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# Modelling Property Overhang using Stigmatised Property Dimensions

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**Abstract**
Property stigma refers to some characteristics, features, social values, or an event relating to land and buildings that can create a negative perception of a building, land, project, or neighborhood area. Property stigma was identified as a significant factor contributing to the number of overhang residential units in Malaysia. This paper aims to develop a PLS-SEM model using stigmatized property dimensions on Clio2 Residence, an overhang strata residential scheme in Putrajaya. External and internal stigmas are significant factors causing unsold property units in Clio2 Residence.

Keyword: Property Stigma; Property Overhang; SEM-PLS


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## 1.0 Introduction

The Malaysian property market continued growth as Selangor dominated the overall property transactions within the Central Region. However, according to the NAPIC, up to the third quarter of 2023, Selangor will be the main contributor to the central region state with the highest number of overhangs. Selangor was the state that has active industrial activity and has the highest population among the states in Malaysia. Therefore, it is an issue that should be resolved as to why the buyer refuses to buy the house in Selangor. This paper was a preliminary study by adopting one sample housing residential scheme. Thus, Clio2 Residence was identified as one of the residential schemes listed in the overhang residential sector as of the first half of 2023 (NAPIC, n.d). After four (4) years in the selling phase, as of the first half of 2023, it was found that only 50% of the units have been sold, and the rest of the units are categorized as overhang units. Property values are affected by "location, location, location," an old and oversimplified saying. It might be more accurate to say that "perception, perception, perception" determines the value of a property." (Bell, 2016). According to his statement, other significant factors need to be closely examined rather than location. According to Said et al.(2017), property that has been found to have a stigma will affect housing prices. Thus, properties with a stigma differ from the choice of investors or potential buyers. This indicates

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that any property with a stigma will have a lower take-up rate because the value differs from a property without a stigma. This aligns with the definition of property overhang, which is a property that has been completed and not sold after nine months and is considered a property overhang (NAPIC, n.d). Does this stigma have a direct effect on the occurrence of property overhang? Therefore, this paper aims to identify the relationship between stigmatized property dimensions and property overhang.

## 2.0 Literature Review

### *2.1 Stigma*

Stigma is believing in something or an event that can create a negative perception of something different from the norm. It is an attribute that conveys devalued stereotypes (Clair, 2018). Stigma or fear is a behavior that people have that cannot be quantified and may or may not be quantified (Callanan & Eves, 2015). Stigma studies carried out till the 2000s are related to the non-physical character and phenomenon variables; most do not cover variables related to a property's physical aspects or features. Later research examines stigmas identified as affecting property values in neighborhoods with physical issues (Bell, 2016). Thus, according to the previous study, stigma can be divided into three categories, namely internal Stigma, external Stigma, and phenomenon stigma

### *2.2 Internal Stigma*

Internal stigma consists of minimal Stigma and physical Stigma. The minimal stigma is known only to a small group of people and is usually taken seriously only by locals (Nallathiga et al., 2017). Minimal stigma is only known by interested persons and locals. However, for individual property, the minimal stigma can refer to any negative perception of the land titles, for example, the tenure of property (Cheng & Ling, 2023), multiple layer sub-lease, and the land size (Cradduck & Warren, 2019). House purchasers will be hesitant to purchase if the tenure of properties is a private lease scheme. Furthermore, when it comes to multi-layer sublease, it will cause the issue of strata title issuance. The physical stigma refers to the current condition of building features. Insufficient maintenance of a building's characteristics and physical attributes can lead to a negative perception, as potential purchasers primarily consider these factors when purchasing a house (Cradduck & Warren, 2019). For newly launched housing projects, for example, shape layouts and inefficient layouts causing unusable space will be more challenging to sell, contributing to the property overhang scenario.

