



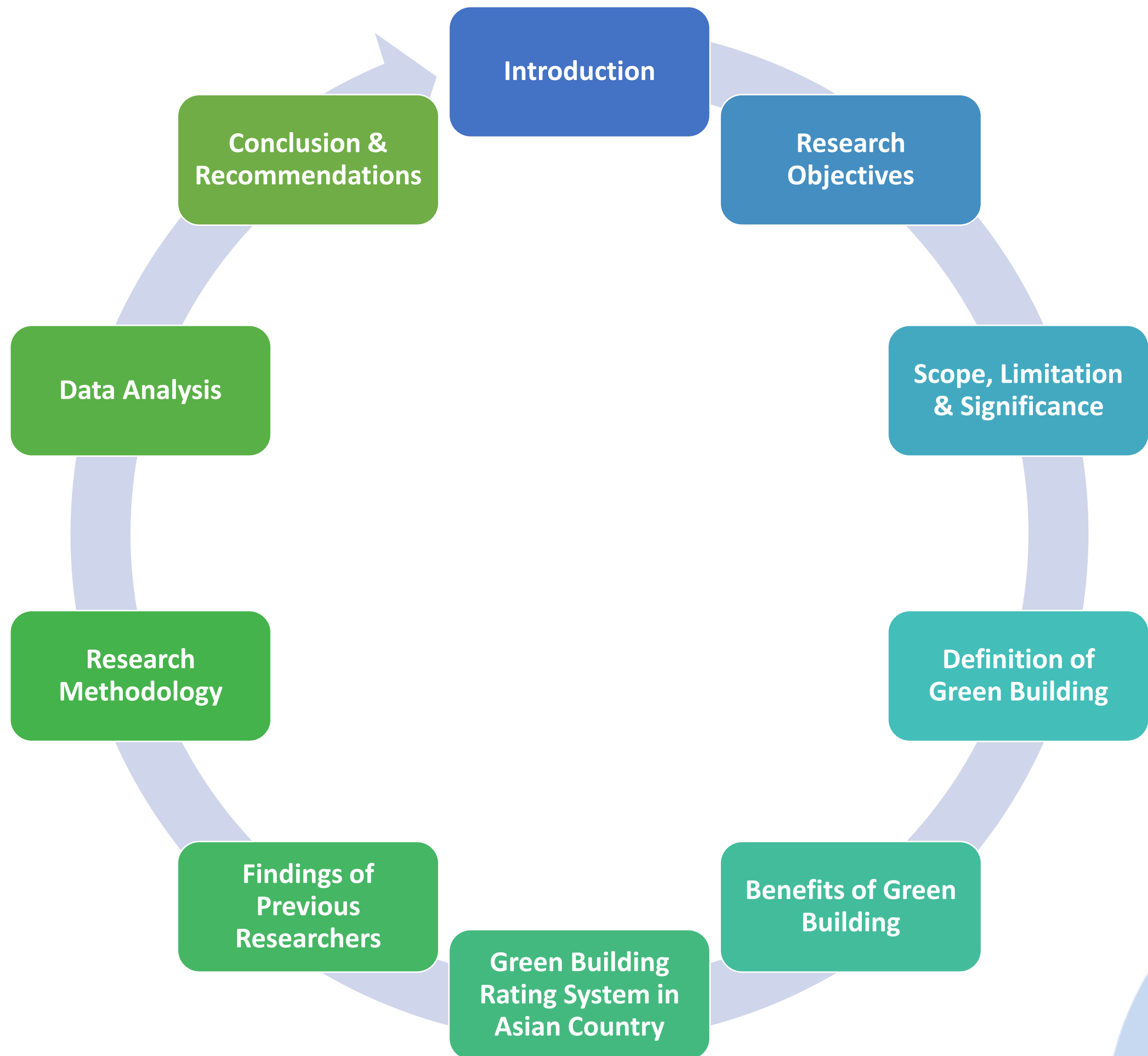
Effect of Green Building Certification on Residential Property Price:

A Case Study in Mont Kiara, Kuala Lumpur

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Presentation Outline



Introduction

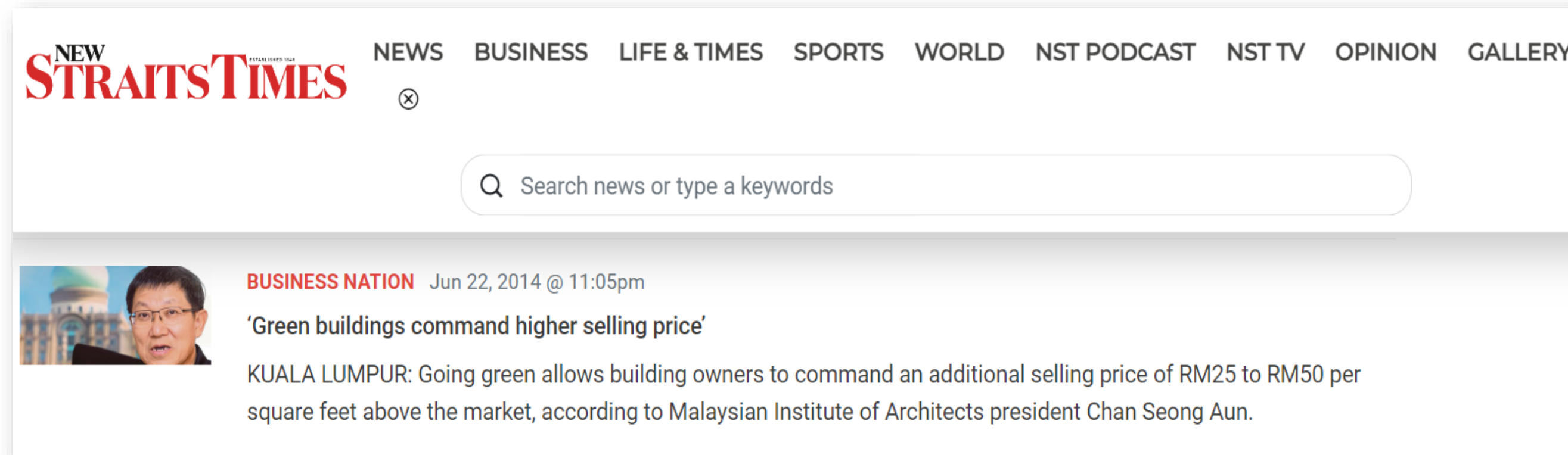
Over the past few years, Malaysia has showed commitment to promote sustainable development through the initiative in construction green building.

On March 4, 2016, the Malaysia Green Building Index (GBI) has announced that they have approved approximately **150 million square feet of gross floor area** for green building certification, of which more than half comprised residential development.

Demand for residential property has largely shifted to affordable houses, PR1MA (1Malaysia People's Housing Programme) and others, but houses with a "green" concept remain a factor that attracts the interests of buyers and investors behind the additional premium they bring.

The image shows the cover of a report titled "GREEN BEATS" with the subtitle "GBI SUSTAINABILITY MILESTONE HITS 150 MILLION SQUARE FEET MARK". The cover features a grid of images: "THE OCEANUS BEACHFRONT LUXURY VILLA | RNC | GOLD", "MOKEN PINE 4 | RNC | PLATINUM", "ANGKASA RAYA - TOWER R | RNC | GOLD", and "PONDEROSA LAKESIDE APARTMENTS | RNC GOLD". The GBI logo is on the left, and the text "ISSUE NO 1, April 2016" is in the center. The main headline is "GBI SUSTAINABILITY MILESTONE HITS 150 MILLION SQUARE FEET MARK". Below this, it states: "March 4, Kuala Lumpur – Green Building Index (GBI) announced that it has hit the 150,000,000 sq. ft. mark of GFA in GBI certified buildings. This is a 50% leap from its one hundred million sq. ft. milestone achieved 2 years ago, making it the first and largest gross floor area certified by a single green certification organisation in Malaysia. The achievement is represented by 350 certified projects out of 673 registered projects to date." A large "150 MILLION SQUARE FEET" graphic is on the right. Below it, it says "CERTIFIED GREEN BUILDINGS SINCE 2009" and "GUEST OF HONOUR: YBHG TAN SRI PETER CHIN FAH KUI, CHAIRMAN, MALAYSIA GREEN TECHNOLOGY CORPORATION, MARCH 4, 2016". The left sidebar lists the editorial team: Ar. Lee Chor Wah (Editor-in-Chief), Ar. Chan Seong Aun (Chairman), Ir. Chen Thiam Leong (Co-Chair), Ar. Von Kok Leong (Co-Editor), Ar. Michael Ching (Sub-Editor), and a committee of Ar. Boon Chee Wee, Ar. Simee Higin, Ir. Wong Siew Fong, Ir. Wang Shu Leong, and Ir. Ahmad Rashid Zainudin. A disclaimer is at the bottom left.

