



Key Factors Influencing the Purchase Intention of Green Residential Buildings among Homebuyers in Sarawak

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ARTICLE INFO

Article history:

Received 27 November 2026
Received in revised form 20 February 2026
Accepted 15 April 2026
Available online 4 May 2026

Keywords:

Green residential building;
Homebuyers; Key factors; Purchase intention

ABSTRACT

Green residential buildings (GRBs) have been widely introduced as one of the most effective methods to cope with the issue of global warming. However, the development of GRBs in Malaysia is in an imbalance state whereby none of it has been developed in Sarawak. This might be due to many homebuyers are reluctant to pay the higher cost for GRBs. Thus, this paper aims to uncover the key factors influencing the purchase intention of GRBs. A questionnaire survey was employed to collect data from 200 homebuyers followed by statistical data analysis using the Statistical Package for the Social Sciences (SPSS) software. The majority of Sarawak homebuyers perceive environmental attitude and value perception and trustworthiness as the most important key factors to their GRBs purchase decision compared to perceived financial risk. These findings can assist related authorities on the readiness and expectation of Sarawak homebuyers towards the future GRBs development in Sarawak. Future studies are suggested to expand the sampling size and investigate other determinants that may affect GRBs purchase intention.

1. Introduction

Green Buildings (GBs) comprise features such as efficient use of energy, water, and resources; reduce environmental pollution; incorporate environmental consideration in the design, construction, and operation phases; and improve occupants' health and quality of life. Other benefits include cost saving on utility bills of the tenants and occupants [1]. For buildings to be recognised as GBs, these features will be assessed via rating tools or certification in fulfilling certain green requirements and standards. As a member of the World Green Building Council (GBC), Malaysia has established its own rating tools in 2009, namely Green Building Index (GBI), which was developed by

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<https://doi.org/10.37934/araset.59.5.5869>

the Malaysian Institute of Architects (PAM) and the Association of Consulting Engineers Malaysia (ACEM) to promote sustainable construction among building owners and developers [2]. The green building rating system is an assessment of the overall process of green building from its inception until maintenance and operation, which is employed to obtain the green building certification (i.e., Platinum, Gold, Silver, and Certificate) [3].

The Minister of Housing and Local Government Malaysia emphasises that the government has made the commitment to create liveable and sustainable cities to address the issue of rapid urbanisation that can lead to overpopulation and pollution. According to the United Nations Human Settlements Programme (UN-Habitat), urbanisation in Malaysia will surge to 80% by 2030 from the current population of 32 million people. In this regard, the government has incorporated “Advancing Sustainability” as one of the key themes in the 12th Malaysia Plan 2021-2025 by promoting green growth as well as sustainable management of the energy and water sectors to ensure better quality of life for the nation [4]. Construction is one of the industries that has shown a steady increase in energy consumption and has been urged to devise appropriate strategies to reduce energy consumption as a priority [5].

Researchers claim that construction is one of the main sectors in Malaysia that can assuredly increase the nation’s standard of living mainly via the construction of GRBs. This is because one of the significant criteria of GRBs is that the houses can attain long-lasting and sustainability via the efficient consumption of energy [2]. Moreover, researchers also advocate Green Housing (GH) as a dominant approach to achieve sustainable urbanisation in both developed and developing nations [6] such as Malaysia.

However, to compare with conventional housing, the supply of green-certified residential buildings in Malaysia is still at a limited phase. This can be attributed to the fact that no green-certified housing has been developed in the largest state of Malaysia, namely Sarawak [7]. Thus, these circumstances contribute to the present study concerning the implementation of green concept in residential buildings’ development primarily in Sarawak. The main objective is to uncover the key factors influencing the purchase intention of GRBs among homebuyers in Sarawak. The findings can offer meaningful insights regarding the readiness and expectations of potential homebuyers towards the adoption of green home concept for their future residential properties. Moreover, this paper can help developers, government, and policymakers to better understand the expectations of the potential homebuyers in formulating future development and marketing plans of green residential properties, primarily in Sarawak.

2. Key Factors Influencing the Purchase Intention of Green Residential Buildings

According to [8], green purchase intention refers to the likelihood and inclination of an individual to prioritise green products rather than conventional products when making their purchase decision. [9] assert that market demand is influenced by the customers’ attitudes and purchasing intentions, which then determines the development direction of the GRBs’ market. In other words, the size of the market is influenced and determined by the consumers’ demand. Thus, the green residential market will be fundamentally enhanced by the increased market demand, subsequently spurring the real estate companies' enthusiasm to develop green homes. [6] reported that the majority of youth in China are willing to purchase GH. Moreover, [10] mentioned that most potential homebuyers in Peninsular Malaysia, such as Ipoh and Perak, are willing to purchase GH in the future. Conversely, [11] posit on the importance of understanding the factors motivating the GB investment decision among buyers since it will influence the demand for GBs development. This is supported by several researchers who highlighted the need to investigate factors affecting buyers’ purchase intention to

determine the most significant determinants that can influence the purchase behaviour among GH buyers [12].