### *2.3 External Stigma*

External categories refer to attributes that are distinct from individual properties. Three (3) variables are under this category: environmental Stigma, neighborhood stigma, and structural Stigma. The perception of environmental stigma is thought to influence property value, as the general public has become more conscious of environmental hazards. This recognition is seen in the adverse effect of environmental pollution on the worth of properties (Mccluskey & Rausser, 2003). For example, the neighborhood property adjacent to the dumping site (Ogban & Akujuru, 2016), groundwater contaminated by chemicals (Hajnal, 2017), nuclear power stations (Leiss, 2013), high voltage power lines cables (Bell, 2016), airport and railway lines (Hajnal, 2017). These stigmas contribute to scent pollution, noise pollution, and health concerns. Neighborhood stigma in this context refers to safety (Ibrahim & Maimun, 2022; Nallathiga et al., 2017), access to public transport (Cheng & Ling, 2022), and distance location to the public healthcare facilities and educational facilities (Olanrewaju & Woon, 2017). This type of stigma is highly significant because it is associated with a property or community, for example, a housing scheme located within a high crime rate area (Ibrahim & Maimun, 2022), high student occupancy with tenancies in family neighborhoods (Horgan, 2020) and housing scheme with poor security design (Teck-Hong, 2011). These factors pose a potential risk to personal and familial safety. Location accessibility and physical distance are more significant in influencing purchasing decisions because living far from job centers is more expensive (Olanrewaju & Woon, 2017), facilities, e.g., hospitals, schools (Rahim et al., 2019) and retail precincts (Kasim & Tey, 2022). In addition, there is structural stigma, also known as institutional stigma. Developers' reputations are vital in attracting buyers (Rahim et al., 2019). Potential house buyers are a variety of developers with poor track records in delivering properties on schedule and new launches at higher prices than nearby similar properties (Rahim et al., 2019). Another institution is a local authority responsible for the planning permission approval on an area of development (Said et al., 2017). Apart from that, the housing site also gives more probability to the creation of property stigma whereby the housing site is ex-mining land, located in the flood zone area and close to the industrial zoning area (Zhuang et al., 2016) which is believed the house adjacent to an industrial area. The house will experience rapid building obsolescence.

### *2.4 Phenomenon Stigma*

Phenomenon stigma refers to the physiological effects caused by adverse circumstances, which in turn influence the value or reputation of property (Said et al., 2017). This perception will influence the decision of the homebuyers when purchasing the property. For example, houses with murder, unnatural death, haunted (Gourley, 2016), past flood incidents, landslide phenomena (Adzhar et al., 2021), and former abandoned housing projects (Ibrahim & Maimun, 2022). Therefore, if the prospective buyer becomes aware of such stigmas, they will certainly decline to purchase a property in the residential area.

### *2.5 Research Model Development*

Before this study, no previous research was conducted on the stigmatized aspect of property overhang. Hence, this study tries to model the relationship to identify the stigmatized dimensions in the case study area.

