

# **“LEAN GOVERNANCE”: A PARADIGM SHIFT IN INTER-ORGANIZATIONAL RELATIONSHIPS (IORS) GOVERNANCE**

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## **ABSTRACT**

In inter-organizational relationships (IORS) governance literature, the dominant underlying theory is transaction cost economics (TCE) which is based on minimizing the transaction costs. Recently, TCE perspective has been criticized for its limited view towards explaining the value-based decisions on establishing or continuing exchange relationships. Moreover, some scholars have argued that a single-firm view about the interpretation of IORS performance promotes more opportunistic behavior among project participants in terms of IORS and impedes the collaborative atmosphere in the project.

Borrowing from the lean construction literature, this paper develops the concept of “Lean Governance” in the context of IORS governance in construction projects and argues that the underlying logic for IORS governance should be on maximizing the value of relationships for the customers. Applying value-based and customer-focused approach of lean construction as well as its assumption of construction projects as complex systems, this paper further posits that value creation for the customers through IORS is associated with applying “Lean Governance” that is a combination of formal, social, and IT/IS governance mechanisms with more emphasis on social tools. This article contributes to both lean construction and IOR governance literature by conceptualizing this new approach towards IORS governance through discussing paradigm shifts from Non-Lean Governance to the “Lean Governance”.

## **KEYWORDS**

Lean Construction, Inter-organizational Relationships (IORS), Lean Governance

## **INTRODUCTION**

The Transaction Cost Economics (TCE) theory has been widely used for explaining inter-organizational exchange conditions (Zheng et al. 2008). Central to TCE is that the main motive for adopting specific governance mechanism in an exchange relationship is to minimize transaction costs (Heide and John 1990, Wang and Wei 2007, Williamson 1979). However, the TCE’s central logic has been criticized for its restricted view in explaining certain conditions of inter-firm relationships (Li et al. 2010, Poppo and Zenger 2002, Uzzi 1997, Zajac and Olsen 1993). Subsequent studies have shown that valued relationships are not necessarily cost efficient (Beth et al. 2003), but should provide joint benefits and long-term value (Gassenheimer et al. 1998). Another concerning issue in terms of inter-firm relationships is the single-

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organizational view towards IORs performance that promotes more opportunistic behavior among project participants and impedes the collaborative atmosphere in the project (Bryde and Robinson 2005, Chan et al. 2003). The new understanding of construction projects as complex and dynamic systems (Bertelsen 2004, Howell and Koskela 2000) is the third subject that may affect the choice of IORs governance mechanisms. Since complex systems are unpredictable, their management cannot be based on detailed instructions or plans but must be most relied on principles like cooperation, conversations, and learning (Bertelsen and Koskela 2004, Bertelsen 2004).

Although during last two decades the lean construction concept has attracted rising attention in construction industry, its application in the context of inter-organizational relationships (IORs) is under-explored. Applying value-based and client-focused approach of lean construction as well as its assumption of complex nature of construction projects, this article develops the concept of “Lean Governance” in the context of IORs governance in construction projects and argues that the underlying logic for IORs governance should be on maximizing the value of relationships for the customers. This paper further posits that value creation for the customers through IORs is associated with applying “Lean Governance” that is a combination of formal, social, and IT/IS governance mechanisms with more emphasis on social tools. This article is a theoretical work that contributes to both lean construction and IORs governance literature by conceptualizing this new approach towards IORs governance through discussing paradigm shifts from Non-Lean Governance to the “Lean Governance”.

In the following sections, literature on IORs governance and lean construction that are relevant to the governance of IORs in construction projects is reviewed. Then, “Lean Governance” is conceptualized and contrasted with alternative governance systems. Finally, we conclude our discussion with presenting a conceptual model of “Lean Governance” and making some suggestions for future research.

## **IORs GOVERNANCE**

“Governance” is one of the most versatile terms in the literature which is used in a variety of ways and in diverse meanings (Stoker 1998). In the management and organization literature, one of the most popular applications of governance is related to mechanisms for controlling inter-organizational relationships (IORs) among two or more parties (Ruuska et al. 2011). IORs governance, particularly, attracted rising attention in the context of construction projects, due to the complex forms of IORs in terms of inter-firm exchanges (e.g. engineering, procurement, finance, construction, and operation) in these projects and also the fragmented nature of these projects that causes communication and coordination problems which affect on projects’ performance and productivity (Chen and Chen 2007). The IORs governance mechanisms are used to guard against common market hazards such as partner opportunism, market uncertainty, goal heterogeneity, and contractual incompleteness which could render the transactions ineffective (Eisenhardt 1985, Heide 1994, Jap and Anderson 2003, Luo et al. 2011). Additionally, Using these mechanisms can facilitate cooperation among parties and mitigate relationship risks (Gundlach et al. 1995, Ring and Van de Ven 1992).

