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The mediation role of leadership styles in integrated project collaboration: An emotional intelligence perspective

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Abstract

Research on integrated project delivery (IPD) has considered collaboration satisfaction as an important factor for improving project outcomes. Yet, the potential mechanism influencing it remains unexplored in construction project management, especially in the aspects of human skills. The purpose of this paper is to examine whether leadership styles mediate the link between the emotional intelligence (EI) of authorized leader and four collaboration satisfaction outcomes perceived by other participants in an integrated team: performance contribution satisfaction (PCS), efficiency satisfaction (ES), relationship satisfaction (RS), and interests satisfaction (IS). Data was collected from 365 samples including project leaders and scholars who possess experience of IPD in China. The results show that transformational and active-transactional leadership fully mediate the relationships of EI with PCS, ES, and IS, and were partial mediators between EI and RS. In addition, the partial mediation role of passive-transactional leadership in the relationships of EI with RS and IS were identified, but its mediating effects between PCS and ES were not found. Similarly, owing to the non-significant effects of laissez-faire leadership on dimensions of collaboration satisfaction, this leadership style does not play mediating role in the relationships of EI with four dimensions of collaboration satisfaction. This paper makes contribution to the mediating mechanism research of revised full range leadership model by proposing collaboration satisfaction criteria and EI model in IPD project.

Keywords: Integrated project delivery; Emotional intelligence; Leadership styles; Collaboration satisfaction

1. Introduction

Over the last decades, there are strong arguments for incorporating all project parties into one team to perform a project and applying relational contracting appropriately (Kumaraswamy et al., 2005; Rahman and Kumaraswamy, 2011; Bygballe et al., 2016). Therefore, a new project delivery method known as integrated project delivery (IPD) emerged and the benefit of integrated process has been identified through professional institutes and living project samples (Lenferink et al., 2013; El Asmar et al., 2013; Sun et al., 2015). Bond by the three IPD principles of early involvement of all parties, shared risk and rewards, and multiparty agreement (Kent and Becerik-Gerber, 2010), collaboration among heterogeneous project parties has become the critical success factor for operating integrated projects (Phua and Rowlinson, 2004; Xue et al., 2010). Keeping favorable collaboration helps not only achieve short-term business objectives such as the three success criteria of cost, time, and quality (Iyer and Jha, 2005; Chiocchio et al., 2011; Kärnä et al., 2013; Brito et al., 2014), but also foster harmonious working relationships and important affective states crucial to long-term steady development (Eriksson, 2010; Chiocchio et al., 2011; Meng, 2012).

As a matter of fact, it is challengeable for contracting parties which are organized in different structures and interest demands to attain a high level of collaboration in IPD. The architects' reluctance to change decisions made by owners, for example, may lead to reduced satisfaction or even a collapse of collaboration. Thus, some scholars considered that project participants'

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collaboration satisfaction could provide a holistic perspective to measure complex project success (Kärnä et al., 2013). Heimbürger and Dietrich (2012) and Li et al. (2013) have contributed to the measures of participant satisfaction by establishing multi-factor hierarchical fuzzy evaluation model and theoretical framework respectively. However, there is still a lack of comprehensive collaboration satisfaction criteria for IPD and the exploration of potential influencing mechanisms at social and psychological level.

In the competitive construction environment, numerous organizations insist that their "greatest asset is our people" (Butler and Chinowsky, 2006) and choosing right participants to team is paramount (O'Connor, 2009). Leaders in IPD, referred to authorized representatives of each participant in this paper, are the critical factors that influence internal organization operation and external collaborative relationships. Their ideas of open and honest communication, collaborative decision and risk allocation may help improve organizational subordinates' commitment to IPD (Lok and Crawford, 2004; O'Connor, 2009). Moreover, project leaders can recognize the characteristics of different participants intuitively and then influence the project outcomes based on their emotional cognition and power (Nzekwe-Excel et al., 2010; Li et al., 2013). Many scholars argued that the leadership of project managers have great influence on project performance (Müller and Turner, 2007; Yang et al., 2011; Kasapoğlu, 2013). Therefore, leaders in IPD can achieve good project performance through appropriate leadership.

