

## **A STUDY ON UUM STUDENTS'S PERCEPTION TOWARDS GREEN HOME**

**Tan Siew Hooi, Tan Jin Khai, Ong Hooi Shing, Chua Yim Theng, Tuan Nazifah  
Binti Tuan Ismail, & Nor Hasni Osman**

*School of Technology Management and Logistics, University Utara Malaysia,  
06010 UUM Sintok, Kedah.*

*s222778@student.uum.edu.my, s221190@student.uum.edu.my, s222783@student.uum.edu.my,  
s222813@student.uum.edu.my, s221030@student.uum.edu.my, has1218@uum.edu.my*

### **ABSTRACT**

Buyer's perception on green homes affects the development of various green concept in all new housing development projects. As the global warming and environment pollution issues are getting serious, it is crucial for us Malaysian to start looking at greener options which are more environmental friendly and less energy consumption to preserve our environment. In Malaysia, limited exposure to the knowledge about green homes has resulted in the lack of awareness in the view of importance and values of green homes. Majority of the house buyers do not have a good understanding towards green homes. As the result, a number of difficulties arise in implementation of green homes concept in Malaysia. This study examines the relationship between consumers' awareness of green features, consumers' behaviours towards environmental issues and financial consideration with their intention to purchase green home. This study is conducted through running a survey among students in UUM to gather their perceptions towards green homes. It is expected that the findings could contribute towards greater understanding in view of housing industry. This research is also expected to provide good insights on managerial applications.

Keywords: green technology, construction, innovation, eco-friendly, questionnaire survey

### **INTRODUCTION**

#### **Overview of the Issues**

In the past few decades, environmental degradation have been a major concern among consumers when they are starting to aware of the seriousness of environmental issues that our earth is facing. According to Rezai et al. (2013), excessive use of energy and non-renewable natural resources, environmentally unfriendly production processes, the emission of green gases, water and air pollution, climate change and the environmental disasters are the causes of environmental problems. Therefore, the concept of green homes is introduced to us to preserve the beauty of our earth.

Over the past few years, Malaysia has experienced an increase of population as direct effect of constant urbanization and this is the major factor for the change in the urban atmosphere. These has caused the environmental degradation in Malaysia has becoming more and more serious and thus led to the introduction of green homes concept in Malaysia, especially, when Malaysia is a developing country which heading toward industrialization. The concept of green homes in

Malaysia is introduced in year 2007 at Taman Tun Dr Ismail (TTDI), Ampang, Selangor, through the development of luxury green homes (Andrew, 2007; Alias 2010). However, most of the policies in housing development that is practised in Malaysia concern in conventional homes rather than green homes development.

Recently, green technology in housing development has been highlighted by the government. Government has introduced a few policies and organisations to coordinate with the implementation of green homes in Malaysia. One of the organisations is the Ministry of Energy, Water and Green Technology (KeTTHA) which is responsible for activities that involved in improvement of the consumption of energy, water and green technology. According to KeTTHA, problems behind green homes development in Malaysia include low demand towards green products, costs, difficulty in getting co-operation from developers, lack of local expertise, lack of R&D activities and lack of awareness, understanding and acceptance of green technology among Malaysians (Ezanee Md Elias et al., 2013). Another organisation that involved in the development of green homes is the Malaysian Green Technology Corporation (GreenTech). GreenTech is formed to coordinate and strategize the activities under the National Green Technology Policy (NGTP). These policies and organisations are formed to create awareness and understanding towards the concept and the importance of green homes among Malaysian.

Although government has put effort in promoting green homes in Malaysia, Malaysians; demand on green homes is still low. One thing that they do not know is conventional buildings produce around 10 to 30 tonnes of carbon dioxide (CO<sub>2</sub>) per year (Ezanee Md Elias et al., 2013). The consequences come after this fact are global warming and pollution. Adoption of green homes in Malaysia is definitely a solution to environmental issues. Therefore, there is a need to understand the perception of Malaysian on green homes in Malaysia.

