

**THE MANAGEMENT IN PERFORMANCE OF VARIATION ORDER ON  
CONSTRUCTION WORK**

**By**

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I hereby declare that I have checked this project and in my opinion, this project is  
Adequate in terms of scope and quality for the award of the degree of  
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ON CONSTRUCTION WORK

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## DECLARATION OF ORIGINAL WORK

“I hereby declare that the work of this project paper is mine except for the quotations and summaries that have been duly acknowledge”

Signature :

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Date :

## DEDICATION

To my beloved family especially my husband and also my family for always support and give motivation for I complete my research. Without all of you, I cannot finish my research successfully.

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## ABSTRACT

This study aims to investigate the relationship between the factors that influence the occurrence of variation orders in construction sites and also to identify the top factor causing variation order. The aim of the study was conducted is based on problems that can be identified by reading the article and journal. The scope of the research is conduct at the company construction work. This study used quantitative research methods. The data will be obtained through the distribution of questionnaires to targeted respondents. The study sample was non-probability. The study sample consist of 113 respondents. The sample selected is based on the Krejcie and Morgan table. Data analysis methods will be measure by using descriptive analysis Statistical Package for Social Sciences (SPSS). Regression analysis to investigate the relationship between independent and dependent variable. This research was founded the element of owner, consultant, contractor and other (IV) was contributed to the performance of variation order (DV). It is prove by the data analysis using correlation and regression that the contractor ( $r = 0.913$ ,  $r^2 = 0.834$ ) more significant element toward performance of variation order, followed by other ( $r = 0.910$ ,  $r^2 = 0.828$ ), owner ( $r = 0.904$ ,  $r^2 = 0.817$ ), and consultant ( $r = 0.892$ ,  $r^2 = 0.817$ ). Indirectly, this study has also achieved three objectives.

Keywords: Variation Order, Construction work, Correlation, Regression, Significant, Performance of Variation Order.

## ABSTRAK

Kajian ini bertujuan untuk mengkaji hubungan antara faktor-faktor yang mempengaruhi berlakunya arahan perubahan dalam tapak pembinaan dan juga untuk mengenal pasti faktor utama menyebabkan perintah variasi. Tujuan kajian ini dijalankan adalah berdasarkan kepada masalah yang boleh dikenal pasti dengan membaca artikel dan jurnal. Skop kajian ini adalah pengendalian kerja-kerja pembinaan syarikat. Kajian ini menggunakan kaedah penyelidikan kuantitatif. Data ini akan diperolehi melalui pengedaran soal selidik kepada responden yang disasarkan. Sampel kajian adalah bukan kebarangkalian. Sampel kajian terdiri daripada 113 responden. Sampel kajian yang dipilih adalah berdasarkan jadual Krejcie dan Morgan. kaedah analisis data akan diukurkan dengan menggunakan analisis deskriptif Statistical Package For Social Science (SPSS). analisis regresi untuk mengkaji hubungan antara pembolehubah bebas dan bergantung. Kajian ini telah diasaskan elemen pemilik, perunding, kontraktor dan lain-lain (IV) telah menyumbang kepada prestasi variation order (DV). Ia membuktikan dengan analisis data dengan menggunakan korelasi dan regresi bahawa kontraktor ( $r = 0.913$ ,  $r^2 = 0.834$ ) elemen yang lebih penting ke arah pelaksanaan perintah perubahan, diikuti oleh yang lain ( $r = 0.910$ ,  $r^2 = 0,828$ ), pemilik ( $r = 0.904$  ,  $r^2 = 0,817$ ), dan perunding ( $r = 0,892$ ,  $r^2 = 0,817$ ). Secara tidak langsung, kajian ini juga telah mencapai tiga objektif.

Kata kunci: Arahan Perubahan, Kerja-kerja pembinaan, Korelasi, Regresi, Significant, Pencapaian Perubahan kerja



## TABLE OF CONTENT

CHAPTER	CONTENTS	PAGE
	<b>DECLARATION OF ORIGINAL WORK</b>	<b>i</b>
	<b>DEDICATION</b>	<b>ii</b>
	<b>ACKNOWLEDGEMENT</b>	<b>iii-iv</b>
	<b>ABSTRACT</b>	<b>v</b>
	<b>ABSTRAK</b>	<b>vi</b>
	<b>CONTENTS</b>	<b>vii</b>
	<b>LIST OF TABLES</b>	<b>xii-xiii</b>
	<b>LIST OF CHARTS</b>	<b>xiv</b>
	<b>LIST OF FIGURES</b>	<b>xv</b>
	<b>LIST OF ABBREVIATIONS</b>	<b>xvi</b>
	<b>LIST OF SYMBOL</b>	<b>xvii</b>
	<b>LIST OF APPENDIX</b>	<b>xviii</b>
<b>CAPTER 1</b>	<b>INTRODUCTION</b>	<b>1</b>
	1.0 Introduction	1
	1.1 Background of Research	1-2
	1.2 Problem Statement	2-3
	1.3 Research Question	3-4
	1.4 Research Objective	4
	1.5 Scope of Research	4-5

