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## Enhancing the Quality of Construction Environment by Minimizing the Cost Variance

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### Abstract

Poor project execution and deliverable performance considered one of the most recurring problems in the construction industry. Most of the projects completed at sums much higher than the actual contract sum. This led us to analyze the factors influencing the cost variance during the construction stage. A total of 320 questionnaires were sent among the building contractors in Class ‘A’ within the Klang Valley area and followed by interviews with experienced practitioners. The outcomes of this paper will help to enhance the cost performance in the Malaysian construction industry and improve the quality of production among the building contractors.

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*Keywords:* Cost variance; cost performance; building contractors; construction stage

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### 1. Introduction

Construction industry can be considered as a major contributor to the Malaysian economy growth. In recent years, it reported that projects execution and deliverable performance in Malaysia decreased dramatically because of the poor time and cost performance of the projects (Abdul Rahman et al., 2012; Ramanathan et al., 2012 and Endut et al., 2009). As a consequence, most of the projects in Malaysia have

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given negative impacts toward the national construction economy such as leading to additional costs, decreasing of the contractor's profit, reputation damage and increasing of total abandonment of the projects (Memon et al., 2011 and Ali and Kamaruzzaman, 2010). Many researchers have equally agreed that there were many problems of cost variance rather than time variance in Malaysia (Abdul Rahman et al. 2012 and Ramanathan et al., 2012). This is proven by Abdul Rahman et al. (2012), only 11% of respondents mentioned that normally their projects were finished within the budgeted cost while 89% of respondents agreed that their projects had the problem of cost overrun with an average overrun at 5 to 10% over the contract price. Meanwhile, Endut et al. (2009) in their survey of 359 projects in Malaysia found only 46.8% of public sector and 37.2% of private sector projects were completed within the stipulated budget. Thus, it can be indicated that the problem of cost variance gives significant threat to the development of the construction industry (Abdul Rahman et al., 2012). It implies that the cost variance may affect the quality of construction environment. Also, many researchers claimed that there are more building projects that had cost variance rather than others construction projects (Ramanathan et al., 2012; Abdul Rahman et al., 2012 and Memon et al., 2010).

Today, clients' requirements are complex and they are aware towards reasonable budgetary and quality of the projects. It is necessary for construction practitioners to be more concern towards the client's obligations in terms of cost, quality and time (Hamzah, 1997). However, in Malaysia, there is lack of study that incorporate the role of building contractors in improving the project execution and deliverable performance. Hence, in order for the building contractors to stay competitive, the factors influencing the cost variance from their perspectives should be determined. It is also essential to provide the corrective actions in mitigating the measures in order to provide a better quality of the construction environment.

## **2. Literature review**

### *2.1. Definition of cost variance*

There are various definitions of cost variance across the world. Kasimu (2012) defined the cost variance as the differences between the final cost of a construction project and the contract amount that agreed between the client and the contractor during the signing of the contract. Sing (2009) stated that cost variance is a situation where the amount of money used is different from the initial project cost. Meanwhile, Sun and Meng (2009) indicates that the cost variance also can be used interchangeably with the cost overrun. They further added that the cost variance refers to "the excess of the foreign exchange or local currency expenditures incurred exceeding the budgeted estimation". Kaliba (2009) used the terms cost escalation and budget overrun to refer to cost variance. Although there is no specific definition for cost variance in the construction industry, most people working in this industry should realize their effects towards the whole of the construction industry.

### *2.2. Effects of cost variance*

Nega (2008) strictly said that the cost variance affects a whole construction industry and give negative impacts towards the national economy of the country. It has resulted the construction projects into big troubles such as project abandonment, reputation damage, inability to secure project finance and may influence the whole life cycle cost of the projects. Otherwise, the cost variance also may affect the construction practitioners such as contractor, consultant, and client. For contractor, it may affect their company cash flow, minimize the chances of winning upcoming projects, lead to huge losses of the profits and may decrease quality of the production in managing projects. Meanwhile, to the consultants, cost variance implies the inability to provide the best value of money to the clients and result in loss of

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