APPLICATION OF E-TENDERING IN MALAYSIA CONSTRUCTION INDUSTRY

BY

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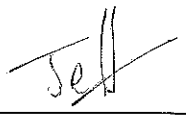
DECLARATION BY THE CANDIDATE

I (JEFFREY TAN JIA REN, I13002480) confirm that the work in this report is my own work and the appropriate credit has been given where references have been made to the work of other researchers.



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ABSTRACT

Electronic tendering has been assumed to be a more effective method compare with traditional tendering method. However, most of the local projects are still adopting traditional tendering method. The aim of this study is to investigate whether the contractors in Malaysia construction industry would adopt and participate in e-tendering system. The study will takes into account the application of e-tendering in current Malaysia construction industry, the challenges of implementing e-tendering system and willingness of the contractors to participate in e-tendering. The research used online questionnaire survey to identify the level of understanding about e-tendering system of contractors in Malaysia and also whether the contractors involved in the application of e-tendering in Malaysia. The result shows that the application of e-tendering is in moderate level in current Malaysia construction community. Majority of the contractors have moderate understanding regarding e-tendering system and more than half of them having experience with e-tendering. The challenges of e-tendering system were also evaluate. There are several challenges for example resistance to change, lack of knowledge, high maintenance cost, high initial cost, poor reliability, lack of business relationship, security concern, and legal issues. Through questionnaire, the contractors have been asked to rank the challenges based on their opinions or experiences in the industry. Poor reliability, security concern and resistance to change have the highest ranking among all the challenges. Contractor's willingness to adopt e-tendering was also evaluated. Most of the contractors are willing to involve if they are invited to participate in the e-tendering project. Saving in storage space is one of the biggest factors which contribute to the contractors' willingness to participate in e-tendering. In other hand, security concern is the most important factor contributes to contractors' unwillingness in the participation of e-tendering.

ABBREVIATIONS

CIDB	Construction Industry Development Board
CRC	Cooperative Research Centre
ICT	Information and Communication Technology
IT	Information Technology
NeTI	National e-tendering Initiative
PAM	Pertubuhan Akitek Malaysia
PWD	Public Work Department
RICS	Rotal Institution of Chartered Surveyors

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CHAPTER 1

INTRODUCTION

1.1 Introduction

The global economy nowadays has changed drastically from an industrial society to an information society. Internet and computers have become the most important information technologies that have developed throughout the years. Most of the business activities accepted the change and transforming into a more electronically ways with internet (Blayse and Manley, 2004). Information, communication and technology can create a more efficient and effective operations. Electronic process may also provide the potential to generate huge wealth (Amit and Zott, 2001).

Traditional process of tendering starts when the drawings and documents are prepared. The owner of the tender advertised the tender in print media such as newspapers or local press. Then, the interested contractor will respond to the tender advertisement by purchasing the documentation, filling the information and submit the documents usually by post, courier or hand delivery before the deadline. Once the tender deadline has expired, all tenders are opened, evaluated, and awarded to the suitable contractor. The details flow of the tender process in traditional ways is shown in Figure 1.1 below.

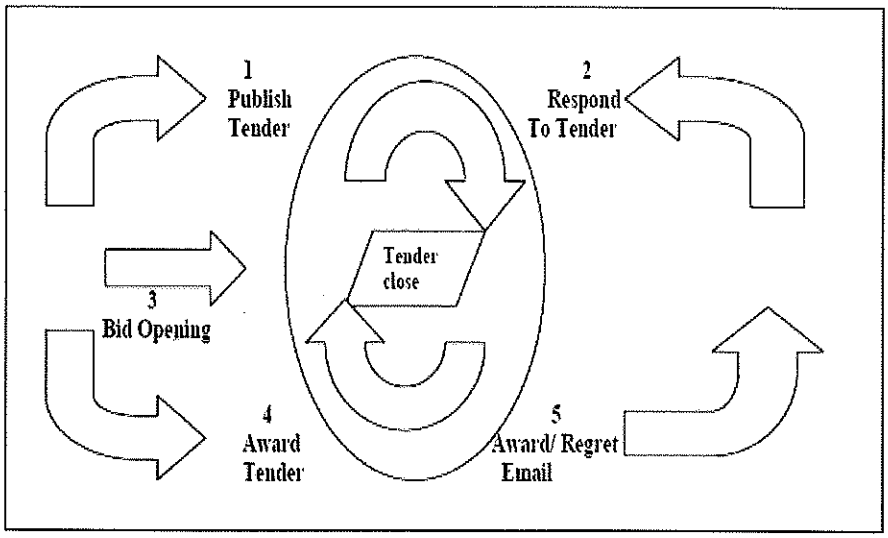

Figure 1. 1Traditional Tender Process

(Source: Ezanee , Norlila and Nurshuhada, 2005)