### **Objectives of the Study**

The main objective of the study is to investigate the perception of Malaysian on green homes in Malaysia.

This study aims:-

- (a) To investigate the relationship between consumers' behaviours and customer intention to purchase green home.
- (b) To understand the relationship between consumers' awareness of green features and customer intention to purchase green home.
- (c) To explore the relationship between consumers' financial ability and customer intention to purchase green home.

## LITERATURE REVIEW

### Introduction

In this era of modern world, there are many kinds of product that are based on green concept such as a hybrid vehicle, solar panel, and other eco-friendly products. So, customer always plays an important role as the main assets in every business where the primary objectives are to meet customer's needs. Next, I will discuss some information of the literatures that related to the customer habits or behaviours, customer awareness of green features, financial consideration in affecting their intention to purchase green home.

### Consumers' Awareness

According to Philip (1984), awareness can be defined as the capability to make things better compared to the chance-level and decisions concerning the presence of the primes or in the opposite way. Therefore, awareness also be measured sufficiently by asking observers are they "consciously see" a stimulus or not (Henley, 1984). Awareness is an understanding activities of others which provides context of your own activity (Dourish, 2012).

An individual (consumers) understanding their rights in concerning the availability of the products or services that sold in the market are known as consumers' awareness. There are four part that involves, which is safety, select, information and listening. Consumer awareness refer to the experience and understanding of the buyer that they know about their rights as a consumer, how products are being made, the safety of the products and others.

### Consumer Behaviour

The knowledge of consumer behaviour is important to understand how the way they thinks and select from alternatives like products, brands and how the consumers are influenced by their environment, the reference groups, family, and salespersons and so on.

As Kotler (1999) asserts, "Consumer behaviour include mental activity, emotional and physical that people use during selection, purchase, use and dispose of products and services that satisfy their needs and desires"

Shahrzad, Zeinab, Milad, Arman & Hossein (2013) said that consumer behaviour can be defined in many way of concept such as:-

*Consumer behaviour is motivational*, Behaviour is a tool to achieve objectives and targeted consumer derives from his needs and desires consumer behaviour is to meet the needs and demands of consumer (p.20). *Consumer behaviour is a process*, activities such as selection, purchasing and consumption of goods and services that include elimination of three steps before buying activities, purchasing activities, activities after purchase (p.21). *Consumer behaviours at different times has different complexity*, there is different implications when buying different product from different people. Where else, when buying some goods, it need involves all three-process step of the consumer behaviour while buying regular goods does not require multiple step (p.21).

### *Consumer buying decision process*

Customers can purchase with any price level for a specific good or services and any specific time durations. Whereby, there is several steps that taken for the buying decision process. Following are:-



Figure 1: Consumer buying decision process.

- (a) Customers can always differentiate between the current and desired situation. Therefore, understand of the situation are important
- (b) Data collection activities were made where information comes from internally (experiences) and externally (family, environment).
- (c) After been through gathering information process, then customer can evaluate the information and make decision which the products achieve their demands.
- (d) At this stage, all marketing activities are the result and customer feel satisfied with the product and purchase it.

Buying behavioural define as the decision processes in purchase and use the products which includes social and mental process. Besides, individuals, groups and organizations in select, purchase, use and disposal activity of products, services, ideas or experience to meet the consumers' demand. (Kolter, 1977 and 2001; Shiau et al., 2015). Consumer purchase behaviour is referred as a buying behaviour by consumer that fulfil consumers' need (Acton, 2005; Shiau et al., 2015).

### **Financial Consideration**

Consideration refers to an act or a promise given by one person in exchange for an act or a promise from the other where the value do not necessary to be equal. Financial consideration refers to monetary given by one person in exchange for a service or act that helps a business. The ability of the consumer to raise a bank or other loan where the lender requires some security and whether the cost of the finance like interest charged are closely related to the amount of finance and the duration of finance (Riley, 2012). According to Mullins (2008), consumers intended to purchase a house must able to afford down payment, has a compelling reason to buy, have good job security, and plan to live at that property for long time.

