Abstract

Traditionally, Singapore’s construction industry has been lagging behind the other sectors in terms of productivity and efficiency. This may be accrued to the industry’s slowness in accepting new methods and technology. In particular, there has been a general inertia towards the adoption of innovations in formwork technology.

System Formwork was introduced in the 1990s to replace the conventional formwork system. Its application has increased the speed and productivity of work in the construction sector significantly and indirectly lowering the overall material cost.

In this dissertation, five case studies were presented to illustrate the use of different types of system formwork. In addition, a construction simulation model was formulated using INSIGHT. The model was subsequently employed to determine the productivity attained within one of the case studies. Using the result as a platform, sensitivity analysis was conducted to explore the impact of a change in the various input factors on productivity.