

**THE IMPLEMENTATION OF DESIGN AND BUILD PROCUREMENT
APPROACH IN LOCAL CONSTRUCTION INDUSTRY**

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APPROACH IN LOCAL CONSTRUCTION INDUSTRY

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Dedicated to my loving parents, brothers and sister

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ABSTRACT

In our local construction industry, the design and build procurement method had been quite widely used especially on the large and complex project. However, there was little research being conducted on the implementation of this approach in our construction industry. Therefore, this research was aimed to identify the advantages of practicing design and build procurement method. Moreover, the problems/constraints in practicing design and build procurement method will also be studied. Next, the major successes factors in the project practicing design and build procurement method will also be part of this research objective. Finally, this research will also include the study on the effectiveness of the design and build method in shortening the construction time, saving the construction cost and deliver better end product. Survey was conducted through questionnaires distributed among local contractors' firm based in Kuala Lumpur and Selangor state. Upon receiving the feedbacks, SPSS program will be used to analyze it. It was found that the overall performance of design and build approach are in better form. Therefore, this approach should be more widely practiced and not only limited to large and complex projects only.

ABSTRAK

Dalam industri pembinaan di negara kita, kaedah rekabentuk dan bina sememangnya telah digunakan secara agak meluas terutama sekali bagi projek-projek yang besar dan kompleks. Akan tetapi, kajian terhadap penggunaan kaedah ini di negara kita jarang dilakukan dan cuma terdapat sebilangan kecil data yang boleh diperoleh berkenaan penggunaan kaedah rekabentuk dan bina di negara kita. Oleh yang demikian, kajian ini telah dijalankan untuk mengkaji dan mengenalpasti kelebihan atau kebaikan kaedah ini. Selain itu, unsur berkaitan keburukan kaedah ini juga akan dikenalpasti. Seterusnya, faktor-faktor utama yang menjurus kepada kejayaan projek yang menggunakan kaedah ini juga dikaji dalam kajian ini. Akhirnya, kajian ini juga akan meliputi kajian terhadap keberkesanan kaedah rekabentuk dan bina dalam menjimatkan masa pembinaan, menjimatkan kos pembinaan serta menghasilkan hasil kerja yang lebih bermutu. Kajian akan dijalankan dengan mengedarkan borang soal selidik kepada kontraktor tempatan yang berpusat di Kuala Lumpur dan Selangor. Setelah berjaya mengumpulkan data, program SPSS akan digunakan untuk menganalisa data yang terkumpul. Hasil analisis menunjukkan bahawa prestasi projek yang menggunakan kaedah rekabentuk dan bina adalah lebih baik dan sememangnya dapat mengurangkan kos dan masa pembinaan disamping menghasilkan mutu kerja yang memuaskan. Oleh yang demikian, kaedah ini seharusnya digunakan secara lebih meluas di negara kita dan tidak terhad kepada projek yang besar dan kompleks sahaja.

CONTENTS

CHAPTER	ITEM	PAGE
	DECLARATION	ii
	DEDICATION	iii
	ACKNOWLEDGEMENT	iv
	ABSTRACT	v
	ABSTRAK	vi
	CONTENTS	vii
	LIST OF FIGURES	xiii
	LIST OF TABLES	xv
	LIST OF APPENDIXES	xvi
CHAPTER I	INTRODUCTION	1
	1.1 General Information	1
	1.2 Problem Background	2
	1.3 Research Objectives	3
	1.4 Scopes of Study	3
	1.5 Importance Of This Research	4

CHAPTER II	LITERATURE REVIEW: DESIGN AND BUILD IN GENERAL	5
2.1	Traditional Procurement Approach	5
2.1.1	Strengths Of The Traditional Approach	8
2.1.2	The Weakness Of The Traditional Approach	9
2.2	Design And Build Procurement Approach	11
2.2.1	Structural Variations Of Design And Build	12
2.2.1.1	Joint Venture	12
2.2.1.2	Contractor Led Design And Build	13
2.2.1.3	Designer Led Design And Build	14
2.2.1.4	Integrated Design And Build Firm	15
2.2.1.5	Developer Led Design And Build	17
2.2.2	Typical Design And Build Operation Process	18
2.2.3	Strengths Of Design And Build Procurement System	20
2.2.4	Weakness Of Design And Build Procurement System	24
2.3	Design And Build Project Success Factors	27
2.3.1	Project Team Commitment	27
2.3.2	Contractor's Competencies	28
2.3.3	Client's Competencies	29
2.3.4	End Users' Needs	29
2.4	Factors Influencing Trends In Design And Build Procurement Method	29
2.4.1	Client's Factors	30
2.4.1.1	Price Certainty	31
2.4.1.2	Single Point Of Responsibility	31
2.4.1.3	One-Stop Shopping Approach	31
2.4.1.4	Shorter Project Duration Time	32
2.4.1.5	Reduction In Costs	33
2.4.1.6	Transfer Of Risks	34
2.4.1.7	Quality Achievement	35
2.4.1.8	Better Buildability	35