### **Consumers' Intention to Purchase Green Product**

Intention can be define as commitment, decision or plan that being carried out by a person to achieve a goal (Richard, 2010). According to Lewin (1951), intention are separate into three stages which is the motivational stage, decision making or known as intention and the last stage will be intentional action.

Intention can be divided into two types which are collective intentions and we-intention. Collective intentions refer to a person that is intentionally do something with somebody or a group of people. We-intention means the person is one of the group member (society) socialist with the other particular group (Richard, 2010). Perceived value and health consciousness are similar predictors towards green purchasing intention among Malaysian consumers (Salleh et al, 2008; Syaidatina and Norazah, 2013, p.1129) plus attitude is the factor that influences the green purchasing intention and behavior. (Syaidatina and Norazah, 2013, p.1130).

## **METHODOLOGY**

This study proceeded with quantitative part via a survey and desktop review on: UUM students (100 respondents). The data collection exercise was done in two weeks within the months of October 2015. The analysis was done with the assistant of the SPSS version 16 package.

### **FINDINGS**

#### **Demographic Profiles**

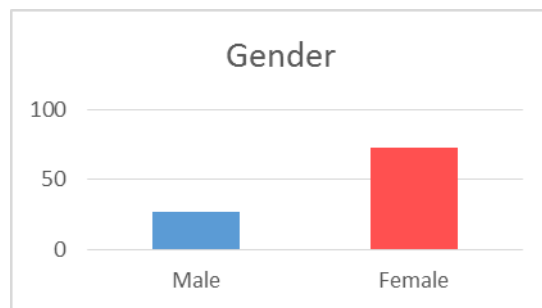


Figure 2: Gender

There are 100 respondents in our research, where 27 are male students and 73 are female students from UUM.

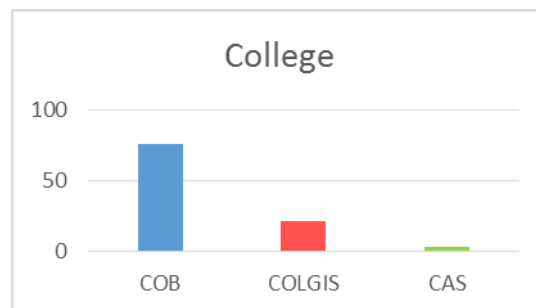


Figure 3: College

Majority of the respondents are from College of Business (COB) with a record of 76 respondents, followed by 21 respondents from College of Law, Government and International Studies (COLGIS), and the least are from College of Art and Science with a record of 3 respondents.

## Awareness of Green Home

### Overall Perspectives

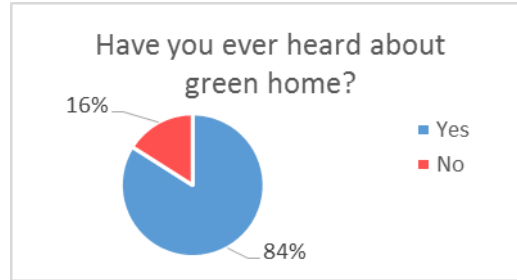


Figure 4: Awareness of green home

Results show that most of the respondents (84%) have heard about green home while only 16% out of the respondents have never heard about green homes. This shows that most of the UUM students have basic understanding towards green home concept.

### Comparison between genders

Table 1: Comparison of awareness of green home between genders

	<u>Male</u>		<u>Female</u>	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Yes	22	81.5	62	84.9
No	5	18.5	11	15.1
Total	27	100	73	100

Among male respondents, 81.5% of them have heard about green home while 18.5% of male respondents have never heard about green home. Among female respondents, 84.9% of them have heard about green home while 15.1% of male respondents have never heard about green home. This shows awareness of green home among female students is higher than male students in UUM.