[6] found that government incentives [13] as well as the customers' attitude towards behaviour and subjective norm were among the significant factors influencing the purchase decision of homebuyers. In a study by [14], respondents categorised under middle-income groups were most willing to purchase GH with subjective knowledge and social trust being the major determinants affecting their willingness to accept. According to [15], the acceptable price of GH perceived by 28 Israeli homebuyers was around 7% to 10% higher than the normal price of conventional housing, and that the government policy tools were found to be among the factors that greatly encouraged the buyers to opt for GH. Additionally, [16] agreed that homebuyers' psychological behaviour has a significant effect over their willingness to purchase GH.

Various studies have proven that consumers' purchase intention towards green products such as organic food is greatly affected by subjective norm, otherwise known as peer pressure [17]. This is contradicted by the research conducted in Malaysia, primarily in Penang, Selangor, and Johor, whereby the perception from family and friends did not influence homebuyers' decision to purchase green homes [18]. [19] further highlighted the high chance of purchasing green homes among individuals who hold a positive attitude towards such homes. This is in line with the research conducted in China by [16] who found that the homebuyers' attitude towards GRBs influences their behavioural intention to live in. Other research also reported environmental concern as one of the factors affecting consumers' purchase behaviour towards green products [20]. In many of these studies, environmental concern was defined as the characteristics of a person's considerations, aversion, and likes of what is influencing the environment.

Concerning the government's role, several researchers stated that environmental concern among Malaysian homebuyers can be enhanced via various government-implemented programmes, such as the Green Carnival [18]. These government incentives will increase the affordability of homebuyers to purchase GH [6]. Moreover, perceived behavioural control is related to one's evaluation of their capability to engage in a particular action. In terms of green purchasing, the majority of people perceive that price is the most vital factor, which then creates a prominent barrier [18]. This is supported by the findings of previous research where the purchase decision towards GRBs is affected by the perceived behavioural control of the homebuyers [19].

According to [21], homebuyers will never have the sense of moral obligation to purchase GRBs and being responsible for the impact if they do not possess any knowledge regarding the adverse effects of conventional housing. Concerning perceived self-identity, past research acknowledged that individuals are most likely to buy a product if they perceive that the product matches with their images. This can be related to the situation in Malaysia whereby local homebuyers might have limited chances to purchase GRBs located in desirable areas as they are merely developed in limited states, such as Selangor, Johor, and Penang [18]. A study conducted by [22] revealed that homebuyers in China who perceived the advantage of GRBs will probably perceive a high value of GRB purchasing. Conversely, homebuyers with higher concern towards the environment are more prone to perceive more advantages and lower risks while making the decision to purchase GRBs. According to [18], developers should devise relevant procedures to enhance the perception of green value among homebuyers as a practical approach. This will contribute to factors associated with the lowest references, such as perceived value, perceived moral obligation, perceived self-identity, perceived performance risk, perceived financial risk, perceived psychological risks, and developer's role.

3. Methodology

The quantitative method was employed to collect data from the target group, namely potential GRB homebuyers in Sarawak. It involved the use of a web-based questionnaire (i.e., Google Form) where the link to the online survey was distributed to the respondents via WhatsApp, email, and Telegram. According to [23], online survey has become the most preferred method to collect data regarding respondents' perceptions as it is easier to be handled by the researchers than a paper-based survey. The method is also more convenient and faster as it requires less work while offering a higher response rate. Moreover, online survey can be verified automatically and can store the responses in the database.

The questionnaire comprised two parts which were answered by the respondents. The first part of the questionnaire survey collected the demographic information of the respondents while the second part measured the key factors that influence the respondents' GRBs purchase intention. The measuring items for each key factor were adapted from previous studies as shown in Appendix Table 4. Each item is rated with a seven-point Likert scale (1 = strongly disagree; 2 = disagree; 3 = somewhat disagree; 4 = neutral; 5 = somewhat agree; 6 = agree; 7 = strongly agree). The seven-point Likert scale was adopted from the study by [18] which examines the psychological aspects that affect the respondents' purchase intention and their willingness to pay for GRBs, which is nearly similar to this study. Prior to the dissemination of questionnaire survey, the questionnaire has undergone several checking and revising by research supervisor who has 13 years of publication experience as an academician and 3 years of working experience as a practitioner in the construction industry. According to [24], the instrument's reliability can be evaluated by professionals in the same field of expertise. Professionals are those with three or more years of research and publication experience, as well as expertise in quantitative research methods. Based on the research supervisor's recommendations, modifications were made by adding and removing details from the questionnaires. Furthermore, the wording of the questions was improved to ensure simplicity and ease of comprehension.

