

INTI INTERNATIONAL UNIVERSITY
MASTER OF BUSINESS ADMINISTRATION

GREEN BUILDING ADOPTION IN
MALAYSIA:
MULTIPLE CASE STUDIES APPROACH

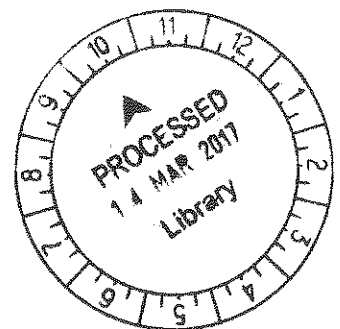
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ABSTRACT

With the ever-growing concern in global warming and amid the nature resources being depleted at an alarming rate, there have been an proliferation focus on the impact of construction industry towards environment. Therefore, the purpose of this study is to explore on the willingness and challenges faced by the developers in green building adoption in Malaysia. In Malaysia, the adoption of green building is still at low level and at its infancy stage, therefore this study will provide a better insight of the challenges faced and reduce the gap in literature in this area of study. This research will adopt the qualitative case study approach using a multiple case studies design. The data will be collected through interview of directors and project manager of a public listed developer company and a SME company. The data collected will then be analysed and compared to provide a comprehensive finding of similarities and differences between both organisations in terms of the challenges and willingness in green building adoption. The data has been collected from 5 interviewees and the data is texted in transcript and cleared for proposition testing. From the findings, the awareness level among the developers are high and they are very much willing to adopt green building in the future project. Involvement and encouragement from stakeholders show little sign of persuasion for developers to adopt green building since it connotes to cost. Hence, cost will still be the deterrent factor in embracing green building nevertheless, through the encouragement and involvement from government, the developer will be more susceptible to adopt green building. In conclusion, green building is not an emerging trend or luxury but rather an obligation for the construction industry players to embrace it for the better and sustainability of the future generation though traversing ahead will bound to encounter many challenges. Challenges are inevitable and a crucial part of any successful journey.

Keywords: Green Building, Developer, Malaysia, UTAUT

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Chapter 1: INTRODUCTION

1.0 Overview

The beginning of the chapter provides a background of the study, the problem statement, its research objectives and questions. It states the fundamental problem that will be studied and researched. The next part will describe the significant of study to the academia and industry, limitations of study, the proposition and finally, and the key operational definitions. Lastly, the summary of all the chapter's organization will be illustrated.

1.1 Introduction

Over the past few decades, massive lands are being cleared for development which has introduced new job opportunities and offers the chance to experience the urban living lifestyle that has cause huge influx and exodus of people moving to live in the city (Were, Diang & Mutai, 2015). Due to this, no surprising the construction activity became one of the most imperative human activities as well as boosting the country's economy and shaping up the society's environment (World Economic Forum, 2016). However, with such rapid development, the natural resources are being consumed and depleted at an alarming rate and being one of the biggest emitter of greenhouse gases that has resulted in irreversible impacts on the natural environment (Liu & Lin, 2016). United Nations Environment Programme (2009) has disclosed that buildings itself are accountable for one third of world-wide greenhouse gas emissions in the developed nations as well is in developing countries and at least more than 40% in terms of global energy use; while reports from the European zone has recorded a 10.9% of greenhouse gases emission for the construction industry itself (Eurostat, 2016).

Malaysia is in the category of developing countries which is aimed to achieve the status of a developed nation by 2020, which sees the advancement and development in the construction industry over the pass decades that ultimately has led to steady

increased of CO₂ emission with an estimation of 226% increment from the year 1990 to 2006 (Wagner & Omran, 2011). Because of this, Malaysia has drawn out the blue print that addresses this issues in the Tenth Malaysia Plan which is further billed and embrace in the Eleventh Malaysia Plan that unyieldingly supports the adoption of green building that is all part of strategy to reduce the greenhouse gases emission intensity of GDP by up to 40% compared to 2005 levels by the year 2020 (11MP, 2016).

The construction industry in Malaysia can be separated into two major areas which is the common building that includes civil engineering building, residential building, non-residential building whereas another area is distinct trade works that is linked to the construction that encompass activities ranging from electrical, steel works and etc. (AHKS, 2011). Amid the vast activities and resources is used in construction it is ever more imperative to promote sustainable development within and since construction has a substantial weight in generating and driving Malaysia's economy, heading towards sustainable development is the way forward (Abdullah, 2004).

Even though, Malaysia has introduced sustainable development concept back in 1996, with accord to the movement and implementation of green building concept worldwide but only on 21st May 2009 that the official green rating tool is officially launched which is known as the Green Building Index that was developed by the Pertubuhan Arkitek Malaysia (PAM) and with the Association of Consulting Engineers (AECM) which is envisioned to promote sustainability in the built environment as well as creating and raising awareness among the construction industry key players (Green Building Index, 2009). Gauzin-Muller (2002) described the concept of sustainable development is based on three principles which are (1) consideration of the life-cycle of the material (2) use of natural raw material and renewable energy resources (3) reduction of materials and energy used in extracting the raw materials, the use of the product and destructing or recycling of the waste.