1.6	Importance of the Research	5
1.7	Limitation of Research	5
1.8	Summary	6
<b>CHAPTER 2</b>	<b>LITERATURE REVIEW</b>	<b>7</b>
2.0	Introduction	7-8
2.1	Rules variation order	8
2.2	Nature of variation order	8-9
	2.2.1 Beneficial variation order	9
	2.2.2 Detrimental variation order	9
2.3	Origin and Causes of variation order	10
	2.3.1 Client	10-12
	2.3.2 Consultant	12-15
2.3.3	Contractor	16-18
2.3.4	Other	18-19
2.4	Impact of variation order on Project Performance	20
	2.4.1 Increase in Project Cost	20-21
	2.4.2 Time Overrun	21-22
	2.4.3 Quality Degradation	22
2.5	Theoretical Framework	23
2.6	Hypothesis	24
2.7	Summary	24
<b>CHAPTER 3</b>	<b>RESEARCH METHODOLOGY</b>	<b>25</b>
3.0	Introduction	25

3.1	Research Design	25-26
3.1.1	Quantitative Method Research	26-27
3.2	Data Collection	27
3.2.1	Primary Data Sources	27-28
3.2.1.1	Questionnaires	28
3.2.2	Secondary Data	29
3.3	Location Research	29
3.4	Sampling Techniqued	29-30
3.4.1	Probability Sample	30
3.4.2	Non-probability Sample	30-31
3.5	Time Horizon	32
3.6	Data Analysis	32-33
3.6.1	Descriptive Analysis	33
3.6.2	Reliability Analysis	33-34
3.6.3	Correlation Analysis	34-35
3.6.4	Regression	35-36
3.7	Pilot Test	36-37
3.8	Validity	37
3.8.1	External Validity	37-38
3.8.2	Internal Validity	37-38
3.9	Summary	40
<b>CHAPTER 4</b>	<b>DATA ANALYSIS AND DISCUSSION</b>	<b>41</b>
4.0	Introduction	41
4.1	Realibility testing for items in variables	42
4.2	Frequency Znalysis on Respondent	42-43
	Demographic Bankground	

4.2.1	Types of Company	43
4.2.2	Profession in Company	43-44
4.2.3	Age	44-45
4.2.4	Period of Work in the Field Of construction	45
4.2.5	Education Background	45-46
4.3	Descriptive Statistics Analysis	46-47
4.4	Multiple linear Regression	47-48
4.5	Objective and Hypothesis Test	48
4.5.1	Objective 1	48
4.5.1.1	Hypothesis 1	48-49
4.5.1.2	Hypothesis 2	49-50
4.5.1.3	Hypothesis 3	51-52
4.5.1.4	Hypothesis 4	52
4.5.2	Objective 2	53-54
4.5.	Objective 3	54-56
4.6	Summary	56
<b>CHAPTER 5</b>	<b>CONCLUSION AND RECOMMENDATION</b>	<b>57</b>
5.0	Introduction	57
5.1	Conclusion from This Research	57
5.1.1	Respondent Demographic	58-59
5.1.2	Relationship between Owner, Consultant, Contractor, Other and	59-60

	Performance of Variation Order.	
	5.1.2.1 Hypothesis 1	60-61
	5.1.2.2 Hypothesis 2	61
	5.1.2.3 Hypothesis 3	61-62
	5.1.2.4 Hypothesis 4	62
5.2	Conclusion	62
5.3	Recommendation for Future Researcher	63
5.4	Limitation of Study	63
	<b>References</b>	<b>64</b>
	<b>Appendix</b>	<b>68</b>

## LIST OF TABLES

NO.	TITLE	PAGE
3.1	Krijcie and Morgan	31
3.2	Cronbach's Alpha	34
3.3	Values of Correlation Coefficient	35
3.4	Validity test for 25 respondent	38-39
4.0	Realibility Statistics Cronbach's Alpha	42
4.1	Descriptive Statistics	46
4.2	Multiple Linear Regression between Owner, Consultant, Contractor and Other toward Performance of Variation Order	47
4.3	Simple Linear Regression between Owner, toward Performance of Variation Order	49
4.4	Simple Linear Regression Consultant toward Performance of Variation Order	50
4.5	Simple Linear Regression Contractor toward Performance of Variation Order	51
4.6	Simple Linear Regression Other toward Performance of Variation Order	52
4.7	Relationship between Owner, Consultant, Contractor and Other toward Performance of Variation Order	53
4.8	Suggestion and Recommendation Solution to Minimize the Variation Order	55
5.1	Relationship between Owner, Consultant, Contractor, and Other toward Performance	59