The study was focused on the divisions such as Kuching, Sibul, and Miri. The rationale for selecting these three divisions in Sarawak is that they have consistently exhibited high housing demand in Sarawak throughout the first quarter of 2022. This is evidenced through the property data published by the [25] whereby these divisions have the highest rankings in terms of the number and value of residential property transactions. Hence, it is both reasonable and insightful to explore the viewpoints of the targeted respondents from these three divisions in Sarawak, Malaysia. The questionnaires were disseminated to a sample size of 200 respondents with jobs via Google Forms. The sample size was adopted from previous research by [26] that looked on the perception of Sarawak homebuyers toward GRBs within the divisions of Sarawak, primarily focusing on Kuching, Sibul, and Miri. According to the 5:1 ratio rule proposed by [27], it is recommended to acquire five responses for each variable. Given that this study involved a total of 20 measuring items, the required sample size was determined to be a minimum of 100 respondents (20 x 5). Hence, a sample comprising 200 respondents was considered adequate for conducting data analysis. The non-probability sampling method namely voluntary sampling was adopted whereby the researcher looks for individuals who are willing to take part in the questionnaire survey. This sampling technique was adopted from the study by [28], where it was demonstrated that employing this sampling approach resulted in a 100% response rate and yielded reliable research data. According to [28], this is the only sampling method that evaluates the potential respondents before selecting them, resulting in a response rate of 100% for this study.

Subsequently, statistical analysis was conducted on the data obtained from the questionnaire survey. The Statistical Package for the Social Sciences Version 22 (SPSS 22.0) was adopted to generate findings through Exploratory Factor Analysis (EFA) and descriptive analysis.

4. Results and Discussion

Table 1 shows the demographic profiles of the 200 respondents. The results indicated that the majority of the respondents lived in Kuching (44.0%), followed by Sibü (33.5%) and Miri (22.5%). Many of them were between the age of 21 to 30 years old (42.0%), followed by 31 to 40 years old (25.0%), 41 to 50 years old (18.0%), and 51 years old (9.0%). Meanwhile, respondents with the age of below 21 years old accounted for the lowest percentage (6.0%). Regarding the education level, the highest percentage was recorded by respondents with Bachelor's degree (59.5%), followed by STPM or Diploma (20.0%), SPM or lower level (10.5%), and Postgraduate or higher level (10.0%). The respondents were employed across three job categories namely the private sector (50.5%), government sector (28.0%), and self-employment (21.5%). Their household monthly income ranged between RM2,001 to RM4,000 (34.0%), followed by RM2,000 and below (19.0%), RM4,001 to RM6,000 (14.0%), RM10,001 and above (13.5%), RM8,001 to RM10,000 (12.0%), and the lowest percentage was those earning between RM6,001 to RM8,000 (7.5%) per month.

Table 1
 Respondents' demographic profiles

Characteristics	Number	Percentage (%)
Living division		
Kuching	88	44.0
Sibu	67	33.5
Miri	45	22.5
Age		
21-30 years old	84	42.0
31-40 years old	50	25.0
41-50 years old	36	18.0
51 years old	18	9.0
Below 21 years old	12	6.0
Education level		
Bachelor's degree	119	59.5
STPM or Diploma	40	20.0
SPM or lower level	21	10.5
Postgraduate or higher level	20	10.0
Job category		
Private sector	101	50.5
Government sector	56	28.0
Self-employment	43	21.5
Household monthly income		
RM2,001-RM4,000	68	34.0
RM2,000 and below	38	19.0
RM4,001-RM6,000	28	14.0
RM10,001 and above	27	13.5
RM8,001-RM10,000	24	12.0
RM6,001-RM8,000	15	7.5

During the questionnaire survey, the respondents were asked to evaluate the importance of several key factors in influencing their purchase intention of GRBs based on a seven-point Likert scale. EFA procedure was adopted to group the twenty measuring items into smaller sets of key factors through varimax rotation. The Bartlett's test of sphericity was significant (Chi-Square = 6480.219, p -value = .000) meanwhile the measure of sampling adequacy via Kaiser-Meyer-Olkin (KMO) was .930. It depicts that the sampling data were adequate for factor analysis as the KMO was greater than 0.80 and the Bartlett's test was less than 0.01 [29]. All the factor loadings of the measuring items were exceeding 0.50 whereby three dimensions were extracted and renamed as Component 1: Environmental Attitude (10 underlying items), Component 2: Value Perception and Trustworthiness (8 underlying items), and Component 3: Perceived Financial Risk (2 underlying items) to show that the common items were grouped under the same component as shown in Table III. As supported by [29], the factor loading which is greater than 0.50 contributes to better results.