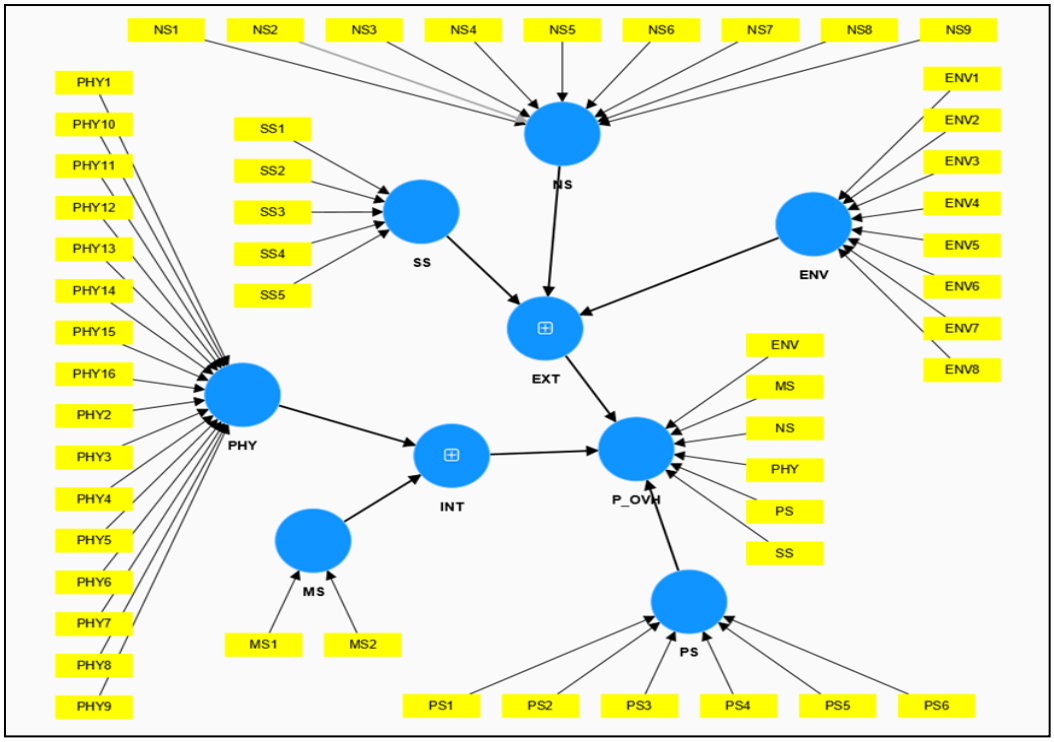


Fig. 1. Research Model
*(Source: Author, 2023)*

Figure 1 shows the research model of this study. The literature review on the stigmatized dimension of property value has formed a model that can incorporate the property overhang in investigating the purchaser's perspective towards property overhang. Generally, this study has identified three (3) primary constructs of the stigmatized dimension that contribute to the property overhang: external, internal, and phenomenon stigma. The indicator variables are shown in Table 1. The research model development will lead to three (3) hypotheses:

H1: External Stigma has a positive and significant relationship with Property Overhang.
H2: Internal Stigma has a positive and significant relationship with Property Overhang.
H3: Phenomenon Stigma has a positive and significant relationship with Property Overhang.

## 3.0 Methodology

This section presents the research methodology for developing a model using stigmatized property dimensions on Clio2 Residence, a strata residential scheme in Putrajaya. The samples were tested using the Partial Least Square Structural Equation Model (PLS-SEM) technique (formative-formative measurement model) to demonstrate the relationship between property stigma variables and their impact on property overhang issues. It enables estimating complex models with many constructs, indicator variables, and structural paths without imposing distributional assumptions on the data (Hair et al., 2017).

This study focuses on the purchaser's perspective of the Clio2 Residences. Questionnaires were sent to the purchasers of Clio2 Residence. In total, the study managed to obtain 35 completed questionnaires from the respondents. The minimum sample size for PLS-SEM analysis is 30 samples (Hair et al., 2017). Therefore, the number of samples in this study is considered adequate for analysis. The data were collected using a self-administered questionnaire developed using Google Forms and distributed via the online WhatsApp group community. This study relies heavily on online approaches to data collection since it can be easily distributed, monitored, and managed. The questionnaire uses a five-point Likert scale ranging from Strongly Disagree (1) to Agree (5) Strongly. In this study, two types of software applications are used for data analysis, i.e., IBM SPSS Statistics Version 28 and SmartPLS Version 4. Table 1 describes the constructs and indicators used for the PLS-SEM analysis.

Table 1: Indicator Variable

| CODE | CONSTRUCT / INDICATOR |
|---|---|
| ***ENV*** | ***Environmental*** |
| ENV1 | Dumping site (Ogban & Akujuru, 2016) |
| ENV2 | Groundwater contaminated by chemicals (Hajnal, 2017) |
| ENV3 | Odor nuisance (Mccluskey & Rausser, 2003) |
| ENV4 | Environmentally friendly (Mccluskey & Rausser, 2003) |
| ENV5 | Agencies Nuclear (Leiss, 2013), |
| ENV6 | High-voltage power line cable (Hajnal, 2017) |

