THE DOCTORAL RESEARCH ABSTRACTS

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The Malaysian construction industry is associated with a high degree of risk due to the nature of its business activities, process, environment and organisation. However, systematic risk management is not practiced in most public construction projects in Malaysia. This situation leads to project failure such as cost overrun, schedule slip and poor quality performance. Risk management is important to improve project performance in term of cost, time and quality. There is little information on the way informal reactive risk management practice contributes either positively or negatively to the project outcomes. The aim of this study was to understand the influence of informal risk management practice to mitigate cost overruns in Malaysian linear-type public projects. It involved projects that had cost overruns and were supervised by Malaysian government technical agencies on behalf of Malaysian ministries and other government agencies. A qualitative-quantitative research methodology was used. The qualitative study involved interviews with a triad of client, consultant and contractor participants in 15 projects. Inductive content analysis produced 16 categories of risk factors, 3 categories of risk treatments, 6 categories of barriers to risk treatment usage and 5 categories of coping actions to overcome the barriers to risk treatment usage.

In the second phase of the study, a questionnaire was designed using the respective subcategories of these categories from the qualitative study phase and literature review findings. The questionnaire was surveyed on triads of project participants in 250 projects. Hence, 750 persons were surveyed. The data from returned completed questionnaires from the triad respondents of 31 projects generated the findings. Factor analysis was used to confirm the categories. Mean scores were used to determine the ranking of the categories. The top risk factor categories were: 1) design, 2) inadequate information and 3) land issue risks. The top risk treatment category was risk treatments during planning and design stage. The top three barrier categories were physical, technical as well as procedural and contractual barriers. The top three coping action categories were rescheduling, redesign and extra resources. T-tests and ANOVA were conducted to detect significant differences between four project characteristic variables and categories of the four risk-related variables (i.e. the risk factor variable, risk treatment variable, barrier variable and coping action variable). There were altogether 10 test results that showed significant differences (p<0.05). One-way correlation analyses were done on the relationships of overall mean scores among the risk factor variable, risk treatment variable, barrier variable and coping action variable. There is a moderately strong significant one-way correlation between the risk factor variable and cost overrun variable (p=0.05). Multiple regression of the categories that made up the risk factor variable (independent variables) and the cost overrun variable (dependent variable) was conducted. Only the third party organisations risk factor category and tender price risk factor category loaded on the regression equation. It is concluded, therefore, that third party organisations and tender price are two risk factors having an impact on cost overruns.

Transparency is defined as the open flow of information and an essential element of the Government primary approach to reduce corruption. The prime reason for dealing with corruption problem is to promote transparency for all businesses. In Malaysia, fighting corruption is one of the National Key Results Area (NKRA) under the Government Transformation Program (GTP). Corruption is a fiduciary crime that is believed to penetrate the construction sectors in countries around the world. Given the intrinsically secretive nature of corrupt activities, the construction industry has a worldwide reputation for incidences of corruption and as for Malaysia; the issue of corruption in construction is at a serious level. Despite corruption exists in every stage of project life cycle, most of the issue of corruption focused at the procurement phase. Besides, sources of corruption can be divided into technical and behavioural issues. Undoubtedly corrupt practices have a lot of adverse effects on the industry as corruption may cause inefficiency and ineffectiveness on project performance. In recent years, anti-corruption strategy has been high on agenda in many parts of the world but relatively little examines the problem in a sector specific way. Regardless of many strategies in combating corruption has been undertaken in Malaysia, there is a need to revise for a more drastic anti-corruption strategies to implement it effectively. The failure in coping with corruption partly stems from our lacking adequate analytical framework that would allow us to sufficiently understand its nature and causal linkage to economic development. Moreover, at present there is no framework of TI formulated to provide a systematic reading on the issues of corruption and means to reduce it especially in construction sector in Malaysia. Thus, the aim of this research is to develop a framework of transparency initiative (TI) to fight corruption for public construction projects. The empirical research was undertaken in two phases; Preliminary Study (i.e., exploratory interviews - 8 respondents, a brain-storming workshop - 72 participants, and document analysis - 4 documents) and Main Survey (i.e., questionnaire – 71 responses) with respondents from Government agencies, contractors and consultants. The data from the Preliminary Study was analysed utilising thematic content analysis and qualitative software (Atlas.ti version 7) whilst the questionnaire survey was analysed using the Statistical Package for the Social Sciences (SPSS) software version 21. The findings from the research were used to develop a framework to fight corruption through TI which was validated to confirm its external validity. The findings confirmed that the level of corruption is high in Malaysian construction industry and procurement phase is the most vulnerable area for corrupt practices. Besides, transparency was found to be important in reducing corruption in term of creating norms for ethical behaviour or in improvement of process of work. However, the research reveals that behavioural issue is one of the important sources of corruption that is negatively related to transparency improvement in order to fight corruption. The framework of TI to fight corruption may serve as a guideline for project stakeholders in achieving better performance of construction project with reduced corruption.