Table 2 and Table 3 depict the mean and standard deviation of the construct and the measuring items for each construct respectively. The results demonstrate that these key factors can be divided into 3 categories of not important (1.00 – 3.00), moderately important (3.01 – 5.01), and very important (5.02 – 7.00) [30].

According to Table 2, it can be observed that Component 1: Environmental Attitude (Mean = 5.59, Std. Deviation = 1.466) and Component 2: Value Perception and Trustworthiness (Mean = 5.19, Std. Deviation = 1.531) were perceived as very important key factors. Meanwhile, Component 3: Perceived Financial Risk (Mean = 4.51, Std. Deviation = 1.815) was perceived as moderately important key factor influencing their purchase intention of GRBs.

Based on the results in Table 3, three items in Component 1: Environmental Attitude recorded the highest mean values, namely "I think that everyone should contribute towards the conservation of our limited natural resources" (Mean = 5.83, Std. Deviation = 1.623), "I think that everyone has the responsibility to cherish our natural resources" (Mean = 5.76, Std. Deviation = 1.611), and "I am concern regarding the worsening issue of our country's environment quality" (Mean = 5.62, Std. Deviation = 1.555). The findings are in line with past research stating that the consumers who are environmentally conscious and motivated to contribute to environmental protection are likely to exhibit a sense of responsibility toward the environment. When evaluating green products, consumers are fundamentally motivated by their understanding of environmental responsibility [9]. Moreover, the study by [20] proved that environmental concern plays a vital role in shaping consumers' behaviour to make environmentally friendly purchases. The findings of this research on environmental attitude being the most important key factor influencing homebuyers' purchase intention can be due to the fact that the majority of the respondents have pro-environmental behaviour as they are conscious about how the built environment affects the environment, ultimately leading them into the GB market [12].

Apart from that, it can be observed that the three items with the highest mean values under Component 2: Value Perception and Trustworthiness were "I believe that GRBs are beneficial as these buildings have sustainable living features" (Mean = 5.30, Std. Deviation = 1.620), "I believe that GRBs are valuable as these buildings adopt environmentally friendly procedures throughout the construction process" (Mean = 5.24, Std. Deviation = 1.706), and "I think I will purchase GRBs if it is constructed by a trustworthy developer" (Mean = 5.22, Std. Deviation = 1.716). The findings are in accordance with [22] who found that residents' intentions to buy GHs were positively impacted by their overall sense of value. This is further supported by the widely accepted theory that consumers' perceptions of value play a critical role in their decision to buy new goods or services. Moreover, residents with higher levels of social trust tend to be more convinced about the veracity of the GH benefits and hence think of more concrete and abstract advantages from buying and residing in GHs

[22]. According to [31], the majority of homebuyers tend to heavily depend on experts due to the lack of professional knowledge and experience to evaluate a new technology such as GHs as well as other green products. However, improper operations supplied by property management agencies may cause GH defects, which contribute to residents' anxiety [22]. This is supported by [32] who reported that many homebuyers will emphasise on the developers' reputation when making GRBs purchase intention as there are numerous issues caused by the developers. Hence, the finding of this paper on value perception and trustworthiness being the second most important key factor suggests that homebuyers in Sarawak are worried that GH performance will fall short of their expectations since it will not be as good as claimed or planned. Thus, it implies that the homebuyers' confidence towards the agencies in charge of GHs, such as developers, is essential for expanding the GB market in Sarawak.

The results also demonstrate two items under Component 3: Perceived Financial Risk, namely "I would feel that it is not worth to invest in GRBs" (Mean = 4.56, Std. Deviation = 1.883) and "I think that my purchase of GRBs would not be a wise way in spending money" (Mean = 4.47, Std. Deviation = 1.815). According to [33], financial risk is defined as the concern over the cost of GRBs and the potential for financial hardship, which depends on the cost of the buildings. This is in line with past research reporting that one of the important influencing factors to consumers' GRBs purchase intention is financial risk [18]. Conversely, housing price stands as among the attributes of financial risk whereby competitive housing price will increase the homebuyers' purchase decision [34].

According to [35], the demand for GRBs in Malaysia remained low in 2015 due to the 30% increase in its price compared to conventional houses. However, the findings of this paper showed that perceived financial risk is deemed as a moderately important key factor than other factors like environmental attitude as well as value perception and trustworthiness. This might account to the fact that homebuyers are more concerned towards the benefits of GRBs compared to the perceived financial risk. This is aligned with [22] who proved that perceived advantages have a greater influence across all dimensions than perceived risks.

In summary, the majority of homebuyers in Sarawak perceive environmental attitude as well as value perception and trustworthiness as the most important key factors to GRBs purchase intention. Meanwhile, perceived financial risk is considered a moderately important key factor. A potential reason to such circumstance is that most homebuyers have pro-environmental behaviour, and they are more concerned about the benefits of GRBs rather than the perceived financial risk. This is in line with previous research where rather than perceived financial risk, the concern towards the technological performance of GRBs remains as a major barrier [3], particularly for the development of GHs in the real estate market in China [36].