| | |
|---|---|
| ENV7 | Airport (Hajnal, 2017) |
| ENV8 | Railway line (Hajnal, 2017) |
| | |
| ***NS*** | ***Neighbourhood*** |
| NS1 | Crime area (Ibrahim & Maimun, 2022) |
| NS2 | Students renting in the neighborhood (Horgan, 2020) |
| NS3 | No sense of security (Teck-Hong, 2011) |
| NS4 | Distance to government office (Kasim & Tey, 2022) |
| NS5 | Distance to hospital (Rahim et al., 2019) |
| NS6 | Distance to the sports centre (Kasim & Tey, 2022) |
| NS7 | Distance to school (Rahim et al., 2019) |
| NS8 | Distance to the shopping mall or retail area (Kasim & Tey, 2022) |
| NS9 | Assess to public transport (Rahim et al., 2019) |
| | |
| ***SS*** | ***Structural Stigma*** |
| SS1 | The developer has a bad reputation (Rahim et al., 2019) |
| SS2 | The developers set expensive house prices (Rahim et al., 2019) |
| SS3 | Ex-mining land (Zhuang et al., 2016) |
| SS4 | Flood zone area (Said et al., 2017). |
| SS5 | Industrial zoning area (Zhuang et al., 2016) |
| ***PS*** | ***Phenomenon Stigma*** |
| PS1 | Haunted (Gourley, 2016) |
| PS2 | Murder (Gourley, 2016) |
| PS3 | Unnatural death (Gourley, 2016) |
| PS4 | Flood phenomenon (Adzhar et al., 2021) |
| PS5 | Landslide phenomenon (Adzhar et al., 2021) |
| PS6 | Abandoned project (Ibrahim & Maimun, 2022) |
| | |
| ***MS*** | ***Minimal Stigma*** |
| MS1 | Housing tenure (Cheng & Ling, 2023) |
| MS2 | Small land area (Cradduck & Warren, 2019) |
| | |
| ***PHY*** | ***Physical Stigma*** |
| PHY1 | Fungal attack (Cradduck & Warren, 2019) |
| PHY2 | Aesthetic view restriction (Hajnal, 2017) |
| PHY3 | Age of building or dilapidated building (Cradduck & Warren, 2019) |
| PHY4 | Small built-up area (Said et al., 2017) |
| PHY5 | Poor quality of flooring type (Teck-Hong, 2011) |
| PHY6 | Poor dimension for ceiling height (Teck-Hong, 2011) |
| PHY7 | Low-quality of building material (Cradduck & Warren, 2019) |
| PHY8 | Small living area (Mccluskey & Rausser, 2003) |
| PHY9 | Building concept (Rahim et al., 2019) |
| PHY10 | The number of bedrooms (Mccluskey & Rausser, 2003) |
| PHY11 | Bedroom's size (Kassim & Tey, 2022) |
| PHY12 | Total number of storeys (Cheng & Ling, 2023) |
| PHY13 | Car park (Olanrewaju & Woon, 2017) |
| PHY14 | Facilities (Mccluskey & Rausser, 2003) |
| PHY15 | Swimming pool (Rahim et al., 2019) |
| PHY16 | Property management (Rahim et al. 2019) |
| | |
| ***P_OVG*** | ***Property Overhang*** |
| ***EXT*** | ***External Stigma*** |
| ***INT*** | ***Internal Stigma*** |
| ***PS*** | ***Phenomenon Stigma*** |

*(Source: Author,2023)*

## 4.0 Findings

This section discussed the results obtained from the frequency and PLS-SEM analysis techniques. Firstly, the frequency analysis analyzed the respondents' backgrounds. Secondly, the PLS-SEM results were discussed from the measurement model to the structural model. This analysis was used to develop the structural model that shows the relationship between purchasers' perspectives towards the stigmatized property dimension.

### *4.1 Respondent Background*

Table 2 displays the demographic information of 35 respondents who have purchased Clio2 Residence. The respondents were selected among the purchasers of the Clio2 Residence. This study also gathers data on the purpose of buying the Clio2 Residence and how long they stay in this locality. The data were analyzed using a descriptive approach since it is straightforward and easily understood by the reader (Jasimin & Ali, 2015). The aim was to investigate the user experience of the stigma found at Clio2 Residence. This study aims to fill the gap by Said et al. (2017), whereby they are studying stigma from the expert's opinion and, in line with the definition of Stigma (Bell, 2016), said that stigma can never be found until it can be experienced by itself.