## Awareness of Green Features

### Overall Perspectives

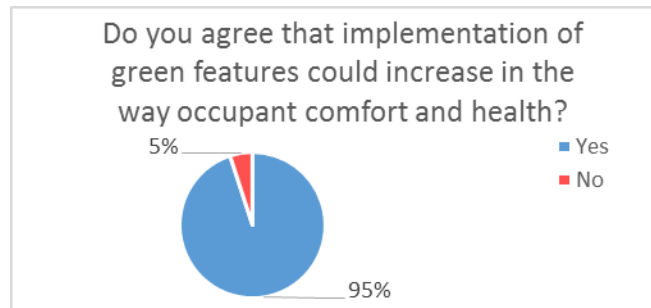


Figure 5: Awareness of green features

Out of 100 respondents, 95% of them agree that implementation of green features could increase in the way occupant comfort and health. This shows that majority have the idea on how green features could improve our quality lifestyle.

*Comparison between genders*

Table 2: Comparison of awareness of green features between genders

	<u>Male</u>		<u>Female</u>	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Yes	25	92.6	70	95.9
No	2	7.4	3	4.1
Total	27	100	73	100

Among male respondents, 92.6% agree that implementation of green features could increase in the way occupant comfort and health while 7.4% disagree. Among female respondents, 95.9% agree that implementation of green features could increase in the way occupant comfort and health while 4.1% disagree. This shows female students have the better idea on how green features could improve our quality lifestyle.

**Consumer Buying Behaviour**

*Overall Perspectives*

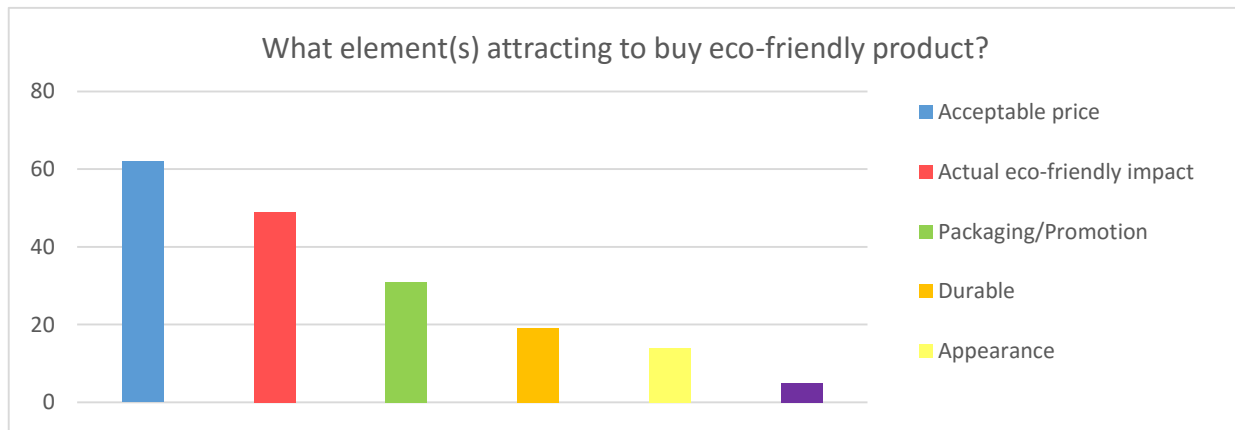


Figure 6: Elements to consider in buying eco-friendly products

According to the results obtain from the survey, we find that the element that attract UUM students in considering buying green products is acceptable price with a record of 62 respondents found this element attracting them the most where the least attractive element is the appearance of the product were only selected by 14 respondents. Out of 100 respondents, only 5 of them do not purchase green products at all.

Comparison between genders

Table 3: Comparison of elements to consider in buying eco-friendly products between genders

Element	Male	Female
Acceptable price	17	45
Actual eco-friendly impact	13	36
Packaging/Promotion	9	22
Durable	7	12
Appearance	5	9
I do not purchase green product	0	4

Comparing the buying behavior between male and female, the decisions made are quite similar. Acceptable price is the most attractive element to respondents in buying eco-friendly product, where 17 male respondents and 45 female respondents find that acceptable price attracts them to buy eco-friendly product. Whereas, appearance of product is the least attractive element to respondents in buying eco-friendly product, where there are only 5 male respondents and 9 female respondents. Out of all respondents, only 4 female respondents that do not usually purchase green products.

