THE CURRENT PRACTICE AND PROBLEMS OF CONTRACTUAL ARRANGEMENT IN CONSTRUCTION INDUSTRY

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ABSTRACT

There are risks involved in any type of contract arrangement in any construction project. The most appropriate contract method for the project needed to ensure optimum efficiency in the future. The present tendency that numerous disputes are arising from contracts in the industry is an indication that aspect of the administration of contract needs to be strengthened. This project paper aims to determine the most prefer applicability and effectiveness of contracts in the industry. The methodologies used will consist of a literature review and questionnaire survey distributed to the prominent in the industry. The questionnaire survey for this study was using Likert Scale and the respondents would indicate how strong they agreed and disagreed with each question. The method of selecting respondents would be from the well known Group 1 - Clients and developers, Group 2 - Consultants and Group 3 - Contractors and Sub-contractors working each other before and the unknown who is introduce through the recommendation of the above respondents. The paper briefly describes the types of contractual arrangement available and the criteria need to be considered in deciding the preferred contractual arrangement. The paper provides conclusions regarding the most appropriate contract arrangement and recommendations factors in selection of contractual arrangement to ensure optimum efficiency in the future.

ABSTRAK

Banyak risiko dihadapi dalam pelbagai jenis kontrak bagi semua projek pembinaan. Kontrak yang sesuai untuk projek pembinaan adalah amat penting bagi memastikan kecekapan yang optima pada masa akan datang. Masalah yang dihadapi pada masa terkini adalah pertikaian yang disebab oleh kontrak dalam projek pembinaan telah membuktikan bahawa aspek pentadbiran kontrak adalah perlu dikaji semula. Laporan projek ini mempunyai sasaran mengkaji kontrak yang efektif dan diingini oleh industri pembinaan. Methodologi yang dipakai dalam kajian ini termasuk kajian literatur dan daftar pertanyaan yang diagih kepada orang terkemuka dalam industri pembinaan. Daftar pertanyaan memakai Kadar Likert untuk menjawab secara setuju atau tidak setuju bagi setiap soalan. Cara pemilihan orang untuk kajian ini terdiri daripada Kumpulan 1 – Gunawan dan Pemaju, Kumpulan 2 – Perunding dan Kumpulan 3 – Kontraktor dan Sub-kontraktor yang dikenali dan pengesyoran. Kajian ini mempunyai keterangan yang terperinci terhadap semua jenis kontrak dan ciri-ciri perlu dipertimbangkan semasa membuat keputusan pemilihan. Kajian ini mempunyai kesimpulan mengenai kontrak yang sesuai dan faktor pengesyoran dalam pemilihan jenis kontrak yang sesuai bagi memastikan kecekapan yang optima pada masa akan datang.

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CHAPTER 1

INTRODUCTION

1.1 Background

A contract has been defined as "a mutual agreement between parties that involved to deliver something have been agreed, whereby an agreement enforcement by law. The aim of contract is to ensuring predictability and security in business transaction. The interest in this paper not much from their status as legal documents but rather their role in establishing relationships for all the parties involved in the project and contractual arrangement are especially significant. Contract selection is important because contracts establish the overall organizational framework within which project delivery take place. The most appropriate contractual arrangement depends on the characteristics of the client and the project to be under take. Contract arrangement is an important mechanism establishing the major organization relationship between the various parties involved in the project.

1.2 The Problem Statement

Construction project are more complex and sophisticated. The project stakeholder involved of many parties also leads to supervision problems. The large amount of co-ordination required may cause the project delay due to poor management and improper planning. The efficiency and productivity of the industry depends largely on various sectors can operate and understand each others need and problems. According to Journal Associate Civil Engineering Feb/2006, through the survey about 29.2% agreed that the responsibility to over come the delay problem should be borne by management while another 27.1% indicated all the functional group should be responsible.

The most appropriate contract method for the project work need on the site to be taken by the client to ensure optimum efficiency in the future. Example, a Lump Sum Contract is most prefer because this type of traditional general contract offers the owner the best protection as to the price he will pay for the work but the riskiest for the Contractor. This type of contract is riskiest for the contractor and is used mostly by public agencies. The present tendency that numerous disputes are rise from building and engineering contracts in Malaysia is an indication that these aspect of the administration of contracts need to be strengthened. Dispute can arise from the interpretation and application of any contract documents and at any time during the execution of the contract. Greater emphasis should be place on proper organization, management and execution of the contract by all parties in order to avoid unnecessary disputes.

Contract selection is important because contracts establish the overall organizational framework within which project delivery take place. The most appropriate contractual arrangement depends on the characteristics of the client and the project to be under take. Contract arrangement is an important mechanism establishing the major organization relationship between the various parties involved in the project. Most problems are, if the wrong procurement method was implemented due to the haste to start work on the site, transferred to the construction stage, thereby generating a relatively higher number of variations, disputes and claims.

1.3 The Project Objectives

- 1. To determine the most prefer contractual arrangement within the industry.
- 2. To describe and analyze the factors related to the choice of contract arrangement.
- 3. To study and analyze how the proper contract arrangements play the important roles.
- 4. To explore different forms of contractual arrangement selected by client.

1.4 Important of the study

In view of the growing interest and impact in contract management in particular of contractual arrangement, it is most appropriate that a comprehensive survey could be conducted by investigating the repetitive problems faced by the industries. This study focused on the construction industry. These industries are huge. The problems encounter seem to be persist. The rippling effect of the problems is widespread and consequence is serious.

The result and recommendation would serve guidelines to performance improvement effort. As the industries become more effectives, the arrangement become efficient, the cost of implementation become low, better services and tariffs could be provide to the industry.

The effectiveness of contractual arrangement practice can be improved, as the factors causing project success problems are better understood.

1.5 Scope and Limitation of the project

The starting point for the study was the assumption that contractual arrangement plays the important roles on the construction project and several factors shall be consider before the choice of contract arrangement. The scope of the study will limit to Klang Valley and Selangor areas. The questionnaires will send out by fax, by email and personally handed over to respondents. One general and simple questionnaire (Appendix "A") was carefully designed and sent to all the prominent in the industry. Due to time constraint the methods like case study, pilot study, structure interview and unstructured interview was not adopted

Inside the questionnaire questions have been set to gather the information on the decision on the preferred method of contract procurement. It is essential as it will impact on the amount of Pre-Contract works, example design, detailing, approvals, tender documentation, financing, etc that need to be under taken by the project team. It will consequently influence the employer's financial and human resource outlay for the complete project.

1.6 Organization of project report

The format and design adopted by this project report are in compliance with UTM Graduate School preferred system as set out in the guide of preparation of Thesis, 2004 Edition and general guideline for Master Project for taught course Master Programs at Faculty of Civil Engineering, July 2005 Edition. This report divided to 3 main sections: the preliminary pages, the main text and the references.

The preliminary pages includes the title page, dedication, abstract, acknowledgement, approval sheets, declaration form, table of contents, list of tables and list of appendices.

The main text is divided to 5 chapters. Chapter 1 is the introduction which consists of the background leading to the study. The problem statement and the project thesis objective are stated. It highlights the significance of the study both in term of theory and practical.

Chapter 2 contains the literature reviews. It provided a critical review of the literature which required and support the study. It explored different types of contractual arrangements. It described the strength and weakness of each types of contractual arrangement on contract theories.

Chapter 3 is the methodology chapter. It describes the various method and statically techniques adopted in the project report. Limitation was discussed.

Chapter 4 is the data collection and analysis chapter. It describes the various methods and statically techniques to gather the information, analyze and present in the project report.

Chapter 5 is devoted to the discussion of result of the survey through questionnaire. It presents a complete account of the results and data of the studies collected. It presents a complete account of the analyses of the survey, the interpretations of the results and discussion of the significance of the finding.

Chapter 6 is the conclusion and recommendation chapter. It summarizes the findings related to the project question. It summarizes the implication of the project finding on theory and practice. It provides some recommendation for possible future study efforts.

The references consist of the public declaration and the appendices (questionnaire, list of respondents, tallies of responses, analysis results).

REFERENCES

- 1. Al-Hammad, A. "Common Interface Problems among Various Construction Parties" Journal of Construction Engineering and Management, ASCE, 2000.
- 2. C. William Emory. "Business Research Method" Revised Edition. Irwin Series in Information and Decision Sciences, Ontario, 1980.
- Davis and Cosenza. "Business Research for Decision Making" PWS-Kent Publishing Company, Boston, 1985. 126 – 127.
- 4. Donald R. Cooper / Pamela S. Schindler. "Business Research Methods." 9th Edition. McGraw-Hill International, Singapore. 2006. 341.
- Dennis L. Mulvey. "Project Delivery Trends: A Contractor's Assessment." Journal of Management in Engineering, ASCE, 1998.
- 6. Duane Davis. "Business Research for Decision Making" 5th Edition. Duxbury Thomson Learning, USA, 2000.
- 7. Edward R. Fisk. "Construction Project Administration" 6th Edition. Upper Saddle River, New Jersey, Columbus, Ohio: Prentice Hall 2000.
- 8. Ir. Harbans Singh K.S. "Pre-Contract Award Practice" 1st Edition. Lexis Nexis, Singapore, 2002. 49 144.
- 9. Jack Rizzo. "Design/Build Alternative: A Contracting Method" Journal of Management in Engineering, ASCE, 1998.
- 10. John Murdoch and Will Hughes. "Construction Contract" 3rd Edition. E & FN Spon, 2001.
- Mark Saunders, Philip Lewis and Adrian Thornhill "Research Methods for Business Students" 3rd Edition. Pearson Education Limited, England: Prentice Hall. 2000. 2 – 3.
- 12. Marwa A. El Wardani; John I. Messner; and Michael J. Horman. "Comparing Procurement Methods for Design-Build Project" Journal of Construction Engineering and Management, ASCE, 2006.
- 13. Reginald W. Thomas. "Construction Contract Claims" 1st Edition. The Macmilan Press Limited, 1993

- 14. Richard Holmes, Hazadiah Mohamad Dahan and Habibah Ashari. "A Guide to Research in the Social Sciences" 6th Edition. Pearson Prentice Hall. 2005.
- 15. Rowena Murray. "How to write a thesis" 3rd Edition. Open University Press, UK. 2004.
- Ticehurst, Gregory W. and Veal, A. J. "Business Research Methods: A Managerial Approach" 1st Edition. Pearson Education Australia: Longman. 2000.
- 17. Uma Sekaran. "Research Methods for Business: A Skill Building Approach" 4th Edition. John Wiley & Sons, Inc. USA. 2003. 29 250.
- 18. Zikmund, W. G. "Business Research Methods" 5th Edition. The Dryden Press, 1997. 48 53.