

**PROGRAM OF QUANTITY SURVEYING
DEPARTMENT OF BUILT ENVIRONMENT STUDIES AND
TECHNOLOGY,
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UNIVERSITI TEKNOLOGI MARA
PERAK BRANCH**

**CAUSES OF VARIATION ORDER IN BUILDING
CONSTRUCTION PROJECT IN EAST COAST
MALAYSIA**

Dissertation submitted in partial fulfilment
of the requirement for the award of
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**PREPARED BY: NUR ARINA AMNI BINTI MOHD AZIZI
(2018249062)
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ABSTRACT

Variation orders are a common occurrence in building projects. It refers to any change to a previously established scope of work at any stage of construction. There are multiple sources of variation depending on the various parties engaged, project complexity, and kind of project, which can lead to disputes and dissatisfaction among parties involved, time overrun, cost overrun, and diminish overall project performance. Thus, controlling variation order is necessary. Hence, the aim of this research is to determine the significant causes of variation order and to identify the possible ways in minimizing the occurrence of variation order in building construction projects in East Coast Malaysia. Data collection involved the survey with a structured questionnaire consisting of 21 causes and 7 possible ways to minimize variation order identified through comprehensive literature review. A total of 97 questionnaire sets were distributed to the consultants involved in building projects in East Coast Malaysia and 48 sets of questionnaire were returned with answer. Data was analyzed statistical software package SPSS and Average Index formula by mean score analysis method and frequency analysis method and further ranked in MS Excel. The results indicated that the most significant causes of variation order are change of plans / scope by owner, change in design by consultants, poor site management and supervision, owner's financial problem, conflict between contract documents and errors and omission in design. Also, possible ways to minimize the occurrence of variation order on a building construction project came up to be variation order must be negotiated by knowledgeable persons, client should provide clear brief of the scope of works, contract document must be checked and reviewed, enhance communications and all parties should be proactive at all times and sufficient time should be given for planning and design phase.

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND STUDY

In an industry, construction sector entails the construction or renovation of buildings, infrastructure, and civil engineering constructions (Nyangwara & Datche,2015). This is a broad and complicated industry comprised of various stakeholders such as owners/clients (government, industry, private parties, and investors), consultants (including designers), and contractors (architects) and construction monitors (engineers), contractors including field managers, site supervisors and construction monitors (engineers), as well as contractors such as field managers, supervisors, and craftsmen (Habenom, 2017). In construction projects, variation order is a typical occurrence. It entails modifying the contract's original scope of work (De Marco et al.,2014).

The construction sector is distinct from other sectors due to its complexity as a result of the participation of many stakeholders. This uncertainty contributes to undesirable conditions, such as variations and the repercussions that come with them. Because of the nature of the construction process, alterations are unavoidable (Sunday,2010). According to Memon, Rahman, and Hasan (2014), variation orders are common in construction projects. It entails making revisions to the initial work scope specified in a contract. A variation (also referred as a change of order or variation of order) is a change in the scope of a construction contract that takes the form of an addition, substitution, or omission from the initial scope of the work specified in the contract. Mostly every construction project deviates from the initial design, scope, and description.