UNIVERSITI TEKNOLOGI MARA

PREDICTION MODEL OF HEDONIC PRICE APPLICATION FOR GREEN CONDOMINIUM MARKET

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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

This research sets out to investigate the impact of green on the condominium market. Literature and research grow to understand more on the economics of green using the green building in most countries as case studies. In line with that, the valuer should also acknowledge the green element as a factor that impacts the value of the building. This research proposes three objectives to achieve in order to understand the impact of green on condominium market price using quantitative methods. The research methodology comprises theoretical, empirical, and evaluation stages. The theoretical stage provides evidence that substantiates the need for the study and outlines possible ways to address green elements in hedonic price modelling. The aim of this research is to develop a hedonic price model for green condominium market. The scope of research covers a condominium sale transaction in the Penang property market. The first objective is to identify the factors influencing the green condominium price in Penang. Through literature review and interview among 15 valuers in Penang, the objective was achieved. Further, this research also identifies the valuer's role should elaborate more in demonstrating the awareness and acceptance of sustainability in the property market. From the discussion among valuer found that integrating green elements in the current valuation practice is not visible. Next, second objective is to analyse the relationship between the factors that influence the green condominium price in Penang. This research was conducted using 1,335 condominium prices between 2020 and 2016 with 18 independent variables. The data was analysed quantitively with descriptive analysis and regression analysis. Green factors also included in the analysed as independent variable which represent by the green certification, GBI. This research found that green does impact the condominium price. Findings from the log transformation regression analysis reveal that R^2 of 36% indicates the percentage of variance explained by the variables in the model. In addition, the independent variable of green-GBI results in a coefficient value of 0.065, indicating the prices increase by 6.5% if the condominium is green rated. The results also suggest that an individual accessibility measure is more significant than the zonal measure because it can capture the micro effect of green on price. Even various case studies of the green building show the benefit and positive impact in the economic context. Furthermore, in future professional development should highlight these trends and changes in property development practice. Finally, the third objective of this research is to develop a predictive model using hedonic price application. From the analysis and findings of objective two, the hedonic model was developed consisting of green-GBI as one of the variables. The hedonic model was used to assess the effect of GBI towards condominium sale price. This research anticipates that the proposed hedonic model can significantly assist the government agencies and industry practices improve the accuracy of green building price valuation within a fast-processing time. Furthermore, this research may extend the body of knowledge in the property valuation area, specifically for the green residential market. To conclude, the findings show a positive relationship between green and condominium prices in Penang.

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