Table 2
Mean and standard deviation of the construct

Key Factors	Mean	Standard Deviation	Ranking
Component 1			
Environmental Attitude	5.59	1.466	1
Component 2			
Value Perception and Trustworthiness	5.19	1.531	2
Component 3			
Perceived Financial Risk	4.51	1.815	3

Table 3
 Mean and standard deviation of the measuring items for each construct

Key Factors	Mean	Standard Deviation	Ranking
Component 1: Environmental Attitude			
I think that everyone should contribute towards the conservation of our limited natural resources.	5.83	1.623	1
I think that everyone has the responsibility to cherish our natural resources.	5.76	1.611	2
I am concerned regarding the worsening issue of our country's environment quality.	5.62	1.555	3
I am passionate about the issues which are related to environmental protection in our country.	5.61	1.532	4
I think I will purchase GRBs if there is green affordable housing offered by the government.	5.59	1.651	5
I think I will purchase GRBs if there is financial incentive provided by the government.	5.56	1.609	6
I suppose that involving in environmental activities is one of the important parts of my life.	5.53	1.546	7
I suppose that I am an individual who is very concerned about environmental issues.	5.47	1.622	8
I suppose that I will engage myself with environmentally friendly practices from time to time.	5.46	1.591	9
I always think about ways to improve our country's environmental condition.	5.44	1.609	10
Component 2: Value Perception and Trustworthiness			
I believe that GRBs are beneficial as these buildings have sustainable living features.	5.30	1.620	11
I believe that GRBs are valuable as these buildings adopt environmentally friendly procedures throughout the construction process.	5.24	1.706	12
I think I will purchase GRBs if it is constructed by a trustworthy developer.	5.22	1.716	13
I think I will purchase GRBs if it is constructed by a developer who expert in the construction field of GRBs.	5.21	1.750	14
I believe that GRBs are sensible as these buildings may not contribute negative effect towards the environment.	5.21	1.694	15
I suppose I will purchase GRBs as it brings more environmental benefits compared to conventional residential buildings.	5.17	1.623	16
I suppose I will purchase GRBs as it is environmentally friendly.	5.12	1.679	17
I suppose the environmental performance of GRBs will fulfil my expectations.	5.07	1.548	18
Component 3: Perceived Financial Risk			
I would feel that it is not worth to invest in GRBs.	4.56	1.883	19
I think that my purchase of GRBs would not be a wise way in spending money.	4.47	1.815	20

5. Conclusion

This paper contributes to the body of knowledge by exploring the key factors that influence GRBs purchase intention. The findings lead to a conclusion that GRBs can be considered as a dominant approach to achieve sustainable urbanisation in both developed and developing nations, including Malaysia. However, the supply of green-certified residential buildings in Malaysia is still at a limited phase whereby no green-certified housing has been developed in the largest state in Malaysia (i.e., Sarawak) due to the infancy stage of GB concept adoption. This might be due to the fact that the development direction of GRBs is influenced by the purchase decision-making process of

homebuyers, which is believed to be influenced by all the key factors reported in reported in this study. Hence, the related authorities such as the developers, government, and marketers should strategically focus on emphasizing these aspects in their initiatives. By highlighting the environmental benefits, showcasing the long-term value, and building trust among potential homebuyers, these stakeholders can effectively promote and facilitate the future development of GRBs in Sarawak. Moreover, addressing and mitigating perceived financial risks through incentives and clear communication about economic advantages would further enhance the acceptance and adoption of GRBs among homebuyers in Sarawak.

The findings of this study offer several promising research avenues for future scholars to explore, with the overarching aim of advancing the understanding and fostering the adoption of GRBs in the region of Sarawak, Malaysia. One pertinent avenue is the execution of a comprehensive cost-benefit analysis, contrasting GRBs against conventional housing alternatives within the Sarawak context. Such an analysis would evaluate the enduring economic and environmental advantages associated with residing in GRBs, thereby furnishing prospective homebuyers with a well-founded basis for their housing decisions.

Furthermore, future researchers may embark on case studies examining successful GRB initiatives that have been implemented across diverse geographical regions or countries. Through a meticulous examination of these case studies, researchers can discern valuable insights into effective practices and strategies that have yielded positive outcomes in different contexts. More importantly, the investigation would culminate the identification and elucidation of best practices that can be judiciously adapted to align with the distinctive local conditions and requirements that are prevalent in Sarawak.