The literature on Inter-organizational Relationships (IORs) has recognized two broad categories of governance mechanisms that are formal and social governance mechanisms. Formal governance usually associates with using detailed contracts containing defined rights and responsibilities of all parties, that constrains attempts at exploitation (Brown et al. 2000, Lumineau and Malhotra 2011, Williamson 1985). These arrangements provide a shared understanding of each side's role in the relationship by delineating the underlying assumptions that are associated with the transaction (Lumineau and Malhotra 2011). In the strategy literature formal governance by contracts is considered not only as mechanisms for enforcing negotiated agreements, but also as facilitating tools for value creation and cooperation (Hoetker and Mellewigt 2009, Li et al. 2010, Lumineau and Malhotra 2011, Reuer and Ariño 2007).

Although highly detailed contracts usually incur greater costs, they are powerful in alleviating conflict in stable environments where the rights and responsibilities of each party can be clearly determined and they can rely on what they agreed upon in contract (Lumineau and Malhotra 2011, Williamson 1985). In contrast, when uncertainty is high, written contracts become less effective in regulating stakeholder behavior. As Williamson (1996) asserted all contracts are incomplete. Although sometimes incompleteness is inevitable, there are situations that parties may prefer to limit their reliance on contractual governance deliberately (Lumineau and Malhotra 2011). First, contract development, monitoring, and enforcement incur cost that parties may intend to reduce it (Williamson 1985). Second, parties may prefer to have more flexibility in their contract to have time for identifying and elaborating their needs, interests, and capacities during the time (Bernheim and Whinston 1998, Malhotra 2009). Third, as some scholars pointed out (Malhotra and Murnighan 2002, Sitkin and Roth 1993, Tenbrunsel and Messick 1999), too much emphasis on contract may impede developing mutual trust and cooperative norms that may affect the team performance.

Social governance aims to enhance the contracting parties' commitment and maintain their relationships by using mechanisms such as relational norms and joint actions and creating shared values and a clan-type environment (Badenfelt 2010, Heide and John 1992, Macneil 1980, Ouchi 1979, Wang and Wei 2007). By providing the conditions for improving trust and commitment, social governance safeguards exchange partners against the threat of opportunism and enhances the collaboration amongst partners and paves the way for joint problem solving (Wang and Wei 2007).

There are two views on how formal and social governance mechanisms interact. One view believes that the two are mutually exclusive and substitutive and the other assumes the two are complementary. The latter view is strongly supported by empirical studies (Gulati and Nickerson 2008, Poppo and Zenger 2002). Further supporting the latter view, some studies even argue that inter-organizational relationships necessarily rely on both formal and social governance mechanisms for coordination and control and the only thing that varies in different exchanges is the degree to which these mechanisms are leveraged (Gundlach and Murphy 1993, Heide 1994, Lumineau and Malhotra 2011).

Although social and formal governance mechanisms are the most prevalent governance mechanisms that have been discussed in IORs literature, some scholars

identified IT/IS as another governance mechanism that can improve the performance of other mentioned mechanisms. IT governance institute (2003) defines IT/IS governance mechanism as the implementation and utilization of information technologies and information systems ‘to establish and communicate strategic directions, ensure realization of goals and objectives, mitigate risks, and verify that assigned resources are used in an effective manner’. It can facilitate common relationships among exchange partners and support collaborative decision making and performance control through providing virtual integration (Morash and Clinton 1998, Wang and Wei 2007). Moreover, it can reduce transaction costs and alleviate opportunism by providing inter-organizational information processing capabilities that decreases information asymmetry and promotes monitoring capabilities (Wang and Wei 2007).

The perspective towards IORs in the context of construction projects may affect the choice of these different governance mechanisms. As mentioned earlier, there are three concerning issues that are associated with conventional IORs governance perspective. In the next section, we analyze the capability of lean construction principles to address these three issues.

## **LEAN CONSTRUCTION**

Lean construction has its roots in Japanese manufacturing principles and its main theme is to deliver the construction project with focusing on value maximization for the client and minimizing the waste (Ballard et al. 2001, Bertelsen 2004, Koskela 2000). Although understanding, dealing with and managing value has been the weakest point in lean construction studies, it is a topic of growing importance as projects become more complex, dynamic and fast (Bertelsen 2004). Considering complex and dynamic nature of construction projects, especially in terms of material and information flow, some lean construction scholars suggested that construction projects should be modeled as chaos and complex systems (Bertelsen 2002, 2003, 2004, Howell and Koskela 2000, Radosavljević and Horner 2002). Although during last two decades the lean construction concept has received increasing attention in construction industry, its application in the context of inter-organizational relationships (IORs) is under-explored.

