

THE EQUATION MODEL OF TRANSACTION PRICE FOR GREEN BUILDING CERTIFICATE ON THE CONDOMINIUM IN SELANGOR

WAN NUR AYUNI BINTI WAN AB RASHID

MSc

May 2019

ABSTRACT

These days, the real estate industry is developing green building condominium because of the rise of global environment issues. Green buildings development are reliable resources often associated with positive influences for quality of live and property value. People's expectations of their 'green' lives are on the rise, increasing the demand and interest in green building condominium. In Malaysia, it continues to gain momentum for its many benefits such as on the environment. However, the question that raised, can green building condominium effect the property market? Therefore, this research aims to underscore the issue of green building certificate that gives an impact to condominium prices and to recommend an equation model of the transaction price. The Green Building Index (GBI) certificate is used as a measure of green building condominium. Further, this research uses the transaction prices database of the transaction from Jabatan Penilaian dan Perkhidmatan Harta (JPPH). A survey of condominium property market in the real estate industry was conducted to gather their perception on the case study area to provide some evidence on Green Condominium Market. The survey were gathered from government valuer to ensure the case study selection. Others, SPSS software is used to analyse the data to determine whether there is the different value between green certificate condominium and non-green condominium using T-Test Analysis. This research also to analyse the relationship between green building certificates and condominium prices using Correlation Analysis. This research hopes to highlight the economic, environmental and social features of the condominium building. The empirical results show that green building certificates have significant and positive relationships with condominium properties. The results imply that eco-friendly green buildings increases the value of property and green buildings accredited buildings add value to real estate thus increasing property prices. The Equation Model is recommended using Multiple Regression Analysis.

Keywords: Malaysia, Condominium property, Prices, Green buildings, Green certificate, Property price, GBI scheme.

ACKNOWLEDGEMENT

Firstly, I wish to thank God for giving me the opportunity to embark on my master's and for completing this long and challenging journey successfully. Then, I would like to express my gratitude to all those who gave me the possibility to complete this thesis.

Secondly, my gratitude and thanks go to my supervisor Assoc. Prof. Dr. Thuraiya Mohd, and co-supervisor, Dr. Mohd Zaki Arif. Thank you for the support, patience and ideas in assisting me with this thesis. All of their help, stimulating suggestions and encouragement throughout my research and writing of this thesis.

I also would like to express my gratitude to the staff of Jabatan Penilaian Dan Perkhidmatan Harta (JPPH), especially Mr. Ishak Yahaya and Mrs. Jamhamalila Kasim for providing me with the required data and information about condominium property markets for my analysis.

My appreciation goes to the IPSIS Department as Master organisation of Universiti Teknologi MARA, who provided the facilities and equipment to finish this thesis. Special thanks to my colleagues and friends for their help, support, interest and valuable hints in my research. Thousand thank you to my proofread person, Dr Mohamad Ali Bin Yusof that checking my thesis committedly.

Finally, this thesis is dedicated to my loving dear father, mother, and my siblings for the vision and determination to educate me. This piece of victory is dedicated to all of you. Alhamdulillah.

TABLE OF CONTENTS

	Page
CONFIRMATION BY PANEL OF EXAMINERS	ii
AUTHOR'S DECLARATION	iii
ABSTRACT	iv
ACKNOWLEDGEMENT	\mathbf{v}
TABLE OF CONTENTS	vi
LIST OF TABLES	xi
LIST OF FIGURES	xiii
LIST OF SYMBOLS	XV
LIST OF ABBREVIATIONS	xvi
LIST OF APPENDICES	xviii

CHAPTER (ONE: INTRODUCTION	1
1.1 Introducti	on	1
1.2 Research	Background	1
1.3 Problem S	Statement	4
1.4 Research	Aim and Objectives	8
1.5 Research	Questions	8
1.6 Scope of	Research	9
1.6.1	Type of Building	9
1.6.2	Type of Green	9
1.6.3	Case Research Area	10
1.6.4	Scope of Research	10
1.7 Significar	nce of Research	11
1.7.1	New Findings and Body of Knowledge	11
1.7.2	The Practitioner	11
1.7.3	Investor/Buyers' Decision	12
1.7.4	Usage of Model	12

CHAPTER ONE INTRODUCTION

1.1 Introduction

This research was conducted from September 2016 to June 2018. The write-up comprises six chapters. This introductory chapter introduces the main elements of the research, namely research background, problem statement, research aim and objectives, research question, scope and limitations of research, significance of research, significant of research, research process structure and research methodology. This chapter closes with an explanation of the thesis structure.

1.2 Research Background

The main change of the world's civilization is because of excessive development. The change includes social, health, economy and the natural environment (Elias & Lin, 2015; Liu, Low, & He, 2012). The unlimited human activities give negative impact to society and cause problems to the world's finance, economy, social aspects, and the environment. The development activity leads to environmental problems and other effects. The fact is development produces extreme energy production such as oil and gas industry. Other factors are overloaded transportation and which will cause air pollution.

According to Jayantha & Man, (2013) the building industry consumes approximately 50% of the total energy demand and contributes almost 50% of the Carbon Dioxide (CO²) emissions released to the environment. The building industry includes construction, operation and demolition which will contribute to CO² emissions. Furthermore, the United States of America reported that building development produce CO² emissions more than 38% as compared to 10% of the world's CO² emissions, specifically residential, commercial and industrial buildings. Therefore, it is proven that, air pollution has an incredible impact on health, environment and property damage.

Many studies have explored greenhouse gas emissions, especially CO² emissions which play a leading role in global warming (Miao, 2017). According to Bienert, Steixner, & Koch, (2009), in the Intergovernmental Panel on Climate Change (IPCC) Special