

STIGMA AND ITS EFFECTS ON PROPERTY MARKETABILITY: A SYSTEMATIC LITERATURE REVIEW

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Abstract: *Stigmatized property is a global issue which has gained continuous attention since the 1990s. This type of property has generally generates a negative perception from the public and the stigma may causes a property market price to fluctuate from time to time. Every real estate agents or negotiators will have the possibility to involve in property listings involving stigmatized property and they may also face some difficulties in marketing them. Hence, this paper has carried out a systematic review on the types of stigma and the effects of stigmatized properties. The aim of this paper is to analyse the existing literature on marketability issues towards stigmatized properties. This paper performed a systematic literature search guided by the PRISMA Statement review method. Reviews from the relevant databases have resulted into three (3) main themes which are physical, non-physical, and psychological stigma, and have further produced a total of seven (7) sub-themes. It has been discussed that stigma may occur and the effect towards the property value is depended on the focus, belief, and culture of that certain location. Understanding the effects of the stigma may assist the agents involved in the stigmatized market and also guide the owners of stigmatized property in the preparation of marketing those types of properties.*

Keywords: *Stigmatized Property, Marketability Issues, Property Value, Stigma Effect*

Introduction

Buying the right property, especially houses is crucial as it provides shelter, a safe haven or even can be a way to show others what they are worth. However, the functions of houses have expanded over time. People nowadays have become more aware and realize that property does not only provide shelter but also as investment purposes. Investment property happens when the prospective buyer has purchased a property with the intention of receiving a return either through rental income, from future resale, or both.

Daly et al. (2003) stated that a better understanding prediction of decision making in the real estate markets would be accomplished when there is a better knowledge of factors that would influence property-buying behaviour (Saw Lip Sean & Tan Teck Hong, 2014). If the quality of

the property is defected either physically, non-physically or psychologically, it could affect the value of the property and result in a stigma. Besides, the defected property could even have a lower rental price than a newly constructed property (Qin, 2008).

Despite the various definitions of stigmatized property across the world, previous studies have agreed that stigmatized property generates negative perception from the public. Thus, a comprehensive study on the factors and effects of stigmatized property are necessary to assist the agents and related parties involved in a stigmatized market. In this study, all papers reviewed are scoped to include those published between 2012 and 2020.

Methodology

The method used for retrieving articles related to stigmatized property is discussed in this section. This study used PRISMA as the guidance, which uses Scopus and Web of Science databases as the resources to run the systematic review, considers the eligibility and exclusion criteria, goes through steps of the systematic review process, and assesses the data abstraction and analysis.

PRISMA Statement, also known as Preferred Reporting Items for Systematic Review and Meta-Analyses is normally used in the environmental management field. Among the advantages of this method includes specifying research questions that allow for systematic research, identifying inclusion and exclusion requirements, and attempting to review a large database of scientific literature within a specific period.

In terms of the resources, this study adopts two databases which are Scopus and Web of Science as suggested by Xio and Watson (2019) and Younger (2010) to ensure the maximization of resources, allowing rigorous and effective string searching, and controlling the journal quality.

Through the PRISMA method, some eligibility and exclusion criteria are identified in line with its objective which focuses on stigmatized property. This method also helps to avoid confusion, difficulty, and ensure uniformity of the review. The criteria are summarized as in Table 1.

Table 1: The Inclusion and Exclusion Criteria

Criterion	Eligibility	Exclusion
Literature type	Journal (research article) and dissertation	Journals (systematic review), book series, book, chapter in book, conference proceeding
Language	English	Non-English
Time Line	2012 – 2020	< 2012

There are four stages involved in the systematic review process where it was performed in March 2021. The first stage established the keywords that would be used in the search string. Keywords that are similar and related to stigmatized property and marketability issues were used, apart from relying on previous studies and thesaurus (Table 2). After careful screening, any duplicated articles were removed.

Table 2: The Search String Used for the Systematic Review Process

Database	Keywords Used
Scopus	TITLE-ABS-KEY(("Market* Problem*" OR "Market* Issue*" OR "Propert* Market*" OR "Propert* Value" OR "Hous* price") AND (stigmati*ed OR psycholog* OR "stigma effect*" OR contaminate* OR Abandon* OR "High Voltage" OR Noise OR "View Restriction" OR Murder OR Suicide OR Homicide OR Hunting) AND (property* OR building* OR land*))
Web of Science	TS= (("Market*-Problem*" OR "Market*-Issue*" OR "Propert*-Market*" OR "Propert*-Value" OR "Hous*-price") AND (stigmati*ed OR psycholog* OR "stigma-effect*" OR contaminate* OR Abandon* OR "High-Voltage" OR Noise OR "View-Restriction" OR Murder OR Suicide OR Homicide OR Hunting) AND (property* OR building* OR land*))

The second stage was screening where a total of 206 out of 254 articles eligible to be reviewed were removed. Next, at the eligibility stage, the full papers are accessed. A total of 14 articles were excluded as they did not concentrate on the marketability issues of stigmatized property. Lastly, the review resulted in a total of 34 articles which will be used for the qualitative analysis. The reviews indicated that the stigmatized properties are diversified into different factors, according to different countries and properties, especially the one that attached with physical stigma, is significantly affecting its marketability including the property value.