As reviewed above, IORs literature has been mostly focused on cost efficient governance systems rather than maximization of value to the stakeholders. A further shortcoming of the IORs literature is the neglect of values to project stakeholders by highlighting exclusively the single-organizational analysis of valued relationships. In the discussions below, we draw from both inter-organizational relationships (IORs) governance literature and the lean construction literature to develop the concept of “Lean Governance” in the context of delivering construction projects. The new concept differs from the conventional meaning of project governance in three aspects: value orientation, outcome perspective and system assumptions. The new conceptualization marks a paradigm shift in governance orientation from cost focus for a single-organization to value creation for all stakeholders, which is particularly adapted to the often chaotic process of delivering complex construction projects that typically involve partnering of multiple stakeholders.

## **CONCEPTUALIZATION OF LEAN GOVERNANCE**

Drawing from both the lean construction and the IORs literature, we develop the "Lean Governance" concept in the context of the delivery of construction projects by demonstrating the main differences from the conventional governance concept and highlighting the implications entailed in this new conceptualization. "Lean Governance" is defined as 'a specific combination of IORs governance mechanisms that emphasizes social mechanisms and promotes valued relationships in the project and consequently minimizes disputes, rework, waste of money, time, and effort and in the same way generates the maximum possible amount of value for all project stakeholders in the delivery of construction projects that are typically characterized as chaotic or uncertain'. The concept entails some paradigm shifts in IORs governance approach as described below.

### **FROM COST EFFICIENT TOWARDS VALUED RELATIONSHIPS**

TCE as theoretical foundation for adopting specific governance mechanism in an exchange relationship claim that among different alternative governance systems, the most cost efficient system is the best option. However, the TCE perspective has been criticized for its restricted view in explaining certain conditions of inter-firm relationships (Li et al. 2010, Poppo and Zenger 2002, Uzzi 1997, Zajac and Olsen 1993). For example, Zajac and Olsen (1993) argued that transaction cost analysis has a cost minimization view to the firm's behavior in terms of IORs and neglects the value-based analysis, whereas, in many cases, the main motive for a firm not to act opportunistically is dominantly affected by the firm's estimate of the negative impact of that behavior on the value of expected future exchanges with its partner.

In response to this issue, we can apply the value-based approach of lean construction and propose a new approach towards IORs by focusing on value maximization instead of cost minimization. In other words, in "Lean Governance" perspective minimizing the transaction costs may be less pertinent than maximizing value in exchange relationships.

### **FROM SINGLE-ORGANIZATIONAL GAIN TOWARDS WIN-WIN FOR ALL STAKEHOLDERS**

Another debate in IORs studies is about project success. As Provan et al. (2007) asserted, in most businesses organizations are mostly concerned about organizational outcomes of applied governance system rather than its project level advantages. For example, Barringer and Harrison (2000) identified several advantages that inter-organizational relationships can have for a firm and discussed the motivational effect of these potential values for an organization to develop IORs with other organizations. Conversely, the construction management literature parallels the lean construction literature in recognizing client-based perspective as a necessary requirement for effective relationships in the project and at the same time warns client organizations to create 'win-win' situations by considering expectations of all stakeholders in the supply chain, such as contractors, sub-contractors, suppliers and other team members (Bertelsen 2004, Bryde and Robinson 2005, Chan et al. 2003, Winch et al. 1998). This perspective encourages project participants to pursue holistic project success rather than concentrating on own expectations. Additionally, this view

parallels value-based perspective towards IORs because of its association with recognition of the interdependence of the exchange partners (Zajac and Olsen 1993). By taking this perspective into account, the “Lean Governance” ensures value for all stakeholders by encouraging relationship building and collaboration amongst project partners while minimizing potential disputes and rework (Green and May 2005).