This study has a few limitations that necessitate improvement. Firstly, the reliance on a sample size of 200 respondents, collected through voluntary sampling in specific divisions, may limit the generalizability of findings to the broader population of potential homebuyers in Sarawak. Moreover, this study solely investigated the psychological factors influencing homebuyers' intention to purchase GRBs in Sarawak, yet it may not capture the entirety of determinants impacting GRBs purchase intention in the region. To address these limitations, improvements should focus on expanding the sampling size. This can be achieved by incorporating respondents from additional divisions in Sarawak, ensuring a more comprehensive representation of the perceptions of potential homebuyers across the entire region. Additionally, future researchers should explore alternative determinants that may impact homebuyers' intention to purchase GRBs in Sarawak.

Acknowledgement

This paper draws from grants awarded by the Ministry of Higher Education (MOHE), Malaysia under the Fundamental Research Grant Scheme (FRGS) Phase 1/2020, Grant No: FRGS/1/2020/SSI02/UNIMAS/02/1.

Appendix

Table 4

List of measuring items

Constructs and Measuring Items	Sources
Component 1: Environmental attitude	
I think that everyone should contribute towards the conservation of our limited natural resources.	[6,15,18,19,20,37,38]
I think that everyone has the responsibility to cherish our natural resources.	
I am concern regarding the worsening issue of our country's environment quality.	

I am passionate about the issues which are related to environmental protection in our country.
I think I will purchase GRB if there is green affordable housing offered by the government.
I think I will purchase GRB if there is financial incentive provided by the government.
I suppose that involving in environmental activities is one of the important part of my life.
I suppose that I am an individual who is very concerned about the environmental issues.
I suppose that I will engage myself with the environmentally friendly practices from time to time.
I always think about the ways to improve our country's environmental condition.

Component 2: Value perception and trustworthiness

I believe that GRBs are beneficial as these buildings have sustainable living features.
I believe that GRBs are valuable as these buildings adopt environmentally friendly procedures throughout the construction process.
I think I will purchase GRB if it is constructed by a trustworthy developer.
I think I will purchase GRB if it is constructed by a developer who experts in the construction field of GRBs. [18,19,20,39]
I believe that GRBs are sensible as these buildings may not contribute negative effect towards the environment.
I suppose I will purchase GRB as it brings more environmental benefits compared to the conventional residential building.
I suppose I will purchase GRB as it is environmentally friendly.
I suppose the environmental performance of GRB will fulfil my expectations.

Component 3: Perceived financial risk

I would feel that it is not worth to invest in GRBs. [18,32]
I think that my purchase of GRB would not be a wise way in spending money.

References

- [1] "Global Directory of Green Building Councils." World Green Building Council, October 23, 2022. <https://worldgbc.org/global-directory-of-green-building-councils>.
- [2] Elias, Ezanee M., and Chong Khai Lin. "The Empirical Study of Green Buildings (Residential) Implementation: Perspective of House Developers." *Procedia Environmental Sciences* 28 (2015): 708–16. <https://doi.org/10.1016/j.proenv.2015.07.083>.
- [3] Ahmad Zaini, Afzan, and Intan Rohani Endut. "Major challenges in implementing green construction." *Journal of Engineering and Applied Sciences* 13, no. 11 (2018): 8865–8869. <https://ir.unimas.my/id/eprint/22545/>.
- [4] Economic Planning Unit, "Twelfth Malaysia Plan, 2021-2025." 2021. <https://rmke12.ekonomi.gov.my/en>.
- [5] Ahmad Zaini, Afzan, Nur Khairina Khairul Hisham, Abdul Rashid Abdul Aziz, and Nurul Nadia Abd Aziz. "Economic Model of Green Building Construction: A Conceptual Model." *IOP Conference Series: Earth and Environmental Science* 1022, no. 1 (May 1, 2022): 012008. <https://doi.org/10.1088/1755-1315/1022/1/012008>.
- [6] Zhang, Lin, Liwen Chen, Zezhou Wu, Hong Xue, and Wenlin Dong. "Key Factors Affecting Informed Consumers' Willingness to Pay for Green Housing: A Case Study of Jinan, China" *Sustainability* 10, no. 6 (2018): 1711. <https://doi.org/10.3390/su10061711>.
- [7] Greenbuildingindex Sdn Bhd, "Projects – Green Building Index," GBI Certified Buildings. 2022. <https://www.greenbuildingindex.org/how-gbi-works/gbi-certified-buildings/>.
- [8] N. A. Rashid, N. Ramli. "Awareness of eco-label in Malaysia's green marketing initiative." *International Journal of Business and Management* 4, no. 8 (2009). <https://doi.org/10.5539/ijbm.v4n8p132>.
- [9] Zhang, Y, and J. Yang. "RETRACTED: Research on the factors affecting consumer trust in green residences—Based on SEM model and SPSS data processing software." *International Journal of Electrical Engineering Education* 60, no. 1_suppl (2020): 885–898. <https://doi.org/10.1177/0020720920930351>.
- [10] Mazli, Muhammad Firdaus, and Nurul Sahida Fauzi. "INVESTIGATING THE AWARENESS AMONG POTENTIAL HOMEBUYERS TOWARDS ELEMENTS OF GREEN RESIDENTIAL BUILDING." *PLANNING MALAYSIA JOURNAL* 20 (2022). <https://doi.org/10.21837/pm.v20i21.1112>.
- [11] Chuweni, Nor Nazihah, Mohamad Haizam Mohamed Saraf, and Nurul Sahida Fauzi. "Motivations for Green Real estate Investments in Residential Properties: A review." *Pertanika Journal of Social Science and Humanities* 30, no. 3 (2022): 1003–1016. <https://doi.org/10.47836/pjssh.30.3.04>.

