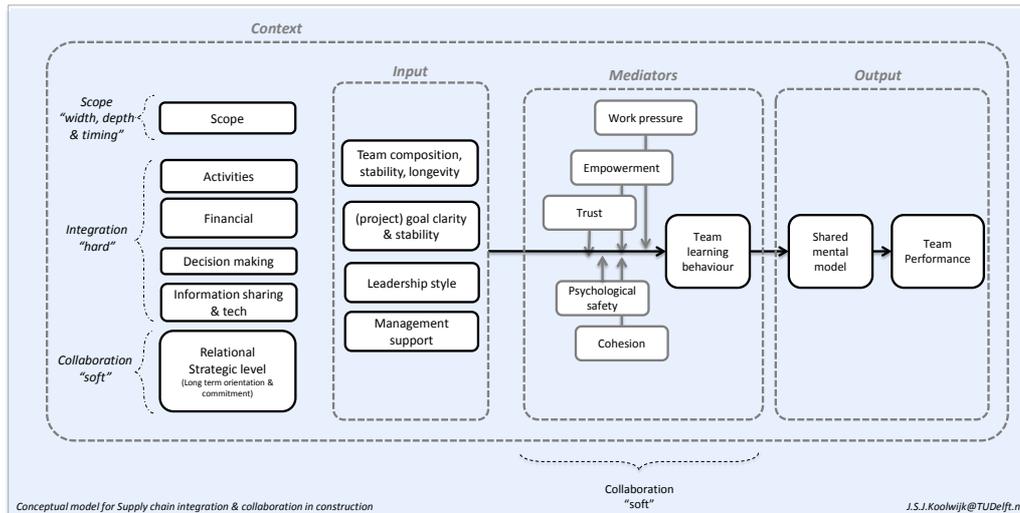


Supply Chain Integration and Collaboration in Construction

Keywords: Construction Industry; Supply Chain Integration & Collaboration; Project Team Effectiveness; Multi-actor Strategic Partnerships

Real Estate & Housing, Design & Construction management

Area of Research: Innovation in the Management of the Built Environment



Research Summary:

The past decades, much research has been performed on the link between partnering and performance in the construction industry (e.g. Bresnen and Marshall, 2000; Bygballe et al., 2010; Vrijhoef, 2011; Eriksson, 2014). There are, however, two main streams of research on the antecedents of project team effectiveness and project performance. One is primarily focussed on the effects of *integration*, referring to 'hard' and 'formal' aspects reflecting, for instance, work processes, sharing of risks and rewards, and technologies used by firms in the supply chain (e.g. Eriksson, 2014). The other line of research builds on the behavioural and sociological paradigm and emphasises *collaboration*; the 'soft' and people focussed aspects of social relationships (e.g. Bygballe et al., 2010). Linkages to performance within each paradigm are plentiful, but surprisingly little has been done to integrate the two and evaluate the relative effect of each on performance. In this research, I explore such an integrated examination of project team effectiveness.

Research Methodology: Mixed methods. (1) To operationalize and validate a framework for supply chain integration in project-based supply chains a pilot study was conducted. In this first study, Project managers of either the client or the contractor assess the team collaboration and integration of teams for construction industry projects with different project delivery methods. Factor analysis is used to identify the components that explained collaboration and integration in project design teams. (2) Analysis of variance was conducted to investigate whether the level of collaboration and integration was significantly different between traditional and integrated delivery methods using the factor scores. (3) A survey is developed based on the conceptual model presented above. Project team members that work in Multi-actor Strategic Partnerships will be interviewed and surveyed for validation of the instrument (the ProjectTeamScan, see link). (4) Finally, path analysis will be done using SEM.



Jelle Koolwijk

PhD started in: 2011
(part time, 1 day a week)

MSc.: 2003

Promoter(s):
Prof. Dr. Ir. J.W.F. Wameling

Daily Supervisor(s):
Dr. C.J. van Oel

Email: j.s.j.koolwijk@tudelft.nl

Phone: +31 6 39 25 13 42

Main Questions: *What is the relative importance of integration and collaboration to performance in construction projects?*

Deliverables: *Three/four peer reviewed articles*

Link(s)

www.projectteamsan.wordpress.com

Updated: December 15, 2016