Recently, the full range of leadership (FRL) model (Bass, 1986; Bass and Avolio, 1990), consisting of transformational, transactional and laissez-faire leadership, has been considered as the most dominant theoretical approach to leadership (Peus et al., 2013; Gumusluoglu and Ilsev, 2009). However, previous research on primary nine-factor structure in varying contexts draws controversial conclusions (Tyssen et al., 2014). In addition, a large number of relevant studies focused on one-dimensional examination of the FRL model such as transformational leadership, ignoring the exploration of other dimensions (Ryan and Tipu, 2013). Consequently, a careful modification and examination of the complete set of FRL model in IPD are needed.

Current research highlights the importance of emotional intelligence (EI) in the project settings, involving the contributions of EI to leadership styles (Butler and Chinowsky, 2006; Sunindijo et al., 2007), and the benefits to collaboration satisfaction (Turner and Lloyd-Walker, 2008). However, there is a lack of empirical evidence that explores the mediation role of leadership styles in collaboration satisfaction from an EI perspective, although it is obvious that leaders with high EI can adapt their leadership styles to improve the collaboration satisfaction better. Moreover, the existing EI model which is often used directly in current studies may result in controversial results due to its lack of pertinence to some extent.

To advance the research further, the paper first modified the EI model based on Goleman's model and reclassified the leadership types based on FRL model. And then, collaboration satisfaction criteria of IPD was proposed in view of the projects' characteristics. In addition, the study investigated the mediating role of leadership styles of IPD leaders in the relationship between leaders' EI and other participants' collaboration satisfaction.

2. Literature review and developed hypotheses

2.1. Emotional intelligence

Both scholars and practitioners in construction have recently started to realize that operations management is not the panacea, and emotional intelligence is a key set of managerial skills contributing to project success (Love et al., 2011, Rezvani et al., 2016). EI theories were broadly divided into two distinct formulations: an ability model and a mixed model (Côté et al., 2010; Bratton et al., 2011). The ability model, labeled by the work of Mayer and Salovey (2007), has the key characteristics of comprehending and managing one's own and others' emotions which facilitates the formation of advantageous thoughts and behaviors (Mayer et al., 2008; Bratton et al., 2011) and can be improved in accordance with the development of age and experience of people (Shih and Susanto, 2010; Obradovic et al., 2013). Different from the ability model, Goleman (1996) advocated the mixed model of EI in broader sense, combining personality aspects with social behaviors and competencies. Subsequently, Bar-On (1997), whose research was associated with the work of Goleman (1998), concluded that "EI is an incorporation of non-cognitive capabilities, competencies, and skills that influence individual's ability to succeed in coping with environmental demands and pressures". Specifically, he stated that the application of individual personality could contribute to EI improvement, and thus impact the project performance (Bar-On, 2004).

Individual EI differences of leaders in IPD require to consider the personality traits due to their stable cognition shaping in long working experience before. Accordingly, we chose Goleman's framework as the foundation of EI model for IPD leaders. Then, the framework was modified specifically to focus on the most relevant concepts of IPD leaders' EI. In the framework, 12 first-order components were grouped into four high-ordered quadrants as the Fig. 1 shows: with self-awareness, leaders identify their own emotional states and their effects on themselves and others; Based on self-awareness, self-management means regulation of their own emotions to prevent negative thoughts and behaviors; as for social competences, social awareness helps leaders read people and situation while team management deals with development of strong relationships with others and improvement of their leadership abilities.

2.2. Styles of leading in construction

Leadership, the process of influencing subordinates to facilitate relevant organizational goals attainment, is important in every walk of life (Kasapoğlu, 2013), and the exploration of leadership in the project settings has attracted much attention due to its specific characteristics (Turner and Müller, 2005; Tyssen et al., 2014). Owing to the project-inherent characteristics such as peripheral dynamics and time-limited undertaking, project members are often less committed (Keegan and Den Hartog,

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