2.4.1.9	Avoidance Of Conflicts And Claims	36
2.4.2	Government Policies	36
2.4.2.1	Introduction Of Private Finance Initiative (PFI)	36
2.4.2.2	Cut In Government Expenditure	37
2.4.2.3	Encouragement Of Partnership	37
2.4.3	Economical Factors	38
2.4.3.1	The Economic Condition Of The Nation	39
2.4.3.2	Interest Rate	39
2.4.4	Marketing Factors	40
2.4.4.1	Service Industry	41
2.4.4.2	The Unique Characteristics Of The Construction Industry	41
2.4.4.3	Client-Oriented Business	42
2.4.4.4	Lack Of Marketing Experts	42
2.4.5	Technological Factors	43
2.4.6	Life-Cycle Cost	43
2.4.7	Conclusion	44

CHAPTER III LITERATURE REVIEW: ROLES OF INDIVIDUALS IN DESIGN AND BUILD PROJECT 46

3.1	Introduction	46
3.2	Owner's Team	46
3.2.1	Owner	46
3.2.2	Owner's Representative	47
3.2.3	Design Criteria Professional	48
3.2.4	Construction Manager	50
3.3	Design Builder's Team	51
3.3.1	Design Professionals As Design And Build Team Members	52
3.3.2	Constructor As Member Of The Design And	

Build Team	54
3.3.3 Design And Build Subcontractor	56
3.3.4 Trade Subcontractors	57
3.4 Independents In The Design And Build Process	57
3.4.1 Quality Assurance Professionals	57
3.4.2 Building Officials	59
3.4.3 Users	59
CHAPTER IV LITERATURE REVIEW: CONTRACTOR SELECTION PROCESS	61
4.1 Design And Build Project In Public Sector	61
4.2 General Practices In Contractor Selection	62
4.2.1 Pre-Qualification	63
4.2.2 Need Statement (Project Brief)	63
4.2.3 Evaluation	64
4.2.4 Supervision	65
4.3 Model Of Contractor Selection	66
CHAPTER V RESEARCH METHODOLOGY	71
5.1 Introduction	71
5.2 Literature Review	71
5.3 Data Collection	72
5.4 Questionnaires Structures	73
5.5 Data Analysis	74

CHAPTER VI RESULTS ANALYSIS	76
6.1 Respondents Background	76
6.2 Reliability Analysis	80
6.3 Analysis Of The Advantages Of Design And Build Procurement Method	81
6.4 Analysis On The Problems/Constraints Faced in Design And Build Procurement Method	87
6.5 Analysis On The Design And Build Project Success Factor	92
6.5.1 Project Team Commitment	92
6.5.2 Contractor's Competencies	98
6.5.3 Client's Competencies	102
6.5.4 End-Users' Needs	104
6.6 Analysis On The Budget Performance	106
6.7 Analysis On The Schedule Performance	110
6.8 Analysis On The Quality Performance	115
CHAPTER VII CONCLUSION AND DISCUSSION	119
7.1 Introduction	119
7.2 Advantages Of Design And Build Approach	119
7.3 Problems/Constraints In Design And Build Approach	120
7.4 Project Success Factors	121
7.5 Cost, Time And Quality	122
7.5.1 Budget Performance	122
7.5.2 Schedule Performance	122
7.5.3 Quality Performance	123
7.6 Limitation Of Study	123
7.6.1 Result Unable To Reflect Our Local Construction Industry Thoroughly	124

7.6.2	Results Do Not Reflect The Opinions From All The Parties In Design And Build Project	124
7.6.3	Medium-Sized Group Of Respondents	124
7.7	Recommendation For Future Study	125

REFERENCE	127
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APPENDIX	130
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LIST OF FIGURES

FIGURE NO.	TITLE	PAGE
Figure 2.1	The traditional procurement system	6
Figure 2.2	Operation of the traditional procurement system	8
Figure 2.3	Joint venture design and build system	13
Figure 2.4	Contractor led design and build system	14
Figure 2.5	Designer led design and build system	15
Figure 2.6	Integrated design and build firm system	16
Figure 2.7	Developer led design and build system	17
Figure 2.8	Operation of the design and build system	20
Figure 2.9	Factors influencing trends in design and build procurement method	30
Figure 4.1	Contractor selection model	66
Figure 4.2	Model for two-stage pre-qualification and short listing of bidders	67
Figure 4.3	Design and build bid evaluation – Phase 1	68
Figure 4.4	Design and build evaluation – Phase 2	69
Figure 5.1	Flow chart and summary of research methodology	73
Figure 6.1	Location of the respondents	77
Figure 6.2	Type of contractor firm	77
Figure 6.3	Size of the contractor firm	78
Figure 6.4	Contractors' firm involvement in construction industry	79
Figure 6.5	Number of design and build experienced	79
Figure 6.6	Other type of procurement method which had been practiced	80

