

HOSTED BY



ELSEVIER

Gulf Organisation for Research and Development

International Journal of Sustainable Built Environment

ScienceDirect
www.sciencedirect.com

Review Article

Critical review of hedonic pricing model application in property price appraisal: A case of Nigeria

Rotimi Boluwatife Abidoye*, Albert P.C. Chan

Department of Building and Real Estate, The Hong Kong Polytechnic University, Hung Hom, Hong Kong

Received 2 March 2016; accepted 8 February 2017

Abstract

The hedonic pricing model (HPM) technique has been widely adopted for property price appraisal by scholars and professionals in different real estate markets around the world. Despite its popularity in this research domain, the trend of the application of HPM in Nigeria, being the largest economy in Africa has not been documented. This study, therefore, aims to critically review the extant literature of the HPM property price appraisal related articles published in Nigeria. Papers published in this research area were retrieved from online databases and search engines. The authors' contributions, authors' affiliations, the focused study areas and the annual publication trend of the articles were reviewed. The first application of HPM in Nigeria was recorded in 1986. Thereafter, there have been fluctuations in the number of annual publications. However, there have been a considerable number of articles published since 2010. The authors have largely focused on the Lagos metropolis property market as a study area. It was also found that most of the authors were university scholars and on the other side, real estate professionals have not contributed significantly to this research topic. In order to achieve a sustainable real estate practice in Nigeria, the gap between theory and practice should be bridged.

© 2016 The Gulf Organisation for Research and Development. Production and hosting by Elsevier B.V. All rights reserved.

Keywords: Hedonic pricing model; Real estate research; Property price; Lagos metropolis; Nigeria

Contents

1. Introduction	00
2. Hedonic pricing model: application to property appraisal	00
3. Application of modelling techniques to property pricing: review of the literature	00
4. Research method	00
5. Results and discussion	00
5.1. Authors' affiliation	00
5.2. Active authors	00
5.3. Annual publications	00

* Corresponding author.

E-mail address: rotimi.abidoye@connect.polyu.hk (R.B. Abidoye).

Peer review under responsibility of The Gulf Organisation for Research and Development.

5.4. Focus study area.	00
6. Conclusion and further research	00
References	00

1. Introduction

Real estate property is a composite goods. This is because the value attached to a property is dependent on many unique bundles of attributes (Rosen, 1974; Sirmans et al., 2005). The uniqueness of the stakeholders that interact in the real estate market, as well as the heterogeneous nature of real estate properties, could be attributed to the differences in the value ascribed to real estate property interest by different stakeholders (Chin and Chau, 2002; Sirmans et al., 2005). This has led to the development of a model that generates the contributory power of each of these variables to the value formation and hence, the emergence of the hedonic pricing model (HPM).

The HPM technique has been largely adopted for real estate appraisal in different real estate markets around the world to measure the contribution of property attributes, as well as other external factors could affect the value of a property (Jim and Chen, 2006; Selim, 2011). The nature of real estate property warrants the quantification of the value of each property variable to property value formation. The multiple regression analysis (MRA) which is also referred to as HPM (Lentz and Wang, 1998), can be employed to analyse the property transaction data of a submarket. By this, the utility of each of these variables is being priced by the property buyer (Malpezzi et al., 1980). The general form of HPM gives the regression estimate of each independent variable, in other words, property value is a function of the sum of both the internal and external property attributes as presented in Eq. (1) (Chin and Chau, 2002; Sirmans et al., 2005).

$$\text{Price} = f(\text{structural, locational and neighbourhood factors}) \quad (1)$$

Other analytical techniques are employed in the property price appraisal domain, however, HPM is widely used by real estate researchers (Bender et al., 2000; Babawale et al., 2012). Probably because the approach is straightforward and versatile (Chin and Chau, 2002).

Nigeria has been acknowledged as the largest economy in Africa, with a relative active real estate market (PwC, 2014). Scholars (for example, Megbolugbe, 1989; Babawale et al., 2012; Adegoke, 2014; Famuyiwa and Babawale, 2014) have conducted research on its real estate market using the HPM technique to model the property price of different submarkets. To the best of the authors' knowledge, no effort has been directed at investigating the trend and gaps in the application of HPM in published real estate studies focused on Nigeria. Therefore, this study aims at investigating the historical development of the adoption of HPM in the Nigeria's property price appraisal

domain. By this, the objectives to be pursued are to (1) ascertain the first study that adopted the HPM in Nigerian for property price appraisal and subsequently the annual publications up to date (2) establish the organisations or institutions which the studies emanated from (3) establish the contribution of the authors by presenting the highest publishing authors and (4) determine the focus (in terms of study areas) of the HPM publications in Nigeria.

Apart from this introductory part, the remaining of the paper is structured into five sections. The next section presents the historical background and application of HPM in the real estate research environment, while the second section reports the review of related studies. The third part deals with the research method adopted for the study, whereas, the preceding section presents the results and the discussion of the data analysis. The conclusion and further research is presented in the last section.

2. Hedonic pricing model: application to property appraisal

The first application of HPM to property price appraisal could be traced back to early 1920s. Although, there is no consensus as to the actual date of introduction. For instance, Colwell and Dillmore (1999) reported that Haas (1922) was the first study which employed HPM in property price appraisal research, by adopting it to value a farmland in Minnesota (United States). Similarly, Bruce and Sundell (1977) argued that the HPM technique was firstly introduced to real estate pricing research in 1924. Besides, Wallace (1926) adopted the HPM technique in appraising farmlands in the US. Ridker and Henning (1967) employed HPM for the estimation of the effect of air quality on residential property value, suggesting that this is the first application of HPM to property pricing appraisal research (Chin and Chau, 2003). However, Freeman (1979) provided a theoretical justification for

Table 1
Application of HPM in global real estate markets.

Study	Country
Adair et al. (1996)	Northern Ireland
Tse and Love (2000)	Hong Kong
Janssen et al. (2001)	Sweden
Paz (2003)	Spain
Mbachu and Lenono (2005)	South Africa
Jim and Chen (2006)	China
Cebula (2009)	United States
Ge (2009)	New Zealand
Selim (2011)	Turkey
Owusu-Ansah (2012)	Ghana
Ong (2013)	Malaysia
Mallick and Mahalik (2014)	India

Download English Version:

<https://daneshyari.com/en/article/6659553>

Download Persian Version:

<https://daneshyari.com/article/6659553>

[Daneshyari.com](https://daneshyari.com)