



Relationships between project governance and information technology governance and their impact on project performance

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Abstract

This research endeavors to address the question of how to enhance project performance through exploring the relationships among information technology (IT) governance, project governance and project performance. The research utilizes an empirical survey methodology. The survey of 533 working professionals in various industries renders 282 usable responses or a response rate of 53.91%. The results suggest that both IT governance and project governance have a positive impact on project performance. Moreover, we found that three dimensions of IT governance (i.e., strategy setting, value delivery, and performance management) are positively associated with project performance while all three dimensions of project governance (i.e., portfolio direction, project sponsorship as well as project effectiveness & efficiency, and disclosure & reporting) are positively associated with project performance. Additionally, the alignment between IT governance and project governance is also found to be positively associated with project performance. These findings provide evidence to project management professionals in regard to IT governance and project governance being part of the operational strategy in facilitating the success of projects. It also demonstrates the importance of the alignment strategy between IT governance and project governance in enhancing project performance.

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1. Introduction

The success of projects has a direct impact on the success of the business. For several decades, researchers and practitioners have attempted to improve project performance by focusing on project-based management and the competence of project team members as well as developing new project management tools and techniques (e.g., Besner and Hobbs, 2012; Crawford et al., 2008; Flyvbjerg et al., 2003; Hebert and Deckro, 2011;

Packendorff, 1995; Sauer and Reich, 2009). Still, the success rate of projects remained low as evidenced by several surveys and studies. For example, Merrow et al. (1988) studied 47 mega projects and found only four projects were completed on budget while 88% experienced cost overruns. Their study also revealed that 26 out of 36 projects (72% of them) failed to meet their profit objectives. In 2001, the International Program in the Management of Engineering and Construction (IMEC) conducted a study of large engineering projects with average capital value of \$1 billion undertaken between 1980 and 2000 and found that 18% incurred extensive cost overruns (Miller and Lessard, 2001). In addition, the study revealed that almost 40% of the projects performed poorly and were either abandoned or restructured after encountering some financial crisis (Miller and Lessard, 2001). Moreover, Flyvbjerg et al.

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(2003) assessed the performance of large infrastructure projects under two measures, cost overruns and benefit overestimation. They found that project cost overruns were common on various large capital projects since the early 1900s. They concluded that project cost overruns had not decreased in the past seventy years despite the development and availability of advanced cost estimation and control tools and techniques (Flyvbjerg et al., 2003).

Since 1994, the Standish Group has studied IT projects performance implementing in various company sizes ranging from small to large companies and published the CHAOS Reports every year. The 1995 CHAOS Report showed that only 16.2% of the software projects were reported completed on-time and on-budget. Twenty years later, the Standish Group published the 2015 CHAOS Report which indicated that 29% of IT projects around the world were successful as defined by on-time, on-budget with a satisfactory result (Hastie and Wojewoda, 2015). Appendix A shows the summary of CHAOS Reports from 1994 to 2015. As Appendix A attests, project performance has plateaued over the past ten years. Improvements through institutionalization of process discipline, accommodative culture, and maturity approaches have had their effect. As such, the improvements observed in the 1990s and early 2000s are no longer being observed through these approaches.

Based on all of the above-mentioned examples, we realized the importance of finding a new method to improve overall project performance. Müller et al. (2014) indicated governance as an organizational enabler was comprised of process facilitators and discursive abilities. On the project level, a new paradigm of governance such as project governance was suggested (Altshuler and Luberoff, 2003; Crawford et al., 2008). Project governance was defined as “the framework, functions, and processes that guide project management activities in order to create a unique product, service, or result and meet organizational strategic and operational goals” (PMI, 2016). Biesenthal and Wilden (2014) analyzed 62 articles published in 21 non-project management-specific journals and 34 articles across the leading project management journals, that discussed project governance, and found that project governance was important in ensuring successful project delivery. In addition, Klakegg et al. (2008) stated that project governance should flow from top-level management down to the project-level personnel. This suggests that, in addition to project governance, other types of governance (e.g., information technology (IT) governance) also play vital roles in the success or failure of the projects. The IT Governance Institute (2011) defined IT governance as “an integral part of corporate governance which is a responsibility of the board of directors and executive management.” IT governance involved the leadership and organizational structures and processes required to ensure that the organization’s IT sustains and aligns with the organization’s strategies and objectives (IT Governance Institute, 2011). Effective IT governance helped develop organization success by providing secure and reliable information through the application of technology (Korac-Kakabadse and Kakabadse, 2001). Effective IT governance also enabled IT managers and suppliers to develop integrated business and IT plans, allocate responsibilities and accountabilities, prioritize and organize IT initiatives, and track

their performance and outcomes (Korac-Kakabadse and Kakabadse, 2001). The main point of IT governance was to ensure that IT is aligned with business goals while supporting the continuous IT operations (Bygstad and Hanseth, 2010).

According to Chan and Reich (2007), empirical studies repeatedly showed that business performance improved when firms experience strategic alignment between IT and business strategies. It was also echoed in Chandler’s (1962) classical thesis that the absence of such a match between a multidivisional structure and a diversification strategy led to weaker performance. Venkatraman (1989) stated that there are six different characterizations of alignment: moderation, mediation, matching, gestalts, profile deviation, and covariation. In this research, IT governance and project governance were considered as two strategies, both at operational level; therefore, the alignment of these two kinds of governance is assessed using the concept of fit as matching (“...a measure of fit between two variables is developed independent to any performance anchor” (Venkatraman, 1989, p. 430)) to see if they complemented each other to enhance project performance. The managerial implication for the fit concept is two-fold. First, companies need to design and implement IT governance in order for it to be in congruence with the specific requirements of project governance. Second, the effectiveness of the alignment between IT governance and project governance can be measured by relating it to the project performance.

More specifically, this research seeks to answer the question of how to improve project performance through a consideration of IT governance and project governance. It is accomplished by developing an empirical study model utilizing IT governance and project governance as independent variables and project performance as the dependent variable. Particularly, the following research questions are explored:

1. Is there a significant relationship between IT governance and project performance?
2. How does IT governance impact project performance?
3. Is there a significant relationship between project governance and project performance?
4. How does project governance impact project performance?
5. Does an alignment between IT governance and project governance translate to superior project performance?

The opportunity to investigate the impact of IT governance and project governance principles coincides with the questions of project performance. Based on the previous research, IT governance has several implications for improving firm performance and has an impact on how decisions around IT issues are made; project governance is required to help improve project performance. To the best of our knowledge, no one has provided a comprehensive framework that explains how these variables are connected and whether synergizing both kinds of governance (IT governance and project governance) helps improve project performance. In this research, we endeavor to provide an empirical model that will help not only academics but also practitioners to explore how project performance can be enhanced through the use of IT governance and project governance.

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