Table 2: Respondent Background

| No. | Respondent Profile | Criteria | | No. | (%) |
|---|---|---|---|---|---|
| 1 | Education | Diploma or Technical Certificate | | 2 | 5.7 |
| | | Bachelor Degree | | 17 | 48.6 |
| | | Master Degree | | 13 | 37.1 |
| | | PHD | | 3 | 8.6 |
| | | | Σ | 35 | 100 |
| 2 | Purpose Ownership | Investment | | 6 | 17.1 |
| | | Living | | 27 | 77.1 |
| | | Weekend House | | 2 | 5.7 |
| | | | Σ | 35 | 100 |
| 3 | Period of Living | Less than 1 year | | 3 | 8.6 |
| | | 1 Year | | 5 | 14.3 |
| | | 2 Year | | 24 | 68.6 |
| | | 3 Year | | 3 | 8.6 |
| | | | Σ | 35 | 100 |
| 4 | Race | Malay | | 26 | 74.3 |
| | | Chinese | | 9 | 25.7 |
| | | | Σ | 35 | 100 |
| 5 | Age | 30 year - 39 year | | 21 | 60 |
| | | 40 year - 49 year | | 8 | 22.9 |
| | | 50 year - 59 year | | 4 | 11.4 |
| | | 60 years old and above | | 2 | 5.7 |
| | | | Σ | 35 | 100 |

*(Source: Author,2023)*

*4.2 Results from the PLS-SEM Analysis*

The data were examined to check on the issues of missing data, suspicious and inconsistent response patterns, outliers, and normality. Then, the research proceeds to the measurement and specification of the structural model. For the formative model, there is a need to conduct the convergent validity test. The analysis results showed that the path coefficient for convergent validity between all variables is more than 0.8, which means all evaluated formative constructs achieved a sufficient level of convergent validity. Therefore, all variables have contributed to its intended content.

4.3 *Formative Measurement Model Evaluation*

There are four (4) procedures to examine the constructs, namely:

Table 3: Measurement Indicator

| Steps | Measure | Indicator |
|---|---|---|
| 1 | Variance Inflation Factor (VIF) | < 5.0: remain |
| 2 | Outer Weigh | > 0.5 : remain |
| 3 | T-Value | > 1.65: remain |
| 4 | Outer Loadings | > 0.5: remain |

*Source: (Hair et al., 2017)*

Table 3 presents the steps to examine the construct through all measures to make sure the construct is suitable for the subsequent analysis. The aim was to determine the suitable indicator for keeping or deleting from the measurement model. Indicators shall remain or be removed according to their significance level (Hair et al., 2017). Initially, indicators ENV5 and ENV8 were removed since it produced high VIF. Table 4, Table 5, and Table 6 exhibit several constructs that were removed from the measurement model and show the significant value of formative construct measurement.

Table 4: External Indicators

| Construct | Weight | t-value (One-tailed) | Significance | VIF | Outer Loadings | Result |
|---|---|---|---|---|---|---|
| ENV1 | 0.201 | 3.093, | Significance | 2.387 | 0.656 | Remain |
| ENV2 | 0.276 | 6.329, | Significance | 3.25 | 0.714 | Remain |
| ENV3 | 0.262 | 4.574, | Significance | 2.52 | 0.676 | Remain |
| ENV4 | 0.209 | 3.916, | Significance | 3.474 | 0.744 | Remain |
| ENV6 | 0.303 | 5.227, | Significance | 1.747 | 0.783 | Remain |
| ENV7 | 0.169 | 2.452, | Significance | 3.991 | 0.596 | Remain |
| NS1 | 0.258 | 1.452, | Not Significance | 2.347 | 0.699 | Remain |
| NS2 | 0.242 | 1.473, | Not Significance | 4.532 | 0.746 | Remain |
| NS3 | 0.092 | 1.252, | Not Significance | 1.798 | 0.437 | Remove |
| NS4 | -0.155 | 1.182, | Not Significance | 3.669 | -0.46 | Remove |
| NS5 | -0.25 | 1.342, | Not Significance | 1.924 | -0.65 | Remove |
| NS6 | -0.26 | 1.431, | Not Significance | 1.748 | -0.721 | Remove |
| NS7 | -0.123 | 1.065, | Not Significance | 3.976 | -0.42 | Remove |
| NS8 | -0.18 | 1.167, | Not Significance | 2.299 | -0.5 | Remove |
| NS9 | -0.107 | 0.876, | Not Significance | 7.301 | -0.33 | Remove |
| SS1 | 0.173 | 2.663, | Significance | 1.318 | 0.57 | Remain |
| SS2 | 0.045 | 0.352, | Not Significance | 3.711 | -0.077 | Remove |
| SS3 | 0.313 | 8.264, | Significance | 6.182 | 0.941 | Remain |
| SS4 | 0.334 | 11.967, | Significance | 8.751 | 0.94 | Remain |
| SS5 | 0.326 | 8.210, | Significance | 4.346 | 0.909 | Remain |

