

## The Impact of the Pricing Strategy, Selling Price, and Time of Sale on the Ability to Sell Real Estate in Vietnam

### Author's Details:

<sup>(1)</sup>Xuan Huy Tran <sup>(2)</sup>Thi Thu Huong Nguyen <sup>(3)</sup>Phuong Linh Nguyen

<sup>(1)</sup> <sup>(2)</sup> <sup>(3)</sup>University of Economics - Technology for Industries, Vietnam

**Correspondence:** Xuan Huy Tran, 456 Minh Khai, Hai Ba Trung, Ha Noi

### Abstract:

*The objective of this article is to assess the impact of the pricing strategy, selling price, and timing of the sale on the ability to sell homes in Vietnam. Given the Vietnamese context with many characteristics of a developing country, the results show that there are many factors affecting the ability to sell houses in Vietnam. And the pricing strategy, selling price and delivery time are important factors influencing the ability to sell homes in Vietnam.*

**Keywords:** Strategy price, selling price, time to sell.

### 1. Introduction

The housing market in Vietnam in general and the HCMC housing market in particular are both small and thin housing markets and have only had meaningful developments since the 2000s (Chung et al., 2018. ) but market movements are very unpredictable (Phan Dinh Nguyen et al., 2018). Accordingly, the real estate market in Vietnam began to have the first development step in the period 1991 - 1993 with the change of economic policy in the Doi Moi period and the introduction of the 1993 Land Law that recognized the legal rights of land purchase, sale and transfer (Nguyen et al., 2014; Kim, 2007). And the type of housing developed mainly in this period is the self-built single-family house (Quang and Kammeier, 2002). However, due to poor governance of state agencies (Vinh & Leaf, 1996), nearly 80% of the private homes developed during this period in Vietnam had legal problems (Waibel et al. et al., 2007), and this caused the fledgling real estate market to fall rapidly in the period 1995-1999 when decree 18 and decree 87 on the transfer of land use rights and land rent born. It was not until the policy of allowing overseas Vietnamese to buy a house, and the housing market in Vietnam was able to get rid of the decline and increase dynamically in the 2000 - 2003 period thanks to a large amount of foreign investment (Nguyen et al., 2014). However, when the Land Law 2003 and Decree 181 / CP came into being with the policy of banning the division of plots for sale, the housing market in Vietnam once again fell into a quiet state. When the Government allowed the transfer of land use rights when infrastructure was built (Seo et al., 2018), the market immediately entered a period of hot growth 2006 - 2008. In 2008, due to the The impact of the world financial crisis and the tightening monetary policy of the Government have once again pulled the housing market into a new recession. Then, thanks to the effects of the Government's stimulus packages and the recovery of the economy, it wasn't until 2013 that the housing market stopped the decline and only started to recover from the third quarter of 2015 until now on.

From the current development status of the Vietnamese housing market, the author finds that the development demand of the Vietnamese housing market is very urgent and that investors in the market are also very responsive to development opportunities. market. However, because the market management and regulation role of the authorities in recent years has been assessed as not good, the management is mainly based on administrative and inappropriate instructions and regulations. With the law of the market, and this leads to many inadequate consequences in the management and clearance compensation, causing grievances and negative impacts on the lives of residents, in addition to creating loopholes for corruption, adversely affecting economic growth in general and the healthy development of the real estate market in particular (Phan Dinh Nguyen et al., 2018). Therefore, a study of the laws of the market and the effect of these factors on the complex relationships between the representative indices in the housing market is necessary to improve the efficiency of operations. buying - selling, consulting, and state management of the real estate market (Asabere and Huffman, 1992). However, the current situation is that studies on the housing market in Vietnam today mainly focus on

analyzing the fluctuation of the housing price factor, specifically Kim (2004) studies the effect of the degree of integration. The method of the house on the transaction price of a house in HCM, Kim (2007) studies the effect of the difference in social norms between the South (HCMC) and the North (Hanoi) like that. House prices, Chung et al (2018) apply geographic information system (GIS) to analyze the factors affecting housing prices in Hanoi and Ho Chi Minh City, similarly, Bui (2020b) Apply the hedonic model to measure the factors affecting apartment prices in Ho Chi Minh City, or as Bui (2020a) applies the ARDL (Autoregressive Distributed Lag) model to measure the effect of interest rate fluctuations on The variation in housing prices in Ho Chi Minh City, which is slightly different, Seo and Kwon (2017) study the impact of factors on the choice between individual housing and apartments of imported households. residing in HCMC. As for the behavioral strategies of buyers and sellers in the housing market, the liquidity of the housing market and the ability to sell houses in the market, many authors are not interested. Therefore, this is a limited side of research on the housing market in Vietnam.