- [12] Durdyev, Serdar, Saeed Reza Mohandes, Amir Mahdiyar, and Syuhaida Ismail. "What drives clients to purchase green building?: The cybernetic fuzzy analytic hierarchy process approach." *Engineering, Construction and Architectural Management* 29, no. 10 (2021): 4015–4039. <https://doi.org/10.1108/ECAM-11-2020-0945>.
- [13] Ahmad Zaini, Afzan, and Intan Rohani Endut. "The Drivers Towards Green Construction - An Empirical Study in Malaysia." *Journal of Engineering and Applied Sciences* 12, no. 4 (2017): 814-818. <http://ir.unimas.my/id/eprint/20798/>.
- [14] Li, Yanan, Li Yang, Baojie He, and Doudou Zhao. "Green building in China: Needs great promotion." *Sustainable Cities and Society* 11 (2014): 1-6. <https://doi.org/10.1016/j.scs.2013.10.002>.
- [15] Portnov, Boris A., Tamar Trop, Alina Svechkina, Shoshi Ofek, Sagi Akron, and Andrea Ghermandi. "Factors affecting homebuyers' willingness to pay green building price premium: Evidence from a nationwide survey in Israel." *Building and Environment* 137 (2018): 280-291. <https://doi.org/10.1016/j.buildenv.2018.04.014>.
- [16] Liu, Yunxia, Zaisheng Hong, Jie Zhu, Jingqiang Qi, and Peng Liu. "Promoting green residential buildings: Residents' environmental attitude, subjective knowledge, and social trust matter." *Energy Policy* 112 (2018): 152-161. <https://doi.org/10.1016/j.enpol.2017.10.020>.
- [17] Dean, Moira, Monique M. Raats, and Richard Shepherd. "The role of Self-Identity, past behavior, and their interaction in predicting intention to purchase fresh and processed organic food." *Journal of Applied Social Psychology* 42, no. 3 (2011): 669-688. <https://doi.org/10.1111/j.1559-1816.2011.00796.x>.
- [18] Tan, Wee-Lee, and Goh Yen-Nee. "The role of psychological factors in influencing consumer purchase intention towards green residential building." *International Journal of Housing Markets and Analysis* 11, no. 5 (2018): 788-807. <https://doi.org/10.1108/ijhma-11-2017-0097>.
- [19] Tan, Teck Hong. "Use of structural equation modeling to predict the intention to purchase green and sustainable homes in Malaysia." *Asian Social Science* 9, no. 10 (2013): 581. <https://doi.org/10.5539/ass.v9n10p181>.
- [20] Nik Abdul Rashid, Nik Ramli, and Mohd. Rizaimy Shaharudin. "Customer's purchase intention for a green home." *International Journal of Procurement Management* 10, no. 5 (2017): 581. <https://doi.org/10.1504/ijpm.2017.086402>.
- [21] Sang, Peidong, Haona Yao, Lin Zhang, Sen Wang, Yanjie Wang, and Jinjian Liu. "Influencing factors of consumers' willingness to purchase green housing: a survey from Shandong Province, China." *Environment Development and Sustainability* 22, no. 5 (2019): 4267-4287. <https://doi.org/10.1007/s10668-019-00383-8>.
- [22] Zhao, Shiwen, and Liwen Chen. "Exploring Residents' Purchase Intention of Green Housings in China: An Extended Perspective of Perceived Value." *International Journal of Environmental Research and Public Health* 18, no. 8 (2021): 4074. <https://doi.org/10.3390/ijerph18084074>.
- [23] Harlow, Ann. "Online surveys—possibilities, pitfalls and practicalities: The experience of the TELA evaluation." *Waikato Journal of Education* 15, no. 2 (2010). <https://doi.org/10.15663/wje.v15i2.116>.
- [24] Memon, Mumtaz Ali, Hiram Ting, Jun-Hwa Cheah, Ramayah Thurasamy, Francis Chuah, and Tat Huei Cham. "Sample size for survey research: Review and recommendations." *Journal of Applied Structural Equation Modelling* 4, no. 2 (2020): i-xx. [https://doi.org/10.47263/jasem.4\(2\)01](https://doi.org/10.47263/jasem.4(2)01).
- [25] National Property Information Centre, "Property sales data -Q1 2022," 2022. Accessed May 03, 2022. <https://napic.ipph.gov.my/portal/ms>.
- [26] Zainordin, Nadzirah, Magdalen Petrus, and Wahida Wahi. "BUYER'S PERCEPTION ON GREEN RESIDENTIAL BUILDING: A STUDY IN SARAWAK." *Sci. Int. (Lahore)* 30, no. 1 (2018): 1–4. <http://www.sci-int.com/pdf/636539356280548165.edited.pdf>.
- [27] Hair Jr., Joseph F., William C. Black, Barry J. Babin, and Rolph E. Anderson. *Multivariate Data Analysis*. 7th ed. New York: Prentice Hall International, 2010. http://digilib.ubl.ac.id/index.php?p=show_detail&id=15963.
- [28] Murairwa, Stanley. "Voluntary sampling design." *International Journal of Advanced Research in Management and Social Sciences* 4, no. 2 (2015): 185–200. <http://garph.co.uk/ijarmss/feb2015/18.pdf>.
- [29] Truong, Yann, and Rod McColl. "Intrinsic motivations, self-esteem, and luxury goods consumption." *Journal of Retailing and Consumer Services* 18, no. 6 (2011): 555–561. <https://doi.org/10.1016/j.jretconser.2011.08.004>.
- [30] Nguli, Judith. "The level of each item is determined by the following formula: (highest point in Likert scale – lowest point in Likert scale)/the number of the levels used," *ResearchGate* (2017). <https://www.researchgate.net/post/How-to-score-a-likert-Scale/59efe557eeae39563907ec80/citation/download>
- [31] Zhang, Li, Cong Sun, Hongyu Liu, and Siqi Zheng. "The role of public information in increasing homebuyers' willingness-to-pay for green housing: Evidence from Beijing." *Ecological Economics* 129 (2016): 40–49. <https://doi.org/10.1016/j.ecolecon.2016.05.010>.
- [32] Nursal, Ahmad Taufik, Mohd Faizal Omar, Mohd Nasrun Nawi, and Mazlan Mond Sappri. "The Importance of Developer Reputation Criterion In House Purchase Decision Making." *International Journal of Supply Chain Management* 8, no. 1 (2019): 697-701. <https://doi.org/10.59160/ijscm.v8i1.2821>.