*(Source: Author,2023)*

Table 5: Internal Indicators

| Construct | Weight | t-value (One-tailed) | Significance | VIF | Outer Loadings | Result |
|---|---|---|---|---|---|---|
| PHY1 | 0.010 | 0.368 | Not significance | 2.098 | 0.083 | Remove |
| PHY2 | 0.111 | 5.266 | Significance | 4.002 | 0.688 | Remain |
| PHY3 | 0.106 | 7.192 | Significance | 3.872 | 0.682 | Remain |
| PHY4 | 0.106 | 4.224 | Significance | 2.937 | 0.641 | Remain |
| PHY5 | 0.051 | 2.034 | Significance | 1.937 | 0.35 | Remain |
| PHY6 | 0.036 | 1.233 | Not Significance | 2.338 | 0.251 | Remove |
| PHY7 | 0.067 | 2.719 | Significance | 3.373 | 0.443 | Remain |
| PHY8 | 0.140 | 26.644 | Significance | 5.719 | 0.864 | Remove |
| PHY9 | 0.119 | 9.114 | Significance | 5.223 | 0.748 | Remove |
| PHY10 | 0.124 | 11.203 | Significance | 6.704 | 0.779 | Remove |
| PHY11 | 0.124 | 11.981 | Significance | 7.857 | 0.798 | Remove |
| PHY12 | 0.127 | 14.521 | Significance | 5.147 | 0.804 | Remove |
| PHY13 | 0.140 | 20.002 | Significance | 7.003 | 0.874 | Remove |
| PHY14 | 0.080 | 3.216 | Significance | 3.58 | 0.527 | Remain |
| PHY15 | 0.075 | 5.172 | Significance | 2.748 | 0.598 | Remain |
| PHY16 | 0.014 | 0.53 | Not Significance | 3.942 | 0.113 | Remove |
| MS1 | 0.425 | 2.025 | Significance | 1.064 | 0.623 | Remain |
| MS2 | 0.807 | 12.522 | Significance | 1.064 | 0.911 | Remain |

*(Source: Author,2023)*

Table 6: Phenomenon Indicators

| Construct | Weight | t-value (One-tailed) | Significance | VIF | Outer Loadings | Result |
|---|---|---|---|---|---|---|
| PS1 | 0.188 | 6.304 | Significance | 2.596 | 0.762 | Remove |
| PS2 | 0.169 | 4.4 | Significance | 10.881 | 0.815 | Remove |
| PS3 | 0.165 | 4.846 | Significance | 13.588 | 0.875 | Remove |
| PS4 | 0.245 | 16.993 | Significance | 4.097 | 0.903 | Remain |
| PS5 | 0.215 | 5.168 | Significance | 2.412 | 0.758 | Remain |
| PS6 | 0.214 | 9.744 | Significance | 4.632 | 0.891 | Remain |

*(Source: Author,2023)*

### *4.4 Structural Model Evaluation*

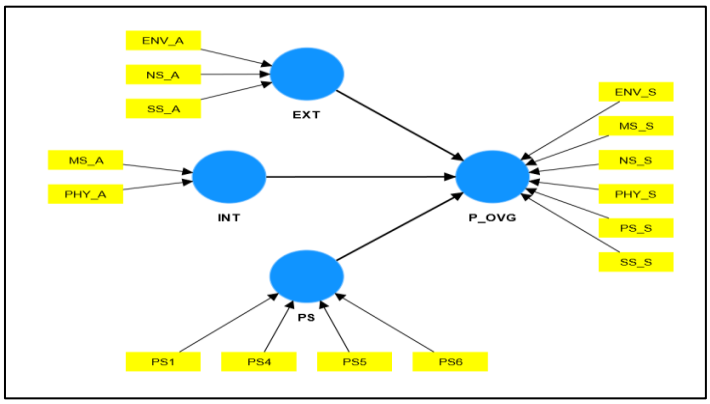


Fig. 2. Final Structural Model
*(Source: Author, 2023)*

Figure 2 shows the final structural model. In this model, ENV, NS, SS, MS and PHY constructs were transformed into indicators under EXT and INT constructs under the HOC approach. Next, the structural model evaluation was conducted, which consists of three procedures, namely, collinearity assessment, structural path coefficient, hypothesis testing, and coefficient of determination (adjusted *R square*), to assess the relationship between exogen and endogen latent variables.