### FROM ORDERED SYSTEM TOWARDS COMPLEX SYSTEM

Recognizing the construction project as an ordered system that comprises of predetermined tasks is wholly different from the complex system view towards these projects in terms of managing inter-firm relationships. The former assumes that all deliverables, processes, tasks and responsibilities can be defined accurately well in advance and governed through detailed contracting. In construction projects, there are frequent and unexpected changes due to a variety of reasons such as political pressure, change of design, changes in economic climate or technology, etc. (Bing et al. 2005). As a result, flexibility for all the parties is necessary to deal with unexpected changes in a chaotic system which does not fit the sole reliance on formal governance and written contracts. Instead, developing relationships based on trust and cooperative norms amongst stakeholders are the less intrusive but effective form of regulating behavior in such environment (Granovetter 1985, Lumineau and Malhotra 2011, Malhotra and Murnighan 2002, Uzzi 1997). For example, Williamson (2000) argued that central to managing chaotic systems is about dealing with changes and uncertainties that entails incomplete contracts. Studies have shown that relying on cooperation, conversations and learning are some of the effective means in such environment (Bertelsen 2004). By adopting the chaotic, complex systems perspective towards construction projects, a “Lean Governance” system suggests the emphasis of the governance system should be on social mechanisms which nurture trust and promote the inter-organizational learning and cooperation.

Figure 1 illustrates three mentioned paradigm shifts between the two governance approaches.

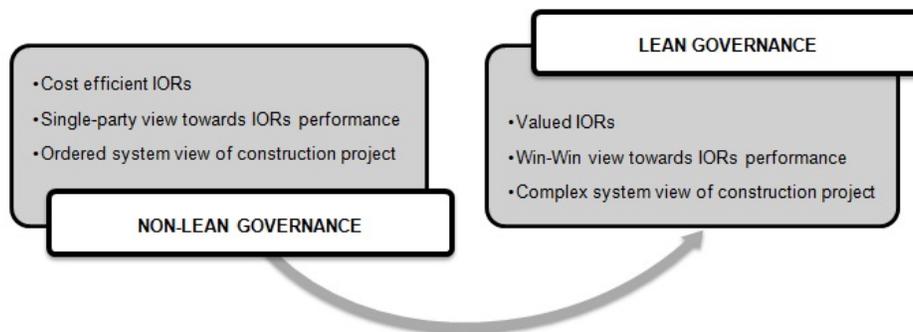


Figure 1: Paradigm Shift towards “Lean Governance”

### CONCLUSION

This paper started with identifying the limitations and inconsistencies of the IORs governance literature in the context of the delivery of construction projects. Then, contributing to both IORs and the lean construction literature, we developed the new concept of “Lean Governance”. By highlighting the main differences between the

new concept and conventional governance of IORs in the context of construction projects, we showed that the new conceptualization encapsulates paradigm shifts in value orientation, outcome perspective and system assumptions. “Lean Governance” encourages value maximization and sharing amongst project stakeholders and reduction of disputes and rework by relying on valued relationships. “Lean Governance” facilitates the development of valued relationships by emphasis on social governance mechanisms supported by formal and IT/IS governance mechanisms (Figure 2).

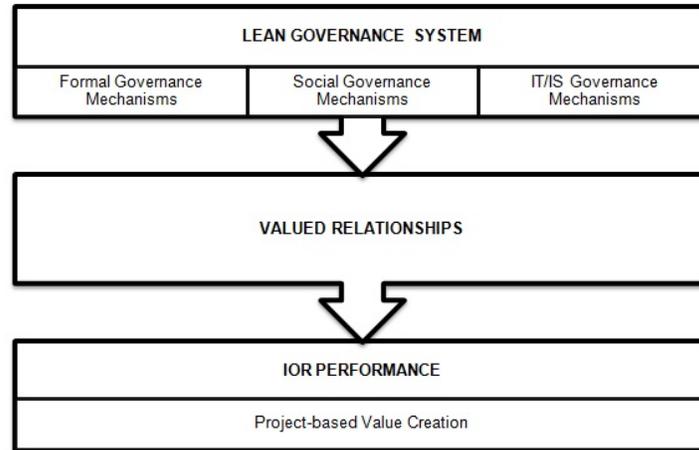


Figure 2: A Conceptual Model for “Lean Governance”

### FUTURE RESEARCH

This paper shed light on both IORs governance and lean construction research by developing the new concept of “Lean Governance”. Based on this new perspective, we propose guidelines for future research. First, the meaning of “leanness” should be revisited, particularly in the context of project governance. Despite the wide-spread adoption of lean construction techniques in the construction industry, the meaning of “lean-ness” has remained empirically elusive (Green and May 2005). Second, we should have a clear definition of values in IORs in construction projects to be able to recognize and implement valued relationships in this context. For example, Wang and Wei (Wang and Wei 2007) identified information visibility and flexibility as values in inter-firm relationships in a supply chain. Finally, it would be useful to develop a conceptual framework for predicting the effect of different governance mechanisms on value creation in construction projects and test the model by conducting an empirical research.

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