In particular, studies on the effect on the ability to sell houses, related studies in the world (there are almost no studies in this area in Vietnam) only measure the impact in a fixed way. of factors up to sellability. Among them, factors that are of interest are measured as the relative ratio of the asking price to expected home price (Kluger and Miller, 1990; Hui et al., 2012), and house's difference from the average home (Kraimer, 1999), its value (Smith, 2010), vendor's motivation (Johnson et al., 2008), or the percentage difference of the actual asking price relative to the expected market price of a home (Cirman et al., 2015). These factors, while both found to have an effect on affordability, are only limited to measuring the static impact of these factors on the viability of homes. However, according to the author of the thesis, the longer a house's selling time becomes, the behavior of the buyer towards the house will change (Taylor, 1999), thus the impact of these factors on the ability to sell. The length of a house will vary with the length of time for sale, so it is necessary to measure the variation in the impact of these factors on the viability of a house over the length of time for sale.

Thus, given the importance of the housing market to the economy, the inconsistency between the theoretical and empirical results of the effect of the seller's listing strategy on the selling price and timing of the sale, and more broadly the effect on the viability of housing; Along with the scarcity of researches in this area in the small, thin housing markets around the world, and in Vietnam, the author conducts the research on the relationship between the seller's auction strategy. with the selling price, timing of sale, and availability of homes in the single housing market in HCMC.

## **2. Literature review**

### ***2.1. Concept of individual houses***

Based on the classification of the Vietnam Population and Housing Census (2009), housing types in Vietnam are classified into the following three basic categories: permanent houses, semi-permanent houses and temporary houses. However, these categories are difficult to accurately understand the diverse housing types in urban areas of Vietnam (Seo and Kwon, 2017). According to the classification of the United Nations Human Settlements program (United Nations Human Settlements program, abbreviated as UN-Habitat), housing in urban areas of Vietnam is classified into five categories, including: shop house alley house, villa, precarious squatter house, and apartment. In particular, the shop house and the alley house are two similar types of house, the only difference is that the ground floor of a shop house is used for commercial purposes such as opening a business store or rental business, and therefore the house The store usually has a street frontage and vice versa. According to the World Bank (WB) classification, housing in urban areas of Vietnam are also divided into five categories, including: old town house, new town house. ), villas, shelters and apartments. In particular, old townhouses and new townhouses according to the WB classification are also the classification of shops and alley houses as classified by UN-Habitat. These two types of houses have similar structures are narrow - long, 3-4 floors on average and especially fill almost 100% of the land area, so Seo and Kwon (2017) combine the two types. This house becomes a single category, called a row house or tube house. Therefore, in their research, Seo and Kwon (2017) divide houses in HCMC into single-family houses, including temporary houses, tube houses and villas; and multi-famil houses are apartment units.

From the above definitions, separate houses in the Ho Chi Minh City area are identified with three types of housing: villa houses, townhouses, and temporary houses. However, in the research scope of this thesis, in order to limit the discrepancy in the research data, the temporary house will be removed from the scope of the study, so the object of the study is the adjacent house. tube houses and villas in the urban area of Ho Chi Minh City.

## **2.2. Some concepts about the price of a house**

### **Sale price**

According to the US real estate listing (MLS) service (MLS - Multiple listing service), the listing price is also the price that the seller asks for their house for sale (asking price). , and this is exactly the amount listed on the property listing service.

In the scope of this thesis, the author determines the asking price of the house as the price announced by the seller (or the seller's broker) to the buyer (or the buyer's broker) on the means of transport. public news or exchanges.

### **Transaction price or selling price**

The transaction price or Selling price (Selling price) is the price at which the asset is actually being sold, this amount represents the price the buyer is willing to pay and the seller is willing to receive in the delivery. Real Estate Property (MLS) translation. When a transaction is made, the selling price of that asset will be determined. This price is influenced by the current supply and demand relationship in the real estate market in the region, the condition of the property in comparison to similar properties sold in the region, so the selling price is possible. higher or lower than or equal to the asking price.

