

# ATTITUDES AND PREFERENCES OF NON-WOODEN HOMEOWNERS IN BACHOK, KELANTAN TOWARDS TIMBER AS A BUILDING MATERIAL

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## ATTITUDES AND PREFERENCES OF NON-WOODEN HOMEOWNERS IN BACHOK, KELANTAN TOWARDS TIMBER AS A BUILDING MATERIAL



By

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### ABSTRACT

Consumers will need housing units as population that is growing. The demand for wooden houses has decreased because timber is expensive, low durable and hard to obtain. However, there has been no study or data to verify this perception. This study examined the preferences of non-wooden homeowners towards timber as a building material, as well as to examine the preferences of nonwooden homeowners towards timber as a building material. A home-to-home survey was used to collect data from 290 non-wooden homeowners in Bachok, Kelantan. This results show that the homeowners have positive attitudes towards timber in regards to its naturalness, eco-friendly, sustainable, low maintenance, good quality and abundant. The positive attitudes led to preferences toward wooden houses that are unique, comfortable, durable and low maintenance despite the high cost, long construction period and shortage of wooden housebuilding expert. However, most of them prefer non-wooden houses as they are unique, comfortable, durable, low maintenance, low cost, plenty housebuilding expert and short construction period. Timber sector must educate the consumers regarding the actual durability, structural and maintenance of timber.

#### ABSTRAK

Bilangan pengguna yang akan memerlukan unit perumahan semakin meningkat disebabkan urbanisasi masyarakat dan juga berlakunya peningkatan sebahagian penduduk global. Permintaan rumah kayu berkurang kerana terdapat pendapat mengatakan bahawa kayu mahal, kurang kukuh dan sukar diperoleh. Walau bagaimanapun, tidak ada kajian atau data untuk mengesahkan persepsi ini. Kertas ini mengkaji sikap pemilik rumah bukan kayu ke atas kayu sebagai bahan binaan, dan juga untuk mengkaji minat pemilik rumah bukan kayu ke atas kayu sebagai bahan binaan. Kaedah kualitatif iaitu kaji selidik dari rumah ke rumah digunakan dengan responden yang terdiri daripada 290 pemilik rumah bukan kayu di Bachok, Kelantan. Kajian ini menekankan bahawa pemilik rumah mempunyai sikap positif terhadap kayu bahawasanya kayu ini semulajadi, mesra alam, mampan, penyelenggaraan yang mudah, berkualiti dan mudah diperolehi. Sikap positif ini mewujudkan minat terhadap rumah-rumah kayu disebabkan oleh penyelenggaraan yang unik, selesa, tahan lasak dan mudah diselenggara walaupun kos yang tinggi, tempoh pembinaan yang panjang dan kekurangan pakar rumah kayu. Walau bagaimanapun, kebanyakan mereka lebih suka rumah bukan kayu kerana faktor unik, selesa, tahan lama, penyelenggaraan yang mudah, kos rendah, banyak tenaga kerja mahir rumah bukan kayu dan tempoh pembinaan yang singkat. Pemasaran sektor kayu perlu ditingkatkan untuk mendidik mengenai ketahanan pengguna sebenar, struktur dan penyelenggaraan kayu.

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### **APPROVAL SHEET**

I certify that this research project report entitled "**Preferences and Attitudes of Non-Wooden Homeowners in Bachok, Kelantan towards Timber as a Building Material**" by Ruziatul Adibah Bt Eddy Warman has been examined and approved as a partial fulfillment of the requirements for the degree of Bachelor of Wood Science and Technology in the Faculty of Forestry, Universiti Putra

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## TABLE OF CONTENT

ABST	RACT		i		
ABSTRAK					
ACKNOWLEDGEMENT					
APPROVAL SHEET					
TABL	E OF CO	DNTENT	v		
LIST	OF TABL	ES	vii		
LIST	OF FIGU	IRES	viii		
CHAF	TER				
1	INTRO	ODUCTION	1		
	1.1	General Background	1		
	1.2	Problem Statement	2		
	1.3	Objectives	3		
2	LITERATURE REVIEW				
	2.1	Attitudes and Preferences	4		
	2.2	Attributes of Wood as a Building Material	5		
	2.3	Attitudes and Preferences towards Wood as a	8		
		Building Material			
3	METHODOLOGY				
	3.1	Research Design	13		
	3.2	Study Area	13		
	3.3	Questionnaire Developments	14		
	3.4	Data Collection	16		
	3.5	Data Analysis	17		

