

## Dissertation Release

7.6.2021

# Performance analysis in the construction supply chain

<b>Title of the dissertation</b>	Supplier evaluation and development in construction: data-driven analyses
<b>Contents of the dissertation</b>	<p>Having access to high-performance suppliers is one of the important factors in executing the construction projects on time, within predefined quality and budget constraints. Therefore, this study develops data-driven methods for supplier evaluation and development in construction context. The analyses involve data from suppliers that work for a large international construction firm and operated in Finnish construction projects. First, it is argued that supplier evaluation in a changing construction project environment differs from evaluation in the context of routine-based operations, such as manufacturing. Next, it is suggested that combining data analysis methods from different theoretical domains and literatures can improve supplier evaluation and development efforts in construction. Then, this work claims that there are certain patterns between the obtained supplier performance and the purchasing volume of the buying company. The study proposes that suppliers could be categorized into exiting, surviving, and entering groups based on the discontinuity, continuity, and start of the buyer's purchase, respectively. Finally, this study investigates supplier evaluation within the project lifecycle by testing whether the construction firm favors suppliers from the late or early project phases. Overall, this dissertation contributes to research on supplier evaluation and development by extending and presenting novel data-driven approaches in the construction supply chain context. For practitioners, the study provides effective methods to manage large supplier networks and evaluate strategic decisions to develop supplier portfolios over time.</p>
<b>Field of the dissertation</b>	Operations Management in Construction
<b>Doctoral candidate</b>	Abdollah Noorizadeh, M.Sc. (Tech.)
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<b>Opponent</b>	Professor Stephan M. Wagner, Department of Management, Technology, and Economics, Swiss Federal Institute of Technology (ETH) Zurich, Switzerland
<b>Supervisor</b>	Assistant Professor Antti Peltokorpi, Aalto University School of Engineering, Department of Civil Engineering
<b>Electronic dissertation</b>	<a href="https://aaltodoc.aalto.fi/handle/123456789/107946">https://aaltodoc.aalto.fi/handle/123456789/107946</a>
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