Thus, in the scope of this thesis, the author determines the selling price of the house is the actual price that the buyer pays to the seller after the negotiation between the two parties. The price level is influenced by the current supply-demand relationship in the regional housing market, and this price represents the price that the buyer accepts to pay and the seller accepts to sell in the housing transaction.

### **Reservation Price, or investment value**

According to Miller and Geltner (2005), there are two threshold values, the buyer's cutoff value and the seller's cutoff value. The buyer's threshold value is the maximum price that the buyer will accept to pay to buy the home, or the willingness to buy price. The seller's threshold value is the lowest price the seller will accept to sell the house, also known as the willingness to sell price. This price varies among homebuyers due to differences in preferences, tastes, risk tolerance, financial capacity and other tax-related conditions.

In the framework of search theory, the threshold price is determined at the search stop, and therefore within the thesis, the buyer's threshold price (the buy threshold price) is defined as the highest price at which the buyer accepts to pay to buy a home (stops looking for a new home), and the seller's threshold price is the lowest price the seller will accept to sell the house (the stop is looking for new buyers). This threshold price varies from person to person and is influenced by many different factors (Turnbull and Sirmans, 1993).

### **Market value / Expected market price / Fair market value (Market Value or Fair market value)**

According to US tax law, the market price, the market expected price or the fair market price (hereinafter referred to as the market expectation price of the house) is the price of the house when traded under edge conditions. painting. In other words, this is an estimate of the market value of the house based on the amount that a knowledgeable buyer has market information; Willing and not under pressure will pay sellers who are knowledgeable, willing and not under pressure. This price is often unobservable in the market, so it must be estimated based on precedent or extrapolated from properties such as supply and demand, maintenance, renovation, number of bedrooms, bathrooms. , area, age and many other factors (Hui et al., 2012).

However, since the housing market is uncompetitive, buyers and sellers may have different values for properties. For example, the seller may feel that the indoor swimming pool is a benefit and therefore give a high value to this facility in the composition of the home price, but the buyer (with small children) feels the pool. Indoor swimming is dangerous and inconvenient so they do not set high value (or possibly negative) for this gadget and thus lower the price of the house they want to buy. Or a seller who prides itself on the quality of his home is very good and feels that it is very worthwhile, asking for a high price, whereas the buyer only cares about the location of the lot and the surrounding area for business opportunity so to him the quality of the house is not important (because he may destroy it) so the value of the quality of the house for the buyer is very low and reduces the price of the house. A home near a school or hospital can be of great value to a buyer with children or health problems, but for a young single buyer those amenities are not worth it.

From the definition of market expectation and selling price, we find that the market expected price is the selling price of a house in competitive conditions (the seller is knowledgeable, willing and not under pressure). But in reality, market housing transactions are often influenced by a variety of influences, possibly on the side of the seller or buyer, and thereby deviating from the market expectation. In particular, given the seller's need of financing for maturity debt, there will be more pressure to complete the transaction and therefore house selling prices will tend to be lower than period prices. market outlook. Conversely, when a buyer expects a home to give him more benefits in the future (compared to other homes), he suffers from more pressure to complete the transaction and thus the price. sale may exceed market expected price.

Thus, the selling price of houses will fluctuate around the expected market value (MLS) due to the influence of market conditions (when the market goes down, the selling price is trending downward and possibly below the value of the house, and when the market goes up, the selling price tends to increase and exceed the home's value), and position in the interaction between buyers and sellers (when the seller has a higher position in the interaction (like the buyer urgently needs to buy the house), the selling price will be higher) and vice versa. Hence, the market expected price can be estimated from the selling price of the house, and the estimated value will tell us the expected price of the house under competitive conditions (neither buyer nor seller will accept. pressure in trading) (Hui et al., 2012).

### **2.3. The concept of a pricing strategy**

Bidding strategy is a concept widely used by authors such as Haurin (1988); Hui et al. (2012); Cirman et al. (2015) use to refer to the difference between the asking price and the expected market price of a home. There are basically two pricing strategies that sellers use:

#### **Price below market expectations**

With this strategy, the seller will set the asking price to be lower than the market expectation with the aim of attracting more attention in order to shorten the time to sell the house. This strategy to put the house under market expectation will make the house sell faster because when the asking price is lower than the expected market price, it will attract buyers' interest. This will create competitive pressure and cause the buyer to offer a price higher than the seller's offered price and eventually the selling price will be higher than the original asking price. However, there is a risk in this price strategy that when a home does not attract sellers (or attracts not enough sellers to create fierce competition), the seller may have to sell his home. with lower than expected price. Therefore, this bidding strategy is recommended to be effective only in areas of attention with high demand and limited supply, such as buildings with unique design or aesthetics. houses in the neighborhoods around major schools.

