ABSTRACT

Design and Build (DB) is a radical departure from the traditional Design-Bid-Build (DBB) procurement method. The government’s push for increased usage of DB is expected to give both public and private sector client confidence to attempt this relatively different form of delivery method.

This study analyses 33 DB projects to identify critical variables exerting significant influence on cost performance, time performance, quality performance, client’s administrative burden and overall client’s satisfaction. Prediction models that correlate project characteristics, client characteristics, consultant characteristics, contractor’s characteristics, pre-contract matters and soft matters to these performance metrics were constructed.

The regression output reveals four robust models that can be used to predict a DB project’s “delivery speed”, “construction speed”, “average turnover quality” and “average system quality”. Within these models, project size, the level of project scope completion prior to tender, the variability of the contract period, the level of design completion when budget was established, the contractor’s track record in quality performance, contractor’s ability in health and safety management, contractor’s ability in financial management, consultant’s experience with DB as well as the adequacy of contractor’s plant and equipment for the project surfaced as statistically significant predictors.
Keywords: Design and Build, critical variables, Cost performance, Time performance, Quality performance, Client’s administrative burden, Client’s satisfaction.