regulatory pressure (Goodhart, 1998), these factors provide an interesting basis upon which to explore how governance practices and standards developed in different institutional contexts impact the relationship between ITG and CG and the institutional pressures that influence this.

Table 3: Empirical investigation

Phase 1: Development of a theoretical model			
Case study	Participant selection	Data collection	Data analysis
<ul style="list-style-type: none"> ▪ Banking industry in Thailand ▪ 3 Organisations <ul style="list-style-type: none"> - A regulatory body - A private bank - A government bank 	<ul style="list-style-type: none"> ▪ Subset of those involved in ITG and CG ▪ Internal stakeholders <ul style="list-style-type: none"> - Business side - IT side - Control side ▪ External stakeholder <ul style="list-style-type: none"> - Regulatory body - External auditor 	<ul style="list-style-type: none"> ▪ Semi-structured interviews ▪ Public documents ▪ Internal documents 	<ul style="list-style-type: none"> ▪ Content analysis <ul style="list-style-type: none"> - Compare and contrast interviews/documents - Compare and contrast findings to prior studies - Nvivo software
Phase 2: Validation of the theoretical model			
Data collection		Participant selection	
<ul style="list-style-type: none"> ▪ Focus group to validate the theoretical model 		<ul style="list-style-type: none"> ▪ Same participants as Phase 1 	

4. Conclusion

Based on institutional theory, this research-in-progress will propose and validate a theoretical model to explain the relationship between ITG and CG and the constructs that contribute to/influence/impact this. In doing so the research makes a contribution to the ITG body of knowledge. For practitioners there is an opportunity to use this understanding as a basis for development of practical guidelines that can assist organisations in establishing a workable relationship between ITG and CG, which can assist with maximising value creation from investment in IT.

References

- Andriole, S. J. (2009) "Boards of Directors and Technology Governance: The Surprising State of the Practice", *Communications of AIS*, No. 24, pp 373-394.
- ASX (2010) "Corporate Governance Principles and Recommendations with 2010 Amendments", ASX Corporate Governance Council.
- Brandas, C. (2011) "Study on the Support Systems for Corporate Governance", *Informatica Economica*, Vol 15, No. 4, pp 55-63.
- Chiasson, M. W. and Davidson, E. (2005) "Taking Industry Seriously in Information Systems Research" *MIS Quarterly*, Vol 29, No. 4, pp 591-605.
- Damianides, M. (2005) "Sarbanes-Oxley and IT Governance: New Guidance on IT Control and Compliance", *Information Systems Management*, pp 77-85.
- DiMaggio, P. J. and Powell, W. W. (1983) "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organisational Fields", *American Sociological Review*, Vol 48, No. 2, pp 147-160.
- Estrada, C. F. (2010) "Aligning Information Technology Within the Framework of Corporate Governance to Increase Corporate Value in Mexico", *International Journal of Management and Information Systems*, Vol 14, No. 2, pp 13-18.
- Goodhart, C. A. E. (1998) *Financial Regulation: Why, How, and Where Now?*, Routledge, London and New York.
- Grant, K., Hackney, R. and Edgar, D. (2010) *Strategic Information Systems Management*, Thomas Rennie, Singapore.
- Ho, J. L., Wu, A. and Xu, S. X. (2011) "Corporate Governance and Returns on Information Technology Investment: Evidence From an Emerging Market", *Strategic Management Journal*, Vol 32, pp 595-623.
- Huang, R., Zmud, R. W. and Price, L. R. (2010) "Influencing the Effectiveness of IT Governance Practices through Steering Committees and Communication Policies", *European Journal of Information Systems*, Vol 19, No.4, pp 288-302.
- ISACA (2012) "COBIT5", [online], ISACA <https://www.isaca.org/COBIT/Pages/Product-Family.aspx>
- ISO/IEC 38500 (2008) "Corporate Governance of Information Technology", International Standards Organisation.
- ITGI (2009) "An Executive View of IT Governance", [online], ISACA <http://www.isaca.org/Knowledge-Center/Research/Documents/An-Executive-View-of-IT-Gov-Research.pdf>
- Khongmalai, O., Tang, J. C. S. and Siengthai, S. (2010) "Empirical Evidence of Corporate Governance in Thai State-Owned Enterprises", *Corporate Governance*, Vol 10, No. 5, pp 617-634.
- Ko, D., and Fink, D. (2010) "Information Technology Governance: An Evaluation of the Theory-Practice Gap", *Corporate Governance*, Vol 10, No. 5, pp 662-674.
- Musson, D. (2009) "IT Governance: A Critical Review of the Literature", in A. Catter-Steel (Ed.), *Information Technology Governance and Service Management*, pp 63-80, IGI Global.
- Nguyen, H. C. (2007) "The Need for Legislation Like Sarbanes-Oxley for IT Governance: An Australian Perspective", *Information Systems Control Journal*, pp 1-5.
- Raghupathi, W. R. (2007) "Corporate Governance of IT: A Framework for Development", *Communications of the ACM*, Vol 50, No. 8, pp 94-99.
- Satidularn, C., Tanner, K., and Wilkin, C. L. (2011) "Exploring IT Governance Arrangements in Practice: The Case of a Utility Organisation in Thailand", *paper presented at the Pacific Asia Conference on Information Systems (PACIS)*, Brisbane, Australia.
- Scott, W. R. (2008) *Institutions and Organisations: Ideas and Interests*. Sage, Thousand Oaks, CA.
- Tolbert, P. S. and Zucker, L. G. (1983) "Institutional Sources of Change in the Formal Structure of Organisations: The Diffusion of Civil Service Reform, 1880 – 1935", *Administrative Science Quarterly*, Vol 28, pp 22-39.
- Van Grembergen, W., and De Haes, S. (2009) *Enterprise Governance of Information Technology: Achieving Strategic Alignment and Value*, Springer.
- Van Grembergen, W., and De Haes, S. (2010) "A Research Journey into Enterprise Governance of IT, Business/IT Alignment and Value Creation", *Internal Journal of IT/Business Alignment and Governance*, Vol 1, No. 1, pp 1-13.
- Wayne, J. (2005) "IT Governance Regulation: An Australian Perspective", *Information Systems Control Journal*, Vol 2.
- Weill, P. and Ross, J. W. (2004) *IT Governance: How Top Performers Manage IT Decision Rights for Superior Results*, Harvard Business School Press, Boston.
- Wilkin, C. L., Campbell, J. and Moore, S. (2012) "Creating Value Through Governing IT Deployment in a Public/Private-Sector Inter-Organisational Context: A Human Agency Perspective", *European Journal of Information Systems*, pp 1-14.

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