Thus, the under-price strategy is to set the asking price to be lower than the market's expected market price of the home, and this lower may be either a ratio or difference. In the scope of the thesis, the author determines the below-market expected sale strategy when the value of the ratio of the asking price to the market expected price of the house is less than one.

#### **Quoting prices exceeding market expectations**

This is a strategy in which sellers set the asking price to be higher than the market's expected price. This strategy is often used by sellers who have a strong belief in the value of the home and, most importantly, do not have the time limit to sell. In such a case, they may be able to offer prices above market expectations in order to test the market, and of course this often comes with a prolonged offering.

Similar to the under-price strategy, within the thesis, the author of the thesis determines that the strategy to sell for sale exceeds the market expectation is when the value of the ratio between the asking price and the expected market price. the school of the house is larger than one.

### 3. Research method

The main method is a quantitative research method based on survey data of individual housing transactions in districts in Ho Chi Minh City and Hanoi, conducted from September 2017 to May 5. 2019.

With data collected from the survey, the author of the thesis will apply the method of estimating the expected market price of housing according to the hedonic model. The hedonic model results will help the author measure the expected market price of the home by determining the price level for the properties of the home. The market-for-sale price is then used to determine the seller's bidding strategy for his newly listed home. In which, the auction strategy of the seller is the difference between the asking price and the expected market price of the house.

The seller's bidding strategy is then applied in quantitative research models to determine the relationship with the home's selling price, length of sale, and viability. The results of these quantitative models will help the dissertation author answer research questions corresponding to the first research objective.

### 4. Result

Table 1 Results of testing the impact of the old home's flooding characteristics on the selling price and duration of the current home selected to buy

Variables	Price model				Time model			
	12		13		14		15	
	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.
LnAge	-0.0387**	0.018	-0.0404**	0.018	-0.1208	0.111	-0.1202	0.111
LnFloor_area	0.1609***	0.036	0.169***	0.036	-0.1864	0.148	-0.1892	0.151
LnLot_area	0.5282***	0.056	0.5261***	0.055	0.8548***	0.233	0.8555***	0.233
Shape	-0.0864**	0.035	-0.0849**	0.035	0.0266	0.169	0.0261	0.170
Sun	0.0539**	0.024	0.0564**	0.024	-0.1065	0.146	-0.1073	0.147
Widestreet	0.0189***	0.002	0.019***	0.002	0.0012	0.011	0.0011	0.011
Dstreet	-0.0002**	0.000	-0.0002**	0.000	0.0006	0.000	0.0006	0.000
LnTworkpla	-0.043**	0.022	-0.0439**	0.022	0.006	0.108	0.0063	0.108
LnTcbd	-0.0709**	0.030	-0.069**	0.029	0.3738***	0.144	0.3732***	0.145
Safe	0.0129	0.014	0.0125	0.014	-0.183***	0.059	-0.1829***	0.059
Waste	0.0632	0.045	0.0643	0.045	-0.17	0.156	-0.1704	0.156
Smelly	0.0357***	0.010	0.0365***	0.010	-0.115***	0.042	-0.1153***	0.043
Noisy	-0.0315***	0.011	-0.0303***	0.010	0.1027**	0.046	0.1023**	0.046
Flooding	-0.0957**	0.042	-0.1021**	0.042	-0.2911	0.235	-0.2889	0.237
Oldflood			0.0631***	0.023			-0.0215	0.163
_cons	5.5727***	0.256	5.4939***	0.258	1.1945	1.450	1.2213	1.485
District Control Dummy	Yes		Yes		Yes		Yes	
R-squared	0.8867		0.8879		0.3063		0.3063	
Prob(F)	0		0		0		0	

Root MSE	0.23267	0.23427	1.1973	1.1987
Dep. Var.	Inprice	Inprice	Intom	Intom
N. of obs	448	448	448	448

Housing price model results can account for about 89% of the variation in house prices and time for sale models can account for about 30% of the variation in time for sale of a home, these results are Similar to the results of the related studies cited above. In addition, adding the variable representing the flooding characteristic of the old house, the Oldflood variable, in models 13 and 15, the estimated coefficients of other explanatory variables were almost unchanged compared to model 12. and 14. This implies that the model estimates are solid and that the control variable, Oldflood, in models 13 and 15 can be used to explain the impact of flooding characteristics in an old home. Up to the transaction price and time for sale of a home purchased in the present.