Table 7: Summary of the VIF value for the exogenous latent variables.

| **Endogen Construct** | **Exogen Construct** | **VIF** |
|---|---|---|
| Property Overhang (P_OVG) | External (EXT) | 2.193 |
| | Internal (INT) | 1.625 |
| | Phenomena (PS) | 1.609 |

*(Source: Author,2023)*

Table 7 shows the collinearity assessment results using VIF, which recommends that all predictors in the structural model were free from collinearity problems. VIF values above 5 or 10 are typically problematic and may involve further investigation or remediation. Afterward, the bootstrapping technique using 5,000 bootstrap samples to weigh the indicators was conducted to assess the structural path coefficient. Therefore, this technique will determine the significance and relevance between endogen and exogen constructs for hypothesis testing.

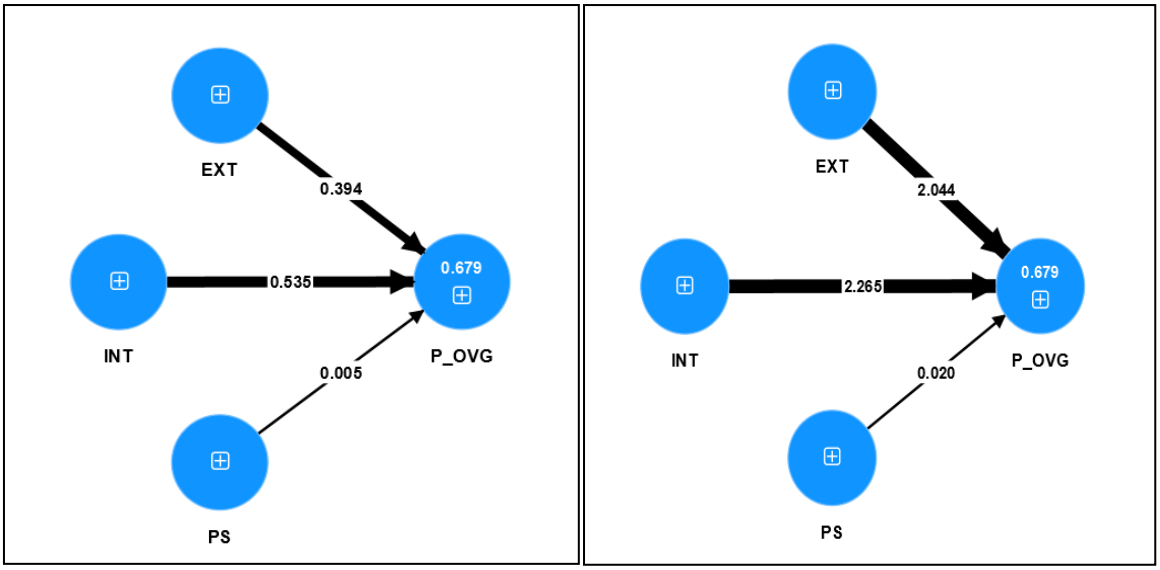


Fig. 3. Structural Model Coefficient Value (left) and Bootstrapping results t-values (right)
*(Source: Author, 2023)*

Figure 3 shows the PLS algorithm results of a positive relationship for INT, EXT, and PS with P_OVG, denoted by the positive coefficient values of 0.535, 0.394, and 0.005 correspondingly. Two constructs exhibited a significant relationship, with the highest t-values of 2.265 for INT, followed by EXT with t-values of 2.044, significant at a p-value greater than 10 percent. Construct PS, with t-values of 0.020, demonstrated an insignificant relationship with P_OVG. The structural model also produced an adjusted r2 of 0.679, moderately representing a 67.9 percent variance in explaining the stigmatized dimension of Clio2 Residence. Table 7 shows the results of the path coefficient and t-values of the structural model.