Introduction



“Green building allows building owners to charge an additional selling price of RM25.00 to RM50.00 per square foot from the market price”

(Chan Seong Aun, President of Malaysian Institute of Architects)

- The basic question that attracts researchers in the field of real estate is that will green certification adds value to the real estate property?

Research Objectives

1

To identify the significance of green building certification of residential buildings to property values in Mont Kiara, Kuala Lumpur.

2

To study the percentage differences in property value between green condominiums and non-green condominiums in Mont Kiara, Kuala Lumpur.

Research Scope & Limitation



Focus on green and non-green housing schemes located in the study area (Mont Kiara, Kuala Lumpur).

Research Significance



Knowledge contribution – the difference in property value between residential development that have green building certification and conventional one.

Provide guidance – valuers (private and government) in conducting valuation involving green buildings.

Definition of Green Building

“ Green building is a facility that is designed, built, operated, modified and removed with high energy efficiency for the purpose of improving the health of the occupants and efficient use of resources in minimizing the impact on nature.

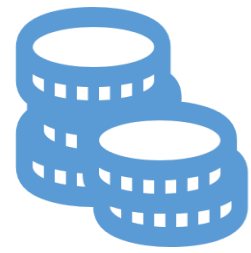
Kibert (2004) dan Zalejska-Jonsson (2014) ”

Definition of Green Building

“ Green residential houses are defined as a high-performance house in terms of its energy use and better indoor environmental quality. ”

Laquatra et al. (2008)

Benefits of Green Building



Save costs in the long term



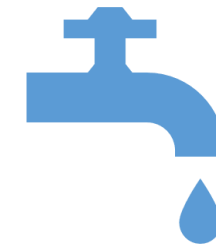
Provide a safe and healthy living space while providing a minimal impact on the environment



Lower carbon dioxide gas emissions and the use of renewable materials and less waste (Reed and Wilkinson, 2008; Wilkinson et al., 2008)



Cleaner air quality that translates into healthy living space (Wyon, 2004; Dunckley, 2007)



Lower water consumption (Roper and Beard, 2006)