The results of estimating the impact of the homebuyer's old home flooding characteristics on the transaction price and duration of the current purchased home (models 13 and 15) show that the Flooding in old houses has a significant effect on current home buyers' searching behavior of new homes, which is consistent with the thesis author's initial expectation.

Specifically, the results of model 13 show that buyers with an old house flooded have an acceptable price to pay 6.3% higher with a significance of 1% (equivalent to 500 million for an average house). sample) vs. homebuyers with old homes that are not inundated. This implies a lower threshold benefit level of home buyers whose old house is flooded, and this experimental result is consistent with the conclusion No. 1 of the theoretical framework that the thesis author has developed. .

The results of testing the effect of the old home's flooding characteristics on the length of time for sale of the newly purchased home also showed an inverse relationship consistent with the author's expectations. . This implies that buyers with a flooded old home will have an incentive to quickly move to a new home, with a higher acceptable price so their search time will be shorter, and this is consistent with Conclusion No. 2 of the theoretical framework developed by the thesis author. However, the results indicated in model 15 show that this factor is not statistically significant. The reason may be that the length of time for sale for a home is not a good representation of the search time of a homebuyer, even though these two metrics include the length of time for negotiation between buyer and seller, But this time only accounts for a small proportion of the time for sale as well as the search time of the home buyer, so it does not guarantee the similarity between these two quantities.

**5. Conclusion**

In order to clarify the controversial capital relationship between researchers in both theory and experiment on the relationship between the asking price, selling price and the length of time for sale of houses in the market, the author concludes. Project on analyzing the relationship between the seller's bidding strategy with the selling price, time for sale and the ability to sell the house with two specific objectives as follows: (1) measure measuring the impact of a seller's pricing strategy on price levels, on time for sale, and on a home's ability to sell for different time periods for sale; (2) Develop a theoretical framework to analyze the effect of old home characteristics on home buyer behavior.

The analytical results in the theoretical model developed by the author show that the homebuyer's threshold benefit value level and the home buyer seek time expectation have a positive relationship with the the value of the benefits the buyer receives from the old home. Thus, an old home with unfavorable properties gives the homebuyer a low value of benefit (low G0) and thus influences the homebuyer's behavior in the direction of lowering the price. value of the buying threshold benefit and shortening the period of time to seek expectations of the buyer, meaning that the buyer will want to buy a house faster and accept to pay a higher price.

Research results show that, in the Vietnamese housing market, the stigma of homebuyers is strong, so a low price listing strategy will not only reduce the selling price of the house but also This is a negative signal to home buyers about the quality of the home, and this will make it harder to sell with reduced availability and the

expected shelf life of the home as well. prolonged. Therefore, according to the author of the thesis, a reasonable strategy for sellers in the Vietnamese housing market is to carry out the strategy of selling for sale above the expected market price of the house, that is, the seller. The house should adopt fishing behavior on the housing market. The empirical results show that a seller's over-selling strategy will increase the expected selling price of the home, and at the same time, make the house easier to sell over time. Sales of shorter expectations and increased availability of the home on any given day. In addition, the research results also show that the impact of the over-price strategy, although there is a decrease with the length of time for sale, but still has an impact on the ability to sell a home until the time. After 180 days, the author of the thesis recommends that the home seller should not reduce the asking price during this period because this does not only make the house easier to sell. but it can also lead to a stigmatization of buyers, in which case the buyer may request additional discounts or extend the time to seek further discounts. Conversely, when the listing for a home exceeds 180 days, the over-price strategy no longer has an impact on the home's viability, and therefore, the seller can take measures to reduce the price. the sale price needed to attract buyers.

A car's likelihood of entry is a factor that has a very strong impact on the price of the home and on the availability of the home during the first 30 days of sale. Therefore, in developing new single-family homes, developers should pay special attention to the width of the road in front of the house to ensure the house's car reception, which will have an impact. A sharp increase in the selling price of a house can also help it be traded very quickly.