**Financial Consideration**

*Overall Perspectives*

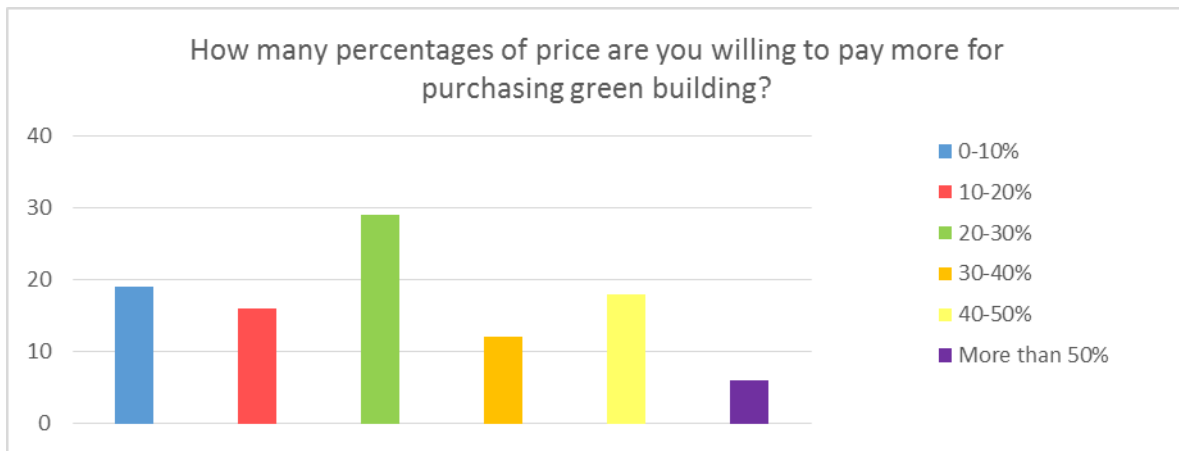


Figure 7: Willingness to pay on green buildings

Referring to the price of green home, most of the respondents, 29 respondents are willing to pay 20 – 30% more for green home compared to the price of conventional home. Only 6 respondents are willing to pay above 50% more for green home, which is the least among the choices.



Comparison between genders

Table 4: Comparison of willingness to pay on green buildings between genders

	<u>Male</u>		<u>Female</u>	
	Frequency	Percentage (%)	Frequency	Percentage (%)
0 – 10 %	2	7.4	17	23.3
10 – 20 %	9	33.3	7	9.6
20 – 30 %	7	25.9	22	30.1
30 – 40 %	3	11.1	9	12.3
40 – 50 %	5	18.5	13	17.8
> 50%	1	3.7	5	6.8
Total	27	100	73	100

According to the results, the willingness to pay more on purchasing green buildings are different between male and female. Majority of the male respondents (33.3%) are willing to pay 10 – 20% more than price of conventional homes compared to green buildings while majority of the female (30.1%) are willing to pay 20 – 30% more. Whereas, only a small group of respondents are willing to spend above 50% more than price of a conventional home on green buildings with a record of only 3.7% of male respondents and 6.8% of female respondents.

**CONCLUSION**

Based on the results, all of the independents variables were found critically related to consumers' intention to purchase green home. In today, green homes have now become popular in Malaysia. Malaysian has slowly changed their perception towards green homes. To achieve better and healthy life style, house buyers are now considering on buying a sustainable housing in future. However, consumer behaviours such as consumers who are environmentally conscious are more likely to purchase green homes. Besides, there is still a group of people who are still not aware about the green homes development and they should be given more opportunity to understand more about green homes in detail so that it more convenience for them to make a decision in purchasing a house. The perception of the house buyers are also being influenced by the consumers' financial ability where less wealthy buyers are more sensitive to house prices and fulfilling their basic accommodation needs.

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