Planning and construction research project: abstract and introduction

Sample abstract 1

Rapid economic growth and urbanization in developing countries lead to extensive construction activities that generate a large amount of waste. A challenge is how to manage construction waste in the most sustainable way. In the developing world, research on construction waste management is scarce and such academic knowledge needs to be responsive to actual practices in the industry in order to be implemented. As construction projects involve a number of participants and stakeholders, their participation and commitment can have a major influence on the goals of green and sustainable construction for urban development. This study provides a significant step in conducting a very first research of this kind in Thailand by aiming to investigate the level of construction stakeholders’ commitment as well as the achievement of construction waste management in order to improve short-term practices and to establish a long-term strategic construction waste management plan. In this study, a structural equation model was employed to investigate the influence of factors that are related to environmental aspects, social aspects, and economic aspect of construction waste management. Concern about health and safety was found to be the most significant and dominant influence on the achievement of sustainable construction waste management. Other factors affecting the successful management of construction waste in Thai construction projects were also identified. It is perceived that this study has potential to contribute useful guidelines for practitioners both in Thailand and other developing countries with similar contexts.

(Adapted from Manawong 2012)
Sample abstract 2

Increased disposal costs and reduction in number of landfills have created a need for implementing effective waste management in the construction industry. As every construction project is unique in its way of development, benefits from the waste management may also differ from project to project and thus project characteristics should be taken into consideration when implementing the strategy. This study sought to investigate how different project characteristics affect perception on benefits, from construction waste management, based on the survey results from 66 industry experts. A literature review was conducted to gather information on project characteristics and its classification, construction waste management, waste management plan and its benefits. Subsequently, a set of questions was formulated to gain insight and opinion on the selection of project characteristics and particular benefits of construction waste management. A set of questions pertaining to different project characteristics linked with benefits of waste management was sent to each of the personnel for their views. The results of this study established that the key materials used in projects, project size in terms of total installed costs, and project type have perceptual impacts on benefits from construction waste management. Understanding how project characteristics will affect the benefits can help the construction industry to identify projects to which the waste management should first be applied, maximizing its benefits.

(Adapted from Hwang & Yeo 2011)

Sample Introduction

The construction industry has been found to be a major generator of waste and pollution. Waste from construction activities significantly pollutes the environment (Shen et al. 2004). In developed countries, construction waste management (CWM) has already been an important aspect that is included in a project management plan. However, in developing countries such as Thailand, CWM practices are still found to be insufficient and inappropriate (PCD 2007).

Construction waste has been largely disposed of at both public and private landfills. When the dumping sites become inadequate to accommodate a higher volume of construction waste, heavy and bulky waste from construction and demolition sites becomes a waste stream requiring further attention. As a consequence of a lack of landfill space, the amount of construction waste illegally dumped in public places has increased, causing social and environmental problems to the local communities.
In developing countries, research on the social, environmental, and economic impacts of construction waste management has not been widely conducted. Meanwhile, in developed countries, extensive research on construction waste has mainly focused on the types of construction waste and work practices, processes and technologies that contribute to the generation of waste (Haggar 2007; Shen et al. 2004; Yost & Lund 1997). However, the importance of people’s willingness to change their attitudes and behaviour pertaining to waste generation, collection and disposal has not been researched to the same extent (Teo & Loosemore 2001).

Hence, in the present study, the participation and commitment of construction stakeholders are regarded as important drivers for construction management. The challenges in managing construction waste are therefore to actively identify what, where, when, and how to do/deal with the generated waste. Furthermore, it is necessary to specify who needs to be engaged in the CWM process.

As there has been very little research on construction waste management in Thailand, this study aimed to take an important step to initiate this kind of research in order to raise awareness on waste management among construction stakeholders within the country. The influences of three sustainability aspects on the project stakeholders’ efforts on construction waste management were investigated by using the structural equation modelling (SEM) technique. The results and findings of this research are targeted to reflect useful information and direct perspectives from construction operatives, which can be adapted and adopted for further improvement of construction waste management. It is also expected that this paper will contribute and integrate knowledge from academic research to practical implementations in the construction industry with specific interest in the achievement of green and sustainable construction. The finding of influential factors and their inter-relationships provide useful insights for establishing effective CWM strategies in Thailand and other developing countries with similar contexts.

(Adapted from Manawong 2012)

References
