UNIVERSITI TEKNOLOGI MARA

FRAMEWORK IN REMODELLING NEW MALAYSIAN STANDARD METHOD OF MEASUREMENTs (SMMs)

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CONFIRMATION BY PANEL OF EXAMINERS

I certify that a Panel of Examiner has met on 11th April 2018 to conduct the final examination of Anis Rosniza Binti Nizam Akbar on his **Doctor of Philosophy** thesis entitled "Framework in Remodelling New Malaysian Standard Method of Measurements (SMMs)" in accordance with Universiti Teknologi MARA Act 1976 (Akta 173). The Panel of Examiners recommends that the student be awarded the relevant degree. The Panel of Examiners was as follows:

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ABSTRACT

Standard Method of Measurement (SMM) is a standard document localized to fit the local custom and practice, thus serving as standardized measurements fundamental to producing a good Bill of Quantities. However, previous studies have revealed issues of key players not being underpinned by an SMM deemed necessary for a review, which subsequently invalidating its status in becoming an acceptable model and resulting in the generation of low-standard BQ. Despite these issues being justified by previous researchers, the lack of efforts towards displaying a preferred resolution have rendered them daunting still and remaining as an academic and industry-wide concern. Therefore, this research aims to propose a framework in remodelling the current Malaysian SMMs for Construction Works into a model that is more acceptable. It has subsequently outlined five specific objectives, which include: investigating current practices implemented by the industry in measuring and preparing BQs for construction works; examining issues related to Malaysian SMMs; analysing suitable characteristics of Malaysian SMMs model; developing a framework used in remodelling New Malaysian SMMs; and finally, assessing the suitability and validity of the developed framework. A triangulation approach has been adopted to obtain wide-ranging information regarding similar issues, whereby the strengths of various approaches may be implemented to overcome the insufficiency of others. Data collection processes have been completed through techniques like literature review, documents analysis, questionnaire survey, interviews and focus group discussions. This particular work has disclosed the importance and urgency of improving the construction industry, achievable by remodelling the current Malaysian SMMs model using a proposed framework to be applied. Comprised of a set of phases and steps to be followed and performed during the process, the framework has also been incorporated with major issues and elements identified during the course of the research. It has been designed with the aim of assisting committee members or decision makers with a guideline or checklist regarding variables necessary in remodeling New Malaysian SMMs model that is more acceptable by making it simple, clear, practical and comprehensive.

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CHAPTER ONE
INTRODUCTION

1.1 Background of the Research

Quantity Surveyors (QS) generally offer their clients a wide range of professional expertise, which encompasses from the pre-contractual to the post-contractual stage. One of the core services provided by them includes preparing a Bill of Quantity (BQ) for the purpose of project cost control and management. The BQ allows information like drawings, schedule and specification representing client's needs and requirements to be converted into a tender document.

Table 1.1 below has displayed the gradual development of Standard Method of Measurements (SMMs) over the past three decades courtesy of key players of the Malaysian Construction Industry. The definitions by Mohammad (2012), Nizam Akbar, Mohammad, Talib and Maisham (2014) and Ganiyu and Mohamed (2012) have highlighted the need for players to be underpinned by a single standard system of measurement so as to avoid discrepancies and laborious work when dealing with cost analysis and evaluation of the rated BQ.

Table 1.1
Development of SMM in Malaysia

	Name of SMM	Year of Publish
Building	SMM First Edition (SMM 1)	1959
	SMM First Edition (SMM 1 - Metric)	1976
	SMM Second Edition (SMM 2)	2000
Civil Eng.	CESMM 3 from UK	1991
	CESMM	2003
	MyCESMM	2011

Source : Guan (2010); Hassan (2009, 2011); Mat Jusoh (2004); Misnan, Mohd Yusof & Bakri (2002)

Furthermore, various research endeavors by Malaysian researchers and sustained with initial discussion and dialog with key players have revealed that the first Edition of Malaysian SMM (SMM 1), Malaysian CESMM and other in-house