

**THE IMPACT OF VARIATION ORDER ON
PERFORMANCE OF CONSTRUCTION
PROJECT IN THE SULTANATE OF OMAN**

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CONSTRUCTION PROJECT IN THE SULTANATE OF OMAN**

by

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KESAN PERUBAHAN ARAHAN KE ATAS PRESTASI PROJEK PEMBINAAN DI OMAN

ABSTRAK

Tinjauan ke atas literatur mendapati terdapat keperluan untuk membentuk model yang berasaskan kesan perubahan arahan dengan melihat kepada proses untuk mengawal atau mengukur proses pembinaan, prestasi pembinaan dan hasil sebelum projek dianugerahkan, semasa projek dijalankan dan menyediakan ketulusan dalam proses dan maklum balas bila mana ianya diperlukan. Jadi, dalam konteks Oman, kerajaan menghadapi masalah yang serius berkenaan kesan perubahan arahan, kos berlebihan dan kualiti kerja buruk. Oleh yang demikian, adalah perlu dilakukan satu kajian untuk menyelidik kemungkinan menggunakan kesan perubahan arahan dan prestasi projek bagi menjangka prestasi kontraktor dan juga prestasi projek yang dijalankan oleh syarikat pembinaan. Kajian rintis yang dijalankan menunjukkan terdapat lumpang dalam ilmu sedia ada iaitu aktiviti proses perubahan arahan. Jadi, kajian ini akan menyelidik faktor-faktor kualiti projek yang sememangnya dibuktikan sebagai sebahagian daripada aktiviti proses dalam menentukan kejayaan prestasi projek dalam sesuatu projek pembinaan. Matlamat utama kajian ini adalah untuk membentuk model ramalan kesan perubahan arahan bagi prestasi dalam projek pembinaan. Objektif kajian ini adalah untuk menyelidik kesan-kesan perubahan arahan berkaitan prestasi pembinaan projek; menentu bagaimana perubahan arahan yang boleh menambah nilai projek pembinaan; menilai sebab kos tambahan yang memberi kesan keatas prestasi projek pembinaan dan membentuk model ramalan kesan perubahan arahan keatas prestasi projek pembinaan bagi syarikat pembinaan yang menjalankan projek-projek pembinaan. Sumbangan utama kajian ini adalah

pengenalpastian dan integrasi faktor-faktor kesan perubahan arahan keatas prestasi projek pembinaan dalam model ramalan prestasi syarikat pembinaan. Borang soal selidik dan temubual digunakan untuk mengutip data. Skala 5 digunakan dalam borang soal selidik. Populasi kajian adalah profesional bertugas dalam syarikat perunding untuk projek-projek di Oman. Responden kajian dipilih berdasarkan teknik rawak berstrata. Daripada 500 borang soal selidik yang dihantar, sebanyak 272 jawapan telah diterima 54.4 peratus. Data kemudiannya dianalisa menggunakan statistik deskriptif, analisa faktor, dan analisa *multiple regression*. Berdasarkan kepada penemuan ini, ianya menggambarkan semakin tinggi tahap kesan perubahan arahan, semakin memberikan kesan kepada prestasi projek yang dijalankan oleh perunding di Oman. Analisa *multiple regression* menunjukkan kesemua angkubah secara signifikan mampu meramal kesan perubahan arahan keatas prestasi projek pembinaan di Oman. Kajian ini mencadangkan supaya kajian akan datang menggabungkan kaedah kualitatif dan kuantitatif bagi mencambahkan pemahaman tentang faktor-faktor kesan perubahan arahan dan prestasi projek pembinaan di Oman.

THE IMPACT OF VARIATION ORDER ON PERFORMANCE OF CONSTRUCTION PROJECT IN THE SULTANATE OF OMAN

ABSTRACT

Investigation of available literature has enforced the need to develop process-based variation order model that will be used to control or gauge the construction process, construction performance and its outputs before the project is awarded, while the project is in progress and also to provide process transparency and feedback where it is required. Therefore, in the context of Oman, the government is facing serious problems variation order, cost overrun and poor quality. Hence, there seems to be a need to investigate the possibility of adopting impacts of variation order factors and performance of construction project in predicting the performance as well as the project performance. The reviews of the literature reveal that the gap in the available knowledge is on process activities. Therefore, this study attempts to investigate the impact of variation order with regard to the performance of construction project that are clearly proven to be part of the process activities to ensure successful project performance of construction projects. The main aim of this research is to develop the impacts of variation order on performance of construction project model for contractors in construction industry. The main objectives of this research are to investigate the impact of variation order with regard to the performance of construction project; to determine on how variation order can add value to construction project; to examine the causes of variation order that affect project performance, and to develop the impacts of variation order on performance of construction project model for contractors in construction industry for contractors undertaking project. The major contribution of this study is the identification and

integration of the impacts of variation order factors into the performance of construction project predictive model for consultants companies. Survey questionnaire methods were employed to collect the data. A 5 likert scale was used in the questionnaire. The research population is consultants companies professional for projects in Oman. The respondents were selected by using stratified random sample technique. Out of 500 questionnaires sent out, 272 answered questionnaires were returned then the response rate of 54.4 percent. The data were analysed by using descriptive statistics, factor analysis, and multiple regression analysis. Based on the research findings, the results seem to prove that the higher the levels of impacts of variation order factors, the highest effect to project performance of the consultants company in Oman. The multiple regression analysis showed that all the variables could significantly predict the project performance of the consultants company in Oman. This study recommends that future studies should combine both qualitative and quantitative methods in this study that will enhance the understanding the impact of variation order factors and performance of construction project in Oman.

