

UNIVERSITI TEKNOLOGI MARA

**CONTRACTUAL BEHAVIOUR
FRAMEWORK FOR SUCCESSFUL
CIVIL ENGINEERING PROJECTS**

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Thesis submitted in fulfillment
of the requirements for the degree of
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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

In Malaysia and elsewhere, there have been many critics in the delivery of civil engineering projects which plagued by cost and time overruns, quality issues and contractual claims. Despite many studies have been carried out concerning improving the performance, very little research conducted focusing on the contractual behaviour of key participants while carrying out the construction process. Whereas, many scholars have consensus that with good contractual behaviour of key participants who duly comply with the contract conditions in implementing the construction, such bad performance can be avoided. Therefore, this study aims to develop an appropriate contractual behaviour framework of key participants for delivering a successful civil engineering project. Before the development of such a framework, the contractual behaviours of key participants that commonly occur in civil engineering projects in Malaysia were investigated, the significant factors causing them were determined and the initiatives for contractual behaviour improvement were recommended. The data of this study was obtained from professional civil engineer registered with Board of Engineers Malaysia (BEM) and Grade G7 contractors registered with Construction Industry Development Board (CIDB) via a robust triangulation method comprising of a questionnaire survey, semi-structured interviews and expert interviews. Based on the result from 288 questionnaire survey, 28 semi-structured interviews and 10 expert interviews, this study highlighted five (5) contractual behaviour of key participants which all this while hindered the civil engineering project success. They were the delay of interim payment, delay of contractor's work progress, delay of issuing project information, ineffective communication between engineer and contractor and unauthorised instructions. The findings also revealed that the project characteristics (project scope change, ground uncertainty, site surrounding uncertainty, project complexity, adequacy of design details and specifications, tight project milestone), quality of Standard Form of Contract (SFoC) (clarity of SFoC, trust produced by SFoC), external factors (bureaucracy of government agencies, resources availability), attitudes of key participants (familiarity with procurement method used, competency of engineer and contractor, level of understanding the condition of the contract, poor in following the condition of the contract, cooperation in solving problems) were significant in causing the unfavourable contractual behaviour. The findings also outlined initiatives need to be taken by the client, the engineer, the contractor as well as both by engineer and contractor to prevent the unfavourable contractual behaviour from occurring. The proposed framework has a significant contribution to be as a guide for key participants to implement the project complying with the condition of the contract. The findings of the study are also particularly significant due to limited study have taken into account the contractual challenges into poor performance and people management within the civil engineering project in the existing body of research.

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