Research results show that individual homes with a small campus area are always more likely to sell than large homes with all dates for sale, at the same time, the average time for sale. for these properties is also significantly shorter at 1%, particularly during the first 30 days of sale, although the prices for these properties will also be lower. Therefore, the author of the thesis proposes that, during the downturn of the housing market, individual housing developers should develop individual homes with a small campus area to help shorten the listing time. sale and increase the sale of the home. This will help improve the housing market downturn.

## References

- i. Adair, A., McGreal, S., Smyth, A., Cooper, J., & Ryley, T. (2000). *House Prices and Accessibility: The Testing of Relationships within the Belfast Urban Area*. *Journal of Housing Study*, 15(5), 699-716. DOI: 10.1080/02673030050134565
- ii. Adetiloye1, K. A., & Eke, P. O. (2014). *A review of real estate valuation and optimal pricing techniques*. *Asian Economic and Financial Review*, 4(12), 1878-1893.
- iii. Allen, M. T., & Dare, W. H. (2004). *The Effects of Charm Listing Prices on House Transaction Prices*. *Real Estate Economics*, 32(4), 695-713.
- iv. Allen, M. T., & Dare, W. H. (2006). *Charm Pricing as a Signal of Listing Price Precision*. *Journal of Housing Research*, 15(2), 113-127.
- v. Allen, M. T., Cadena, A., Rutherford, J., & Rutherford, R. C. (2015). *Effects of Real Estate Brokers' Marketing Strategies: Public Open Houses, Broker Open Houses, MLS Virtual Tours, and MLS Photographs*. *Journal of Real Estate Research*, 37(3), 343-369.
- vi. Alonso, W. (1964). *Location and Land Use: Toward a General Theory of Land Rent*. Harvard University Press. <https://doi.org/10.4159/harvard.9780674730854>
- vii. Aluko, O. (2011). *The Effects of Location and Neighbourhood Attributes on Housing Values in Metropolitan Lagos*. *Ethiopian Journal of Environmental Studies and Management*, 4(2), 69 – 82. DOI: 10.4314/ejesm.v4i2.8.
- viii. Ambrose, B. W., & Nourse, H. O. (1993). *Factors Influencing Capitalization Rates*, *Journal of Real Estate Research*, 8(2), 221-37.
- ix. An, Z., Cheng, P., Lin, Z., & Liu, Y. (2013). *How do market conditions impact price-TOM relationship? Evidence from real estate owned (REO) sales*. *Journal of Housing Economics*, 22(3), 250 – 263. DOI: 10.1016/j.jhe.2013.07.003.

- x. Andersson, D. E., Shyr, O., & Fu, J. (2010). Does high-speed rail accessibility influence residential property prices? Hedonic estimates from southern Taiwan. *Journal of Transport Geography*, 18(1), 166-174. DOI: 10.1016/j.jtrangeo.2008.10.012.
- xi. Anglin, P., & Wiebe, R. (2013). Pricing in an Illiquid Real Estate Market. *Journal of Real Estate Research*, 35(1), 83-102. DOI: 10.1080/10835547.2013.12091351 .
- xii. Anglin, P. M., Rutherford R., & Springer, T. M. (2003). The Trade-off between the Selling Price of Residential Properties and the Time-on-the-market: The Impact of Price Setting. *Journal of Real Estate Finance and Economics*, 26(1), 95 – 111.
- xiii. Arnold, M. (1999). Search, Bargaining and Optimal Asking Prices. *Real Estate Economics*, 27(3), 453 – 481.
- xiv. Asabere, P. K., & Huffman, F. E. (1992). Price Concessions, Time on Market, and the Actual Sale Price of Homes. *Journal of Real Estate Finance and Economics*, 6(2), 167–174.
- xv. Ayan, E., & Erkin, H.C. (2014). Hedonic Modeling for a Growing Housing Market: Valuation of Apartments in Complexes. *International Journal of Economics and Finance*, 6(3), 188 - 199. DOI: 10.5539/ijef.v6n3p188.
- xvi. Bailey, M. J., Muth, R. F., & Nourse, H. O. (1963). A Regression Method for Real Estate Price Index Construction. *Journal of the American Statistical Association*, 58(304), 933–942. DOI: 10.2