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4	RESULTS AND DISCUSSION					
	4.1	Demographic Data of Non-Wooden Homeowners	18			
	4.2	Attitudes of Non-Wooden Homeowners towards	20			
		the Attributes of Timber as a Building Material				
	4.3	Preferences of Non-Wooden Homeowners	22			
		towards Timber as a Building Material				
5	CONCL	USION AND RECOMMENDATION	28			
	5.1	Conclusion	28			
	5.2	Recommendations	29			
REFER	REFERENCES					
APPEN	NDICES		33			
Appene	Appendix A					
Append	dix B		34			

## LIST OF TABLES



# LIST OF FIGURES

FIGURE		PAGE
Figure 3.1	Map of Bachok, Kelantan	14
Figure 4.1	Percentage of attitudes of non-wooden homeowners	20
	towards timber as a building material	
Figure 4.2	Preferences of buying wooden or non-wooden houses	22
Figure 4.3	Reasons of choosing a wooden house as new house	25
Figure 4.4	Reasons of choosing non-wooden house as new house	26

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#### CHAPTER 1

#### INTRODUCTION

### 1.1 General Background

The timber industry represents a significant part of the socio-economic activities in Malaysia. The industry brings important foreign exchange earnings; value added and state government revenue. According to statistics from the Malaysian Timber Council (2014), Malaysia exported timber and timber products valued at RM22.14 billion, a growth of 6.5% over RM20.79 billion. The wood-based industry in Malaysia has 4162 mills in total. A total of 1019 are sawmills and 181 are plywood and veneer mills. Other wood-based industries in Malaysia are 341 moulding mills, 15 medium density fiberboard mills, one integrated pulp and paper mill, 236 kiln drying plants, 99 wood preservation plants, 2152 furniture/woodworking/joinery factories and 119 other type of wood-based mills (Malaysian Timber Industry Board, 2011). From 10 subsectors of the wood and wood products classifications, the special importance is plywood, sawn timber and wooden furniture. The remaining include logs, medium density fiberboard (MDF), builder's carpentry and joinery (BCJ), mouldings, veneer and other timber.

Timber is one of the oldest construction materials that humankind has used (Law, 1985). Malaysia with a plentiful of timber which consists of 90 percent of hardwood (Tan, 1992), has relied upon timber for all types of structures, from the impressive and excellently crafted timber palaces for the Sultans (Lai, 1976) to the most humble, semi-permanent of structures. Human dwellings have to serve many extraordinary and frequently conflicting purposes to satisfy the broad needs of consumers. Physical or technical quality is important in the context of a shelter. While for home, the function itself is important and economic quality is crucial for a capital good (Thomsen, 2014).

Based on statistics provided by the Department of Statistics Malaysia (2010), the use of timber and timber products as construction materials for 2010 was valued at RM 4.02 billion which comprised mainly of sawn timber RM 2.46 billion (61.3%), plywood (waterproof) RM 689 million (17.2%), timber door and window frame RM 464 million (11.6%), other timber materials RM 333 million (8.3%) and gypsum plasterboard RM 66 million (1.6%). In 2010, a total of RM 629 million of industrialized building system building materials was used by the construction sector in Malaysia. Out of which, a value of RM 86 million (13.6%) was industrialized building system timber frames (pre-fabricated timber, beams and columns).

#### 1.2 Problem Statement

The biggest issue in the mind of all builders is the selection of construction material and it has been a topic of advisement in the industry, they have been equating the approximate merits of timber frame construction and non-timber frame construction such as masonry and steel. Timber or timber products predominantly is the lightweight construction which a technology used for residential architecture worldwide. However in Malaysia, the most housebuilding is dominated by the masonry and steel-frame. Climate, culture and the technological advances and experience of the society are the influencers of the evolvement of the technologies over the years from wooden housebuilding to non-wooden housebuilding.

Limited understanding of consumer preferences between wood with other materials in many applications within the urban or rural housing may result in differences of knowledge and experience with regard to building materials. Thus, this may relate to varying attitudes when it comes to durability, environmental issues and any other aspects. Although the material selection has the least influence by homeowner and renter preferences today and therefore are weak predictors of building materials used in multi-family construction, it is valuable data about consumer preferences for those who make these decisions. This is especially crucial when new building structures and materials are brought.

#### 1.3 Objectives

In this study, the data used will be obtained from non-wooden homeowners in Bachok, Kelantan to have a better understanding about material preferences. The following objective guided the study is to determine the attitudes of non-wooden homeowners towards timber as a building material to examine the preferences of non-wooden homeowners towards timber as a building material, as well as to examine the preferences of non-wooden homeowners towards timber as a building material.

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