Therefore, to support this sustainable development, green building is introduced which emphasize in improving human well-being while reducing the impact to the environment which can be translated that the building serves the purpose but does less damage to the environment through (1) efficiency use of energy, water and other

resources (2) ensuring occupants' health (3) reduce wastage, polluting and degradation of environment (Omran, Shafie & Rashid, 2015); (4) safeguarding water and water efficiency (5) sustainable site planning (Samari, Godrati, Esmaeilifar, Olfat & Shafiei, 2012). With the growing concern of global warming, green building cannot be overlooked as it is playing ever more prominent role in the construction industry particularly in developing country like Malaysia. Therefore, it will be crucial to have developers to construct and build buildings that adhere and in compliance to green building that can ensure sustainable development and ultimately reducing the greenhouse gases emission for the benefit of environment and human well-being even though, at the infancy stage will undergo many challenges and barriers as well as overcoming the willingness to adopt it (Abidin, 2010).

There are still many uncertainties and qualms to those challenges and willingness issues in green building adoption and more of those qualms can be unearthed by answering the why and how questions. Therefore, for this research it will adopt the multiple case studies approach which is under the category of a qualitative research method and by using this approach it allows the researcher to obtain answers to questions of how and why in explanatory research as pointed out by Rowley (2002). Flyberg (2011) further acknowledged that by deciding to use case study for a research, it does not indicate the selection of method but rather a selection of what will be explored. Starman (2013) emphasized that many researcher focus on individual case (or in multiple cases) at hand rather than viewing case study as a type of research or a research approach. All in all, this research will provide a more in-depth insight and identify the root cause through exploring and delving in the challenges and willingness issues in green building adoption faced by the developers in Malaysia.

1.2 Problem Statement

Sustainability development or green building is still relatively new concept in the development sector for those in the developing countries and has not received adequate attention among the South-East Asia countries however there is an increase of awareness on green building and development in the region but not entirely across the whole gamut of the building and construction sector (Shafii & Othman, 2010).

Taking a closer look, the term green building concept is not fairly a new concept as it has been coined over the past decade yet the level of awareness and involvement among the developers in Malaysia are rather on the low side and it's at the infancy stage (Abidin, 2010). However, the research only looks at generally Malaysia as a whole and is lacking of a more zoom in focus that compare between big and small-medium organisations in their willingness and challenges in embracing green building.

In addition to this, many developers firm are concerned and troubled with the increased in cost of development if were to adopt the green building which Marhani (2011) advocated that developers today should change the mind-set of sourcing and undertake the cheapest solution but instead resolve to the best long-term solution. Green building does not only give business-related benefits but as well as community and environmental advantages that is intangible in value (Yap, 2007). In support of the green building movement, the Assistant Housing Minister Abdul Karim Rahman Hamzah has stated that indeed certain green methods or technology can be tad costlier to adopt, but in the long run it would be worth it for the developers in terms of energy savings, sustainable development and better corporate image (Chiam, 2012). Therefore, this study will further explore whether will cost post as a challenge that might influence the adoption of sustainable development in Malaysia.

The idea to expose as well as educating stakeholders about the importance of green building concept and its effect and contributions to the environment is important whereby it help to enhance stakeholders interest and participation of stakeholders in adopting green building concept in Malaysia as participation from the stakeholders are crucial in identifying suitability of the green building design with the building usage, function and operations (Sharif, Kamaruzzaman & Pitt, 2014).

Due to the weight that stakeholder possess, they are ever more essential in influencing the adoption of green building concept by developers as well as sharing of technologies among them. However, the reality in Malaysia is that the stakeholders are not putting sustainability as their priorities in the decision making and many the developer firms are in the range of small and medium scale company and the only parties who are keen in green practices and green concept are those huge corporations that have huge fund in hand or well reserved capital (Goh, Seow & Goh,

2011). With that being stated, one of the challenges that will be look upon to is the stakeholder involvement in influencing the adoption of green building.

Last but not least, there have been several studies that pointed out the need for government to support, provide initiatives and enforce the implementation of green building concept. The role of the government changing the current market mechanism, changing market dynamics by providing incentives, regulations and standards and raising awareness and demonstrating proof of concept (Sharif et al., 2014). New rules and regulation should be enforced and implemented in order to support green building development as well as facilitating green building development through regulatory instruments and incentive instruments (Samari et al., 2014). Therefore, it is to deem that the government should play an active role and has the responsibility to promote green building and in which this study will provide a better insight of government enforcement that may impose challenges or encourage adoption of green building in Malaysia to different group of organisations.

1.3 Research Objectives

Research objectives can be defined as the specific aims or purposes of the study that should be stated clearly at the beginning of the research protocol (Farrugia, Petrisor, Farrokhyar, & Bhandari, 2010). These objectives are the goals that are to be achieved via conducting research (Zikmund, Babin, Carr & Griffin, 2013). With well-defined research objectives, it sets a clearer path and guideline for the study to achieve the intended goals. This study will focus and zoom in the willingness and challenges in Green Building adoption in Malaysia through multiple case study approach. Within this research, the expected outcome of the research objectives will be as follows:

- To understand the current level of awareness with regards to green building among the developers in Malaysia.
- To determine whether the stakeholders' extent of involvement pose as a challenge in the adoption of green building in Malaysia.
- To determine whether the cost of embracing green building is a deterrent, and thus, serve as a challenge in the adoption of green building in Malaysia.