Of Variation Order

**LIST OF CHARTS**

<b>NO.</b>	<b>TITLE</b>	<b>PAGE</b>
4.1	Types of Company	43
4.2	Profession in Company	44
4.3	Age	44
4.4	Period of Work in Field Construction	45
4.5	Education Background	46



**LIST OF FIGURES**

<b>NO.</b>	<b>TITLE</b>	<b>PAGE</b>
1.0	Statistic Variation Order on FGVP	3
2.0	Theoretical Framework	23
3.0	Table Krejcie and Morgan	32

## LIST OF ABBREVIATIONS

SPSS	-	Statistical Package for Social Sciences
IV	-	Independent Variables
DV	-	Dependent Variables

**LIST OF SYMBOLS**

% - Percent

**LIST OF APPENDIX**

<b>TITLE</b>	<b>PAGE</b>
R Product Moment	68
Kreiji R. Morgan	69
Questionnaires	70-77
Gantt Chart PSM 1	78
Gantt Chart PSM 2	79

## **CHAPTER 1**

### **INTRODUCTION**

#### **1.0 Introduction**

In this chapter will explain about overall the research and will explain why this research will be implement on this study. This chapter will touch about background of research, problem statement, research question, research objective, scope of reserch, importance of research, limitation of research. From this sub-tittle will explain clears details about research.

#### **1.1 Background of Research**

Variation order is meant any increase, substitution, reduction or change in the speccifications, drawing or quantity on a contract. Any amendent work can only be executed by the contractor in the event of an official directive issued by the Superintending Officer (S.O). therefore, if the command is issued, the contractor are required to comply. Any Variation work which has been directed by Owner should be measured and assessed by the Superintending Officer (S.O). Assessment rates for

Variation Order should be done with reference to the same rate as those on existing contracts. Should not there for the same price, a reasonable price can be established by agreement between the two (2) parties. For works that can not be measured or evaluated physically, the content in day work can be used. Day work mean, the contractor will be paid in accordance with Schedule day work filled when the contract was signed and supplement with profit. However, the contractor must submit from the copies of vouchers, receipts or payroll books as proof of payment within seven (7) days from the date amendent work instruction (APK) issued. for instance, for the variation order less then  $\pm 5\%$  of the contract price will approved by the Executive Director. While for variation order exceed  $\pm 5$  of the contract price will br approved by Chief Executive Officer. Contract price adjustment will be made on variation order which was approved by the Committee for the payment to the contractor's work futher.

## 1.2 Problem Statement

The effect of the enactment of variation order will cause an impact on wheather to contract owner, management team and also contractors. Among the problems that often occur are changes in project costs and delay in the delivery of project. Changes in project costs is significant effect is the change in the quantity of the contract either incresed or decreased from the original value in contract. When there is a change in the contract, particular the increased value of the contract, the owner must apply for an addition budget to cover the cost of the contract increased from the original value. For delay in the delivery of project is variation Order will result in an increase in employment in construction work. In this case, the contractor is entitle to seek additional time to complete the contract work/project. So that, from the problem statement, the reseacher try to find ways or to solve this problem with identify what the potencial cause that make variation order happen in construction

work/project. Therefore, researcher also wants to find out the effect of variation order to construction work/project.

Referring to engineering projects at FGVPM in 2013, a total of 278 tenders engineering fields. Of that amount, 72.3% of total employment contract has change resulting from the variety of factors.

No.	Causes of variation	Total	%
1	No change	77	27.7
2	Has changes	201	72.3

Table 1.0: Statistical Variation Order in Construction Work

Sources : Felda Global Ventures Planstations (Malaysia) Sdn. Bhd

### 1.3 Research Question

In this research, the focus is to determine what causes that variation order will happen and what the effect to the project from variation order . So, this research explored the following key question:

1. What are the causes that will make variation order happen in the construction work/project?
2. Which is the top causes of variation order happen on construction work/project?

3. What are the related these research for an effective solution to minimize the variations order?

#### **1.4 Research Objective**

The objectives of this study basically is to investigate the potencial causes that will make variation order happen in construction work/project and also what are the effect if variation order happen in construction work/project. The objective of study are state as below

1. To investigate potencial causes that will make variation order happen in construction work/project.
2. To identify the top causes of variation order happen in construction work/project.
3. To study the related these research for an effective solution to minimize the variations order.

#### **1.5 Scope of the Research**

This research will be conducted on the parties involved with the engineering contract in construction fields in Malaysia. Respondent is estimate in this study are 100 people. The respondent consist Project Manager, Project Engineer, Assistant Engineer, Technician, Client (Estate Manager), Consulting Engineers and Contractor. The respondent is totally contributes in consruction work/project. So that,