Main Results

The review resulted in three (3) main themes and seven (7) sub-themes related to marketability of stigmatized properties. The three main themes are physical stigma (with two sub-themes), non-physical stigma (with three sub-themes), and psychological stigma (with two sub-themes). The sub-themes are namely abandoned and under construction; contaminated land; high voltage power line; noise; view restriction; murder or suicide; and hunting or phenomena.

A total of eleven (11) studies focused on property with physical stigma (Bartke, 2011; Chang & Li, 2020; Han, 2013; 2017; 2019; Said et al., 2016; Taylor et al., 2016; Giudice et al., 2020; Liou et al., 2017; Tonin & Turvani, 2014; and Zabel & Guignet, 2012), eighteen (18) studies concentrated on property with non-physical stigma (Aranda et al., 2020; Batog et al., 2019; Belej et al., 2020; Callanan, 2016; 2015; Geng et al., 2015; Hajnal, 2017; Hajnal, 2019; Jain et al., 2019; Lozhkina et al., 2020; Mense & Kholodilin, 2014; Polytechnis & Egbenta, 2016; Szopinska et al., 2020; Wadley et al., 2018; Wyman & Motherpe, 2020; Zheng et al., 2020; and Chasco & Le Gallo, 2015), and seven (7) studies focused on property with psychological stigma (Alias et al., 2014; Bering et al., 2017; Chang & Li, 2018; Klimova & Lee, 2014; Sadayuki, 2019; and Tao & Zhao, 2019).

Regarding years published, eight articles were published in 2020, five articles were published in 2019, two articles were published in 2018, and eighteen articles were published between year 2012 to 2017. Table 3 shows the summary of the findings.

Physical Stigma

This sub-section concentrates on the first main theme which is property with physical stigma. Here, the effects of physical stigma toward property marketability and its value is discussed. This type of property stigma represents a property that has a tangible physical asset defect (NST, 2012) either on the base or the structure of the property. From this review, physical stigma can be divided into two types which are abandoned or under construction, and contaminated land. An abandoned property can be defined as a waste of a housing resource (Han, 2013) which may also impact the nearby property value (Han, 2017). For example, a study by Giudice (2020) has highlighted that the reduction in the market value of abandoned Steel mill area of Bagnoli can even be equal to 28.63% approximately.

Furthermore, contaminated land refers to sites that are attached with hazardous materials concentrations, such as oil, above baseline and/or naturally occurring levels. For instance, a study by Zabel and Guignet (2012) mentioned that the effect of leaking underground storage tank (LUST) land may not significantly affect nearby property values, however, the more severe sites may cause reduction of surrounding property values by more than 10%. For commercial properties with unknown environmental contamination, the neighboring housing values can reduce at 2.5% by average (Taylor, 2016). This shows that the effect of abandoned property and contamination has a significant effect on the value for the subject property itself and the neighbouring properties (depending on the severity).

Non-physical Stigma

The second main theme is non-physical stigma which refers to property near high voltage power lines (HVPL), property with noise nuisance, and property with view restriction. Basically, when the HVPL is in place, the effect on value is reduced to the nearby properties (Callanan, 2016). Besides that, the majority of the property's owners in New Zealand are aware that the HVPL may affect their property value and 60% of them believe if the towers and lines were removed, the property value can increase by 10% (Callanan, 2015). This situation may cause some difficulties to the property valuers as there is a financial interest by the power suppliers, some potential buyers may believe about health effects of the electromagnetic field, and the valuers have to expect the buyer's attitude also, to value the effect.

Noise nuisance can happen when the property is near a busy highway, airport, or high-speed rail station. A study by Szopinska (2020) found that the value of an apartment in a noisy zone that is near a highway is only 1.9% lower than the value of an apartment located in a quiet zone. The difference is not statistically significant but the result based on the linear regression in Szopinska's study (2020) shows that there is a relationship between the price of the property and the height of the building from the noise source. In addition, the value of houses near airports can be reduced to 9.6% on average within a slant distance of 3km from a flight path (Mense & Kholodilin, 2014). For property near a high-speed rail station, house prices may decline depending on the distance between the house and the rail station. However, most researchers opined that homeowners should be compensated for the negative effects of high-speed rail stations that they have to deal with (Geng, 2015).