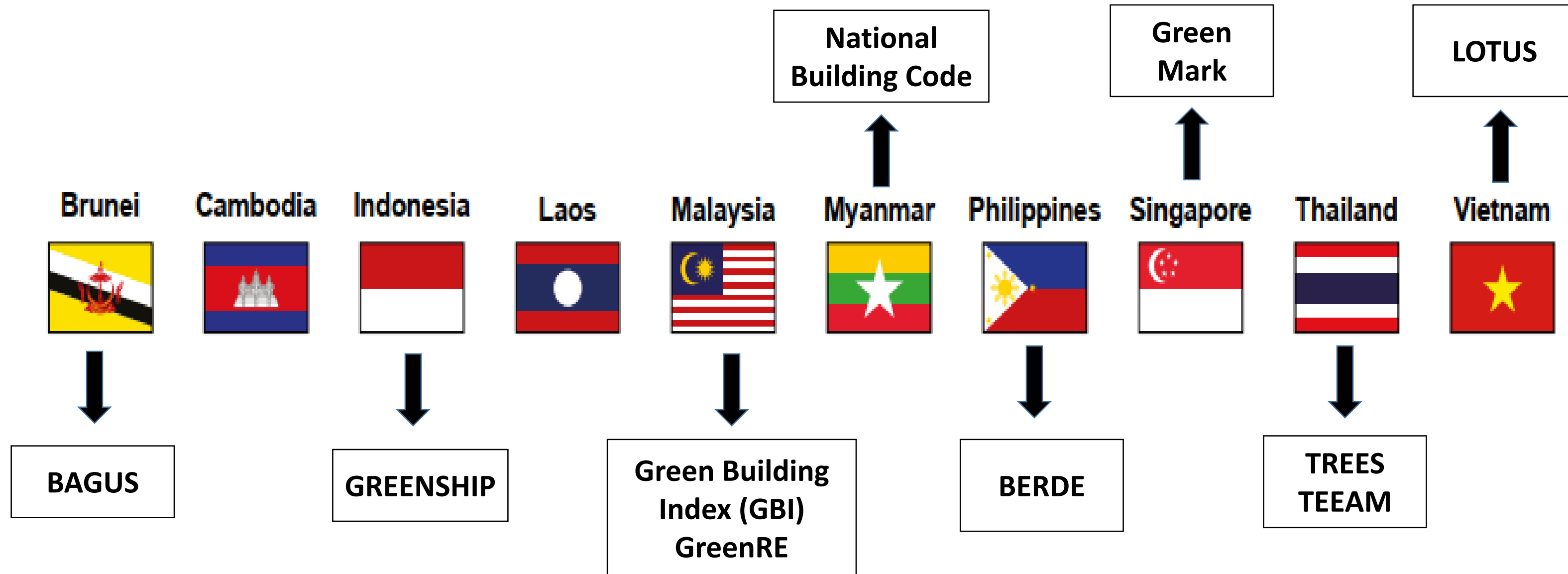


Often higher building quality (Seiler and Miler, 2011)



Provide long-term financial benefits as much as ten times compared to their initial cost premium (Kats, 2003)

Green Building Rating System in Asian Country



Findings of Previous Research

Relationship Between Property Value and Green Building

RESEARCHER	YEAR	FINDING
Brounen et al./ Deng & Wu/ Yang/ Jayantha & Man/ Popescu et al.	2009-2014	Property value will increase in the range of 10% with the addition of green building features compared to conventional buildings.
Brounen & Kok	2011	Houses with a green label were sold at a premium of 3.6% .
Addae-Dapaah & Chieh	2012	Value of properties with a green label increased up to 9.61%-27.74% .
Eichholtz et al.	2010	Prices and rents increased by 16% and 3% respectively.
Fuerst & McAllister	2011	Price premium increased by 35% and 31% respectively for LEED status buildings and ENERGY STAR labeled buildings.

Research Methodology

Research Approach

- Quantitative study
- Using Hedonic Price Modelling

Sample Selection

- Selected housing scheme in Mont Kiara, Kuala Lumpur



Target Population

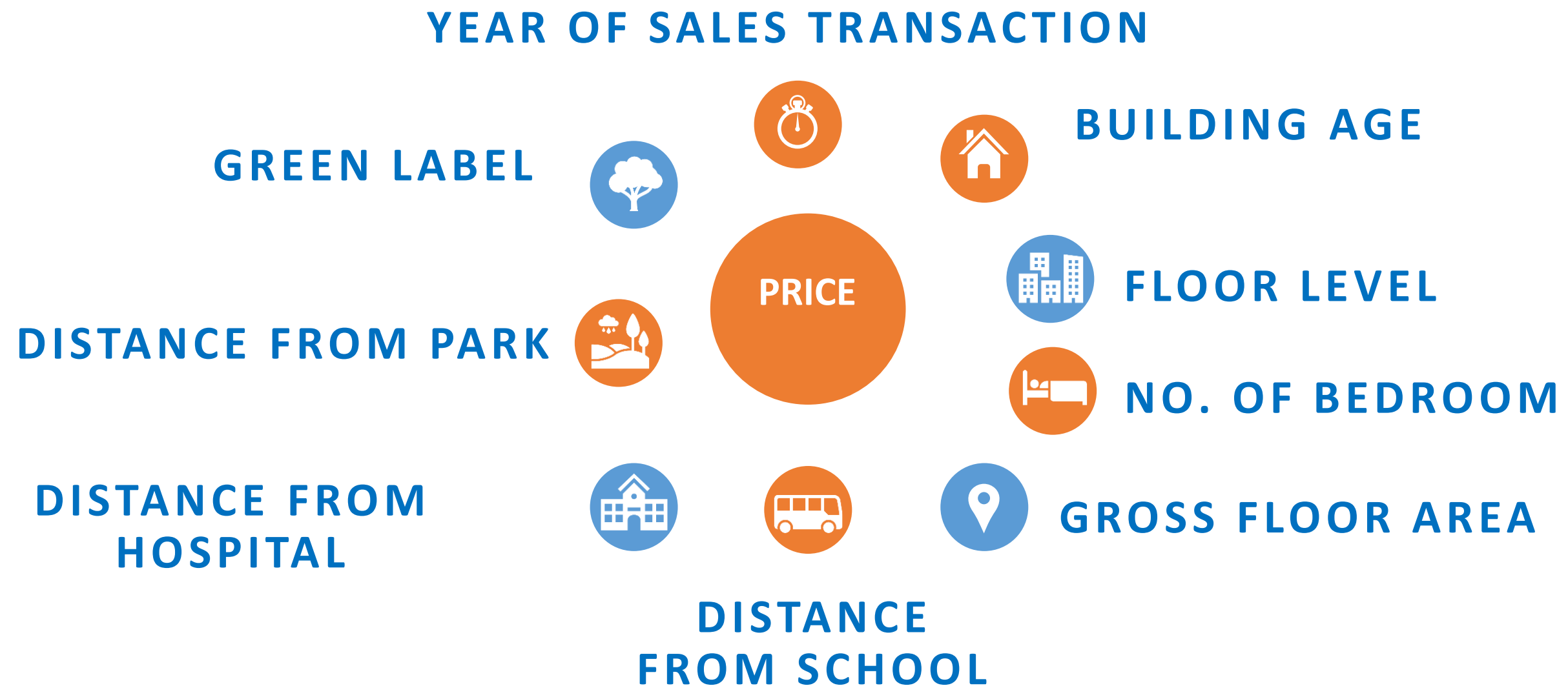
- Sales data of green and non-green condominium