- To determine whether government enforcement and involvement pose as a challenge in the adoption of green building in Malaysia.
- To determine the level of willingness in green building adoption with the given challenges among the developers in Malaysia.

1.4 Research Questions

Research question can be defined as a list of questions that is prerequisite to begin the research process within an area of interest or field of study due to the perceived knowledge deficit or gap (Farrugia et al., 2010). With the research objective stated, the research question can be formulated from it and would provide a more precise direction to achieve the research objectives as well as aiding the construction of the framework study. Below are the few key research questions: -

- What are the current level of awareness of green building among the developers in Malaysia?
- Will the stakeholders' extent of involvement pose as a challenge in green building adoption in Malaysia?
- Will the cost of embracing green building be a deterrent and thus, serve as a challenge in the adoption of green building in Malaysia?
- Will the government enforcement and involvement pose as a challenge in the adoption of green building in Malaysia?
- What are the level of willingness in green building adoption with the given challenges among the developers in Malaysia?

1.5 Significance of the Research

1.5.1 Significance to Academia

The outcome of this research will be beneficial for the academia as it gives them a better understanding of the current level of awareness in regards to green building among the developers in Malaysia. Moreover, it also gives further insight of the challenges faced by organisation in adopting adoption of green building. It also helps to reduce the knowledge gap of the study in this area which is the green building adoption in comparative terms between a huge organisation and small medium organisations.

1.5.2 Significance to Industry

In terms of industrial significance in particular the construction industry, the developers and the stakeholders can have a better perspective and insight of green building concept. Besides that, this research can elevate the awareness in regards to the green building concept. It will as well allow the organisations to get a better grasp of the challenges bound to face by them in adopting green building and with that find ways to overcome these challenges. Last but not least, it showcases the imperativeness of adopting green building by the construction industry players for the coming years as it becomes one of the key criteria in building development which helps to provide a sustainable and healthy environment for the generations to come.

1.6 Scope of the Research

Many studies have been conducted in regards about green building concept around the globe including Malaysia itself. However, there are lack of research in regards to willingness and challenges in green building adoption on Malaysia using the multiple case study approach. Therefore, this research will focus on 2 developer firms around Malaysia. This research will be conducted through interview of companies ranging

from small-medium scale firm to big-size firm. The criteria of the interview frame are as per below: -

1. Participants of the research: Top Management Team
2. Organisations: Developer Firm
3. Geographical area: Malaysia

1.7 Limitations of the Research

Limitations are part of any research, and they exist either directly imposed by the researcher, or indirectly by the environment where the research is happened to be conducted. This research is no exception from the limitation as well. The major concern on the limitations are described here, along with a description of their potential issues and the impact towards the study.

1.7.1 Participant Access Limitation

This research would only gather data and information via interview of 2 developer firms, with the purpose of understanding the level of willingness of green building and its challenges in adopting it among the medium scale and big developer companies within the Malaysia. Consequently, any results and finding may only be deemed relevant and to represent a limited pool of developer companies, and may not be generalizable to the whole construction industry in Malaysia.

Besides that, one of the primary limitations of this thesis is the limitation of access to the participants. This is centred around the availability of the participants, how many there were, and the ability to identify and contact them. At the onset of this thesis, many of the directors and managers who were interviewed were not known and difficult to identify as not many known information were available. Furthermore, the participants were identified the main approach or method to contact with them is through the company organization they work with. Participants were occasionally

difficult to contact individually, relying on getting in touch with them through the company or organisation they worked at. The potential and concerning issues is that with such limitation, the number of participants that can be interviewed were lesser as due to the deficiency in identifiable information.

1.7.2 Time limitation

With the given limited amount of time for this study which is four months, it would not be possible to expand the interviewee pool of companies. This research is only directed within the limit of approximately 2 developer firms within the whole of Malaysia, therefore there would be bias and skewedness in terms of findings due to the time constrain. Nonetheless, the results and findings gain could still be generalizable for certain group of companies in Malaysia.

1.7.3 Interviewer Experience

At the time of this research, the researcher had little prior experience not only in conducting interviews, but also in analysing them and which appropriate methods or approach to use. As the researcher's background – and the subject of this thesis – is in building science, much of the social research methods and information were unknown or mainly unfamiliar, which resulted more additional time had to be spent in learning and understanding green building and other relevant social research information.

This limitation mainly affected the interview process and the data analysis. In particularly in relation to the issues of missing information or areas to follow-up on during interviews, and unintentional misappropriation or misunderstanding of social research methods. In order to, alleviate and diminish these issues extensive research was done in regards to the relevant areas of social research in order to familiarise the researcher, in conjunction with discussion with knowledgeable people for their experience and advice.