

ABSTRACT

## Key Factors Affecting the Implementation of Integrated Project Delivery for Lean Construction

Saad Bin Asad

**Keywords:** integrated project delivery, lean construction, challenges, barriers

The global construction industry suffers from increased costs, time delays, and low productivity rates. A solution to these issues is the increased application of Lean Construction (LC) and Integrated Project Delivery (IPD). LC is a way to design the production system to minimise waste and maximise the possible value generation. IPD is the practical application of LC. IPD is an approach that integrates people, systems, business structures, and practices into a process that collaboratively utilises the skills and opinions of all project participants to enhance project results. IPD aims to minimise waste in construction projects, improving health and safety, cost, schedule, and quality, and addressing the trust issues in the construction industry by attempting to promote a positive collaboration based on mutual respect. Though numerous literature is available on IPD, an in-depth analysis of the barriers to IPD has never been conducted. This study addresses this research gap and aims to present the barriers to IPD in detail. A systematic literature review (SLR) was conducted using 4 databases: Scopus, Emerald, ScienceDirect and International Group for LC using keywords “integrated project delivery” and “challenges”. Additional searches using synonyms such as “barriers” and “obstacles” were conducted as well; the keywords yielding the highest number of results were selected and every paper was examined to identify either explicit or implicit mention of IPD barriers. The SLR identified 222 barriers to IPD globally. The barriers were grouped into themes and separated as primary codes. The themes include Legal and Contractual, Financial, Technological, Cultural/Organisational, Collaboration and Communication, and Governmental/Political. The barriers are displayed using VOSViewer to visualise the co-occurrence of factors. The implications of this research will aid researchers and industry practitioners in understanding existing barriers comprehensively and identifying the most frequent barriers to IPD for LC in the global context.