

CONSTRUCTION ENGINEERING MASTERS DISSERTATION ABSTRACT

Exploring the formal communication trends and efficiency on delayed large-scale projects. A retrospective analysis on three projects in Saudi Arabia

Construction spending is on the rise. Industry reports suggest governments and employers globally are expected to increase construction spending by 50% in the next decade. The execution of large-scale projects is a significant contributor to the forecast spending. Whilst the consensus is that projects must be delivered within the timescales to achieve economic and social benefits, this is not the current reality. A recent study on a sample of large-scale construction projects globally suggested an average delay of two years. Similar findings were noticed in Saudi Arabia.

The academic literature provides numerous causation factors that lead to cost and schedule overruns on construction projects. Poor communication as an overrun causation is well reported and highly ranked through the various desktop studies. However, little empirical research exists that examines or validates the findings using actual project data on delayed projects. This research was undertaken to explore the communication trends and communication efficiency of delayed projects. The study also extended to quantify the perceived wasted effort derived from inefficiency. Three delayed large-scale projects with contract values of US\$ 200M-450M were selected. The researcher had first-hand access to the contemporaneous project records.

The research adopted a mixed methods approach. It utilised a document analysis methodology that categorised a sample of communication exchanges into themes and concurrently applied the quantitative method to expand on the research. Efficiency was explored by classifying the correspondences as necessary and unnecessary, where unnecessary communications were classed as not clearly contributing to the project success factors of time, cost, or quality. The researcher adopted five-point criteria to support the categorisation. Given the limitations of the scope, the analysis was limited to formal letters exchanged between the employer and the main contractor for two periods, each with a six-month duration, i.e., Period 1 and Period 2.

The key finding was that at least one-fourth of the total formal letters issued by the contractor on all three projects for Periods 1 and 2 were considered unnecessary. Further, it was noted that another 15-25% of the necessary category of formal communications could have been communicated through less intensive channels for more efficient communication. This result indicates a correlation with the desktop findings that delayed projects consist of inefficient and ineffective communications. Further analysis indicated that the wasted effort costs for the unnecessary letters exchanged between the contractor and the employer aggregates up to a provisional upper limit of US\$ 300,000 per year. These costs only relate to the staff handling the communications. The analysis of themes suggests that the frequency of letters issued by the contractor to the employer substantially increased from Period 1 (first half of the project) to Period 2 (latter half of the project). The most significant increase in the letter category was related to financial letters, with the volume increasing threefold to fivefold. This paper's empirically derived findings contribute to the literature on poor communication in construction projects. These findings may also assist practitioners in gaining awareness of the communication trends and encourage them to better approach the communication strategies on their ongoing delayed projects.