

UNIVERSITI TEKNOLOGI MARA

**CONCEPTUAL PROTOCOL MODEL
FOR IMPROVING PRELIMINARIES
IN CONVENTIONAL CONTRACT**

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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

The construction sector is one of the contributors to the Malaysian economy alongside the manufacturing, agriculture, services, and mining & quarrying sectors. The sector comprises of Civil Engineering, residential buildings, non-residential buildings, and special trades sub-sectors. The conventional procurement entails the bills of quantities (BQ) as part of the contract. Preliminaries constitute an integral part of the BQ. The research prevailed that the establishment of existing Preliminaries among Engineers mainly based on past projects and personal experiences. A variety of methodologies used to conclude Preliminaries has exposed to random errors. On the other hand, varied approaches by Contractors to interpret and price the Preliminaries would result in inconsistency of estimates despite tendering project of similar natures. The lack of comprehension and analytical consideration affects the reliability of Preliminaries, and the lack of use of MyCESMM as a term of reference to standardise the bill has directly retard the professionalism process of the Malaysian construction industry. The study probed into the existing practices of how the Preliminaries being established by the Engineers, what acceptance levels to the industry, and what strategies by the Contractors to interpret and price. In general, the reliability of Preliminaries due to a lack of comprehension and analytical consideration found to be a grave concern. The persistent issues deduced from the existing practices in the Civil Engineering sector require an urgent attention with the aim to improve reliability of the Preliminaries. The research started with an initial preliminary research (N=18) to confirm the existence of issues in Malaysia's construction industry. The issues were further investigated by qualitative research (N=6), content analysis to JKR Form PWD203A and quantitative research (N=270), i.e. followed by statistical analysis using IBM SPSS Statistics Version 23. Based on the findings, a supplementary preliminary research to practising Engineers (N=48) to confirm the root cause was necessary. The findings subsequently reviewed and validated by independent qualified practitioners. The research prevailed that the Civil Engineering sector found to be heavily influenced by the non-standard practices to establish Preliminaries. The tendency to adopt various methods resulted in a lack of awareness of important elements or items. Therefore, the change of practice was articulated and the process proposals presented as the outcome of this research. The "best practice" propositions outlined in the conceptual Protocol encourage better contemplation of cost related items in the Preliminaries. It would also act as an important checklist. The adoption of MyCESMM for the standardisation of the bill would then be easier to achieve the purpose. The Protocol envisaged to create awareness, improve cost bidding competencies and strategies as well as to promote confidence and competitive tender bid. The Protocol would encourage a "win-win" situation between the contracting parties, fairness, avoidance of cost risk, and enhance "value for money". For new knowledge, the Protocol was developed encompassing important parameters, and "best practice" approach. For future research, the recommendation for a research strategy to attest the Protocol through pilot projects and measure the performance and necessary improvements. Other recommendations weighing on the identification of the industry ready to adopt the changes, identification of training needs to create awareness on the reliability of Preliminaries, identification of the development needs by the industry, and what different types of construction activities would impose diverse challenges. Future research is highly recommended for other types of construction contracts such as 'design and build' and Building Works.

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