Figure 6.7	Percent of cost can be saved using design and build approach	109
Figure 6.8	Budget performance of design and build projects	109
Figure 6.9	Percent of time can be saved using design and build approach	113
Figure 6.10	Schedule performance of design and build projects	114
Figure 6.11	Response on the conformation to user expectation in design and build projects	117
Figure 6.12	Response on the owner satisfaction of the design and build projects	118

LIST OF TABLES

TABLE NO.	TITLE	PAGE
Table 4.1	Tenders called by JKR headquarter	62
Table 5.1	Mean scale	75
Table 6.1	Response on the advantages of design and build procurement method	81
Table 6.2	Response on the problems/constraints faced by design and build procurement method	88
Table 6.3	Response on the project team commitment factor	92
Table 6.4	Response on the contractor's competencies factor	98
Table 6.5	Response on the client's competencies factor	102
Table 6.6	Response on the end-users' needs factor	104
Table 6.7	Response on the budget performance of design and build projects	106
Table 6.8	Response on the schedule performance of design and build projects	110
Table 6.9	Response on the quality performance of design and build projects	115

LIST OF APPENDIXES

APPENDIX	TITLE	PAGE
A	Questionnaires structure	130
B	Reliability analysis result using SPSS	138

CHAPTER I

INTRODUCTION

1.1 General Information

The design and build system was first introduced in Malaysia in 1983 (Khairuddin Abdul Rashid, 2002). Design and build procurement method is not a new project delivery system, but rather one that has been used for centuries throughout the world. Those who built the projects that are landmarks of ancient civilization used processes essentially similar to modern design and build method (National Society of Professional Engineers, 1995).

The present design-bid-build system or known as traditional system, whereby the design and construction are separated, was borne out of the “spoils system” and lack of widespread technical expertise. Conceptually, traditional system was established to produce facilities to meet the needs of growing population at the lowest cost to the public. Nevertheless, the system ensured that goods and services were purchased on the basis of a low bid. Traditional system functioned on the basis that project plans and specifications, prepared by trained professionals and executed by a properly supervised low bidder would produce the desired product at the lowest cost (NSPE, 1995).

There appears to be a trend in Malaysia for some employers to elect for design and build type contracts for their developments. Until recently, the most common forms of contract adopted in Malaysia were based on the traditional arrangements between an employer, his consultants and the contractor. The common forms were those published by the Pertubuhan Akitek Malaysia (Malaysian Architects' Association) and Jabatan Kerja Raya (Public Works Department).

Despite the absence of a local design and build form of contract, local employers have, presumably under the advice of their consultants, had the option of choosing from various forms of contract available. In relation to design and build forms, the FIDIC Orange book appears to be the form that has been most popularly received by employers here (Khairuddin Abdul Rashid, 2002).

1.2 Problem Background

Nowadays, the construction industry is evolving towards a stage whereby cost, time and quality are being stressed and remain the main requirements from the end user. Although the use of traditional method to implement project has been there for many decades, recent years, as projects getting more complex and require fast track which demand greater emphasis on management techniques and engineering skills, the traditional approach to implement those projects were found to be not effective (Bahari Mohd. Ali, 1986)

The practicing of the traditional method had also came under heavy and severe criticism from the academician both locally and overseas as being too slow, requiring too much input from the clients and the implementing agency hence causing a lot of delays. In local government projects, many of the projects conducted suffered delays in delivering the projects on time. The causes of delays were not made known whether it was related to the current practice of traditional method.

Design and build procurement method may seem to be suitable replacing the old traditional approach as it is known to be able to deliver projects in a faster way and require less input from the clients. However, there was little research being conducted on the implementation of this approach in our construction industry. Therefore, this research is meant to give an overview of the implementation of such approach in our construction industry.

1.3 Research Objectives

The main objectives of this research are as follows:

1. To identify the advantages of practicing design and build procurement method.
2. To identify the problems/constraints in practicing design and build procurement method.
3. To identify the success factors in the project practicing design and build procurement method.
4. To study the effectiveness of the design and build method in shortening the construction time, saving the construction cost and deliver better end product.

1.4 Scopes Of Study

This research will be involved the general contractors in Kuala Lumpur and Selangor state only. In other words, the respondents will be the contractors who are registered with the Construction Industry Development Board (CIDB) under Gred 7 or register with Pusat Khidmat Kontraktor under Gred A.

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