Data Sources

- Secondary Data – NAPIC, Malaysia.
- Previous research

Data Analysis

Variables



Data Analysis

Data use for Multiple Regression Analysis (2015 – 2019)

Housing Scheme	Data
Green Condominium <ul style="list-style-type: none">❖ Verdana @ North Kiara❖ Residensi 22 Mont Kiara	70
Non-Green Condominium <ul style="list-style-type: none">❖ 28 Mont Kiara❖ 11 Mont Kiara❖ Kiaramas Danai❖ Kiara 9 Residency	189
TOTAL	259



Verdana @ North Kiara



Residensi 22 Mont Kiara

Data Analysis

Result of MRA

Variable	B	Std. Error	Sig.	Tolerance	VIF
(Constant)	12.421	0.134	0.000		
D_HOSPITAL	0.071	0.009	0.000	0.243	4.117
D_SEC_SCHOOL	0.036	0.010	0.000	0.400	2.502
FLOOR	0.001	0.000	0.001	0.842	1.188
GFA	0.003	0.000	0.000	0.396	2.525
AGE	0.072	0.008	0.000	0.195	5.132
GREEN	0.103	0.019	0.000	0.213	4.703

Data Analysis

Result of MRA

Referring to a study conducted by Jayantha and Man (2013), the increase in the price of green condominiums (X) can be generated from the following formula:

$$\{100[\exp(\text{Coefficient}) - 1]\} \text{ percent} = X$$

$$\{100[\exp(0.103) - 1]\} \text{ percent} = 10.85\%$$

Conclusion

Housing scheme with Malaysian GBI certification has a positive effect on the property value of condominium in Mont Kiara, Kuala Lumpur.

The price of condominiums with green status has showed an increase in addition to other factors such as the building GFA, floors level, building age, the distance of the scheme from the hospital and secondary school.

The price increase for green condominium compared to non-green condominiums is around 10% in the Mont Kiara area.

Many previous researchers also agreed that the value of property will increase within 10% with the addition of green building features compared to conventional buildings (Brounen et al. (2009), Deng and Wu (2014), Yang (2013), Jayantha and Man (2013)).

Recommendations



Further studies can also be suggested to be carried out in other study areas where green housing scheme are available such as in Selangor.



The study can also be extended to other types of building categories, for example purpose-built offices with green building features that are increasingly available in the market but by looking at other aspects such as the impact on building rental rates.

Examples of Green Building Housing Projects in Malaysia

Leisure Farm Resort Central Spine @ Iskandar Malaysia, Johor (Certified)



Eco Horizon @ Bandar Cassia, Penang (Certified)



Examples of Green Building Housing Projects in Malaysia

Eco Ardence @ Shah Alam, Selangor
(Certified)



Eco Majestic @ Semenyih, Selangor
(Certified)



Examples of Green Building Housing Projects in Malaysia

Bandar Gamuda Gardens, Selangor (Silver)



Marvelane Homes By The Lake @ Subang Jaya, Selangor (Gold)



THANK YOU