Table 8: Path Coefficient and T-Values for all constructs

| Hypothesis | Relationship | Coefficient Value | t-value | Result |
|---|---|---|---|---|
| H1 | EXT → P_OVG | 0.394 | 2.044* | Accept |
| H2 | INT → P_OVG | 0.535 | 2.265* | Accept |
| H3 | PS → P_OVG | 0.005 | 0.02 | Reject |

*p<0.10; **p<0.05; ***p<0.01; NS = Not Significant
*(Source: Author,2023)*

## 5.0 Discussion

Table 8 shows two out of three hypotheses were accepted based on the result of t-values using PLS-SEM bootstrapping estimation. Firstly, it was also hypothesized that the External Stigma (EXT) factor significantly influences the property overhang (H1). This hypothesis was also accepted based on the result of the t-values in the bootstrapping technique. It can be inferred that the external stigma construct is strongly linked to the property stigmatized dimension and will influence the property overhang. The positive relationship reflects that, as long as this stigma continues, overhang units will remain challenging to sell. Therefore, the respondents trust that external stigma contributes to people's refusal to buy the strata units in this high-rise residential scheme. The result is consistent with the findings by Rahim et al. (2019) that External Stigma significantly influences the relationship between property stigma and property overhang.

Secondly, it was hypothesized that Internal Stigma (INT) significantly influences the property overhang (H2). Based on the results, this hypothesis was accepted. As compared to other variables, INT exhibits more significance as it has the highest t-values among others. Based on the result, INT proves that the purchaser's experience is more precise than the experts' opinions as they are only experts and giving their opinions based on their professional experience but not the user experience. It can be inferred that the internal stigma construct is strongly linked to the property stigmatized dimension and will influence the property overhang. The positive relationship reflects that overhang units will remain challenging to sell as long as this stigma continues to exist. Therefore, the respondents trust that internal stigma contributes to people's refusal to buy houses in this housing scheme. The result is consistent with the finding by Cradduck and Warren (2019) that Internal Stigma significantly influences the relationship between property stigma and property overhang.

Lastly, the third hypothesis stipulated that the Phenomenon Stigma (PS) is significant in influencing the property overhang (H3). Results of the analysis reveal that this construct has no significant relationship with the stigmatized dimension construct. Most of the respondents believed the phenomenon of stigma in stigma categories was less significant since the Clio2 Residence is not an abandoned project in fact, the housing development was completed within the stipulated time frame. Besides that, the respondents also

believed that Clio2 Residence had been built in an area that is not zoned as a flood area, and also, in this area, there has never been a landslide event. Other than that, respondents rejected the argument that this area or the overhang unit is haunted and that there has never been an issue of murder. It is too early to conclude that stigma is not a significant factor affecting property overhang since this study is preliminary and only employed one case study in Selangor. However, this study needs further in-depth investigation by surveying more selected housing schemes from overhang residential listings in Selangor to validate the stigmatized dimension model towards property overhang.

## 6.0 Conclusion and Recommendations

Stigma was found to have an impact on property value. Any property attached to stigma will have a different market value than a similar property. This situation will dissuade potential buyers from buying the property and thus will cause the property overhang. Researchers have neglected stigmas as a contributory factor towards residential property overhang. Stigmas are expected to influence negatively the decision-making of house buyers. Considering the stigmatized dimension of property overhang can guide the government or related agencies in mitigating the stigmas, from site selection and layout design to the strata management phase. The findings of this research show that only external and internal stigma are significant. These findings are limited to only one sample case study as a preliminary study, and the results are based on one case study. The findings may vary according to the property type, geographical area, layout design, site characteristics, surrounding neighbourhood features, etc. Extending this research by using more overhang projects and adding more variables will give a better picture of the impact of stigmas on the property overhang issue

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## Paper Contribution to Related Field of Study

Local Authorities can use this model as one of the elements that applicants should consider when developing a new development scheme in a specific area. Through this model, an action plan can be made through the symptoms of stigmas, and responsible bodies or departments can be directly highlighted to strengthen their policy and procedures. Identifying the root causes of property overhang from the stigma dimension can help the government deal with the issue of overhang apart from the continuous giving of rebates, including the giving of rebates on stamp duty, which impacts government revenue.

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