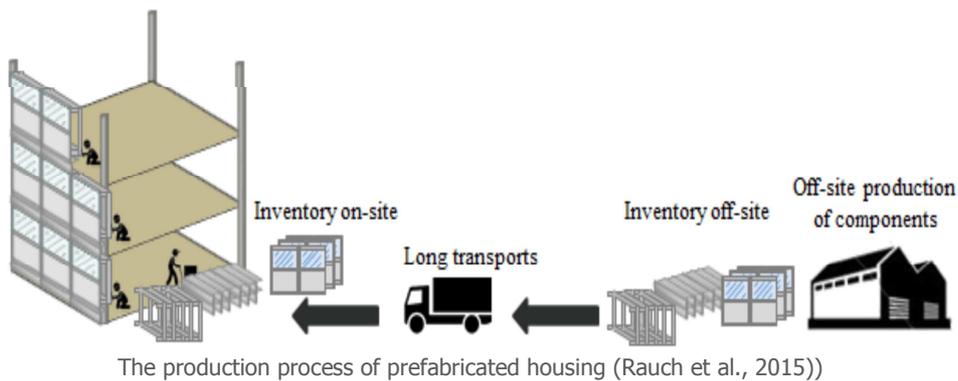


Improving the Supply Chain of Prefabricated Housing: From A Transaction Cost Perspective

Keywords: Prefabricated housing, Transaction cost, Governance, Supply chain, China, Stakeholders

OTB Department/ Housing Quality and Process Innovation

Area of Research: Construction Management

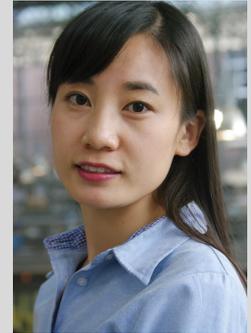


Research Summary: Prefabricated housing (PH) is globally recognized as a sustainable construction method. However, the promotion of PH in China has come along with some problems, and cost is identified as one of the critical barriers that prohibit the implementation of PH. Unlike the previous studies mainly focused on the physical costs, this research investigates a new dimension of costs-transaction costs (TCs). This study aims to identify, understand and lower the TCs through the whole supply chain of PH in order to reduce the frictions to PH. Firstly, the supply chain of PH in China is built by explanation of stakeholders, stages and tasks, while TCs along the supply chain are subsequently identified to build a generic framework of TCs. Secondly, the TCs framework is validated by case study in China, interviews are conducted to explore the content and scales of TCs. Thirdly, questionnaire survey with professionals' perception is adopted to triangulate the understanding of TCs. Subsequently, the effect factors of TCs are collected and analyzed by structural equation model. Strategy suggestions for different stakeholders to improve the governance of the PH supply chain are finally proposed.

Research Methodology: Specific research methods, such as literature review, case study, interview, questionnaire survey and focus group, will be adopted to collect both qualitative and quantitative data. Analytical methods, including triangulation analysis, Bayesian belief network analysis and structure equation model, are chose to achieve the sub-objectives.

Key Publications:

- H.J. Wu, Qian, Q.K., Ad Straub, H.J. Visscher, 2017, Improving the Economic Efficiency of Prefabricated Housing Supply Chain From A Transaction Costs Perspective, ENHR 2017 International Conference, TIRANA , Albania, 4 – 6, Sep, 2017.
- H.J. Wu, Qian, Q.K., Ad Straub, H.J. Visscher, 2017, Optimizing the Supply Chain of Housing Industrialization from Transaction Costs Perspective - A literature review, Hong Kong, June 2017.



Hongjuan Wu

PhD started in: September 2016

Master in Management Science and Engineering, China, 2013

Bachelor in Construction Management, China, 2009

Promotor:
Prof.dr.ir. H.J. Visscher

Daily supervisors:
Dr. K. Qian
Dr.ir. A. Straub

Email: H.Wu-2@tudelft.nl

Phone: +31 (0) 63 98 98468

Main question:

How to improve the governance of prefabricated housing supply chain in China by using transaction cost theory?

Deliverables: Understanding the content and scales of transaction costs in the supply chain of prefabricated housing; potential effect factors of transaction costs in the PH supply chain; Strategies for different stakeholders to improve the governance of PH supply chain by reducing the TCs

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