- [33] Wu, Paul C.S., Gary Yeong-Yuh Yeh, and Chieh-Ru Hsiao. "The Effect of Store Image and Service Quality on Brand Image and Purchase Intention for Private Label Brands." *Australasian Marketing Journal* 19, no. 1 (2011): 30-39. <https://doi.org/10.1016/j.ausmj.2010.11.001>.
- [34] Rachmawati, Dwi, Sakinah Shukri, S. M. Ferdous Azam, and Ali Khatibi. "Factors influencing customers' purchase decision of residential property in Selangor, Malaysia." *Management Science Letters* 9 (2019): 1341-1348. <https://doi.org/10.5267/j.msl.2019.5.016>.
- [35] Elias, Ezanee M., and Chong Khai Lin. "The Empirical Study of Green Buildings (Residential) Implementation: Perspective of House Developers." *Procedia Environmental Sciences* 28 (2015): 708-716. <https://doi.org/10.1016/j.proenv.2015.07.083>.
- [36] Li, Qianwen, Ruyin Long, and Hong Chen. "Differences and influencing factors for Chinese urban resident willingness to pay for green housings: Evidence from five first-tier cities in China." *Applied Energy* 229 (2018): 299-313. <https://doi.org/10.1016/j.apenergy.2018.07.118>.
- [37] Chen, Mei-Fang, and Pei-Ju Tung. "Developing an extended Theory of Planned Behavior model to predict consumers' intention to visit green hotels." *International Journal of Hospitality Management* 36 (2014): 221-230. <https://doi.org/10.1016/j.ijhm.2013.09.006>.
- [38] Newton, Joshua D., Yelena Tsarenko, Carla Ferraro, and Sean Sands. "Environmental Concern and Environmental Purchase Intentions: The Mediating Role of Learning Strategy." *Journal of Business Research* 68, no. 9 (2015): 1974-1981. <https://doi.org/10.1016/j.jbusres.2015.01.007>.
- [39] Chen, Yu-Shan. and Chang, Ching-Hsun. "Enhance green purchase intentions: The roles of green perceived value, green perceived risk, and green trust". *Management Decision* 50, no. 3 (2012): 502-520. <https://doi.org/10.1108/00251741211216250>.