In terms of the issue of view or panorama restriction, it has been discussed by Hajnal (2019) where they highlighted that this condition may result in stigmatization and the effect on the market value of the properties is significant. The result shows an unanimous opinion on the fact that the value of property with partial view restriction caused by a mobile phone tower can be reduced by 14.96% to 18.6%. Along with commercial property like hotels around

Mediterranean Sea, the price for rooms with a view were not significantly different and were estimated to be about 10% higher than rooms with no view specification (Fleischer, 2012). This stigma somehow can have no significant additional value depending on the types of view and the regions of the property located.

Psychological Stigma

The third main theme is psychological stigma which refers to property that has an awful history either from murder, suicide, hunting, or phenomena. It is justifiable that property, especially houses that have psychological stigma will be less popular than a new house (Alias et al., 2014). In Hong Kong, housing units which experienced any traumatized incidents like unnatural death show a significant value drop of 25% and 4.5% for nearby units on the same floor (Chang & Li, 2018). However, housing units in Japan experience 10% reduction of value immediately after the unnatural incident occurred but the stigma will improve gradually over time and will be forgotten after approximately 7 to 8 years (Sadayuki, 2019). Alias et al. (2014) highlighted that marketing this kind of property may be challenging for the agents and the owner of the property as they will face a risk where the prospective tenants will withdraw the agreement once they acknowledge the stigma attached to the property.

Table 3: A Summary of Previous Studies Findings

Authors	Physical stigma		Non-physical stigma			Psychological stigma	
	AUC	CL	HVPL	N	VR	MS	HP
Alias <i>et al.</i> (2014) – Malaysia						/	
Arias-Aranda <i>et al.</i> (2020) – Spain			/				
Batog <i>et al.</i> (2019) – Poland				/			
Belej <i>et al.</i> (2020) – Poland				/			
Bering <i>et al.</i> (2017) – New Zealand						/	
Callanan (2016) – New Zealand			/				
Callanan (2015) – New Zealand			/				
Callanan (2014) – New Zealand			/				
Chang & Li (2020) – China		/					
Chang & Li (2018) – Hong Kong						/	
Chasco & Le Gallo (2015) – Spain				/			
Geng <i>et al.</i> (2015) – China				/			
Giudice <i>et al.</i> (2020) – Italy	/						

Hajnal (2017) – Hungary		/	
Hajnal (2019) – Hungary			/
Han (2019) – US	/		
Han (2017) – US	/		
Han (2013) – US	/		
Jain <i>et al.</i> (2019) – Zambia		/	
Klimova & Lee (2014) – Australia			/
Liou <i>et al.</i> (2019) – Taiwan	/		
Lozhkina <i>et al.</i> (2020) – Russia		/	
Mense & Kholodilin (2014) – Germany		/	
Ukpevbo & Egbenta (2016) – Nigeria		/	
Said <i>et al.</i> (2016) – Malaysia	/		
Sadayuki (2019) – Japan			/
Szopinska <i>et al.</i> (2020) – Poland		/	
Tao & Zhao (2019) – US			/
Taylor <i>et al.</i> (2016) – US	/		
Tonin & Turvani (2014) – Italy	/		
Wadley <i>et al.</i> (2018) – Australia		/	
Wyman & Motherpe (2020) – US		/	
Zabel & Guignet (2012) – US	/		
Zheng <i>et al.</i> (2020) – China		/	
<p>AUC = Abandoned or Under Construction, CL = Contaminated Land, HVPL = High Voltage Power Line, N = Noise, VR = View Restriction, MS = Murder or Suicide, HP = Hunting or Phenomena</p>			

From the table above, the findings can be grouped into five different continents namely Asia, Europe, Oceania, North of America, and Africa. Here, the case of physical stigma mostly happened and focused in the North of America countries, especially the United States (US) as the US residents have major concern on the properties with perceptible defects. For cases with non-physical stigma, this stigma is likely to happen and has been concerned more in the Europe countries involving Spain, Poland, Italy, Hungary, and Germany where the issues of HVPL and

noise nuisance is popular among the residents. Lastly, the review shows that the issue of psychological stigma is mostly focused by the residents in Asia countries including Malaysia, Hong Kong, and Japan as Asian cultures is commonly known with many superstitious beliefs that may play important role in their daily decisions.

Conclusion

This systematic review has highlighted the importance of acknowledging the marketability condition of a certain property towards its value. It has been discussed that stigma may occur and depended on the focus, belief, and culture of that certain area. The effects of stigma towards property value can be minimised if the property agents and related parties, including the owner of the stigmatized property, understand the preparation in managing and marketing those types of properties. However, the findings of this study may not represent the global property stigma issues due to the limited literature that only imply on few continents. In addition, it is also suggested that future research should embark on a qualitative method to allow a more in-depth analysis and extensive explanations on stigmatized properties.

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