In other way, electronic tendering serves as a more elaborate Internet based tendering system. According to Harry, The Builder in Construction News and Views, Issue 3 (JUBM, 2002), electronic tendering or E-Tender is one of the many interesting development in today's construction industry. Electronic tendering system manages and facilitates the tendering process by using internet or other electronic media. Basically, it does not change the how the tendering process is done, but it enhances the process by utilizing today's digital technology.

Construction Industry Development Board Malaysia (CIDB) and Public Work Department Malaysia (PWD) have promoted the use of e-tendering since 2004. This research aims to investigate whether the contractors in Malaysia adopt or participate in e-tendering.

1.2 Aim

To investigate whether the contractors in Malaysia's construction industry would adopt and participate in e-tendering.

1.3 Objectives

1. To identify the application of e-tendering in Malaysia construction industry.
2. To identify the challenges in implementing e-tendering in Malaysia Construction Industry.
3. To investigate the willingness of contractors in Malaysia to participate in e-tendering.

1.4 Problem Statement

Paper based tendering system has been considered as part of the conventional procurement process. Things started to change with the increased of technologies, design and build procurement, and client expectancies. Electronic tendering has been assumed to be a more effective method compare with conventional procurement method in term of cost and time savings (Lavelle and Derek, 2009)

In Malaysia, CIDB and PWD have actively promoting the use of e-tendering since 2004. E-tendering system benefits the contractors and also the clients (RICS e-tendering guidance note, 2005). However, most of the local construction organizations are still adopting traditional tendering method (Lou, 2007). Therefore, a research has been carried out to investigate the challenges implementing e-tendering in Malaysia and the potential of contractors in Malaysia to involve in it.

1.5 Key questions

1. What are the challenges in implementing e-tendering in Malaysia Construction Industry?
2. Does the contractors involved in Malaysia are willing to involve with e-tendering system?
3. What are factors affecting the contractors' willingness or unwillingness to participate in e-tendering?

1.6 Important of study

E-tendering means entering and carries out a tender process electronically. Basically, it could be defined as the electronic conduct of tender exercises. E-tendering processes involve the use of Information, Communication and Technologies (ICT) such as the internet, computer to manage the process. At this point, construction conservatives will comment the older way is easier, it is difficult to change an informative and paper environment into an electronic format, Will this affect the tendering process? (Alsagoff, Eric & Zainon, 2006)

Ordinarily, preparing tender documentation for employers and obtaining, processing and submitting tenders for contractors are very costly. The contractors would have invested their own resources in preparing and submitting items like brochures, presentation materials, estimating resources, administration and clerical assistance. (Holt, etc. 1996) By using electronic media to manage and facilitate the process (E-tendering), it not only reduced the cost but also improve the process without changing the way it should be.

However, according to Tindsley and Steohenson (2008), the cost implications of E-tendering will be the initial capital investment for set-up cost of the system and training required at the early stage, which will particularly affect smaller firms. Contractors may also suffer cost in printing the drawings as well as employed specialist staff to use the software to read the drawings. E-tendering consisted of some barriers included:

- E-documents are often badly referenced
- Some contractors' Information Technologies (IT) capabilities are not adequate to successfully tender electronically
- Tender costs are transferred to smaller companies.
- The documents are presented to the contractor in poor way.

In general, the purpose of this study is to examine the application of e-tendering system in Malaysia construction industry. The study continues with consideration of challenges faced in implementing e-tendering in construction industry. Lastly, the research will find out the willingness of the contractors in Malaysia to participate in the application of e-tendering.

1.7 Limitation of study

The research aim is to investigate the willingness of the contractors to participate in E-tendering. In order to obtain information, online questionnaire will be used. The research will be focused on the Grade 7 contractor firm which is located at Petaling, Selangor, Malaysia. The research is limited to contractors because the contractors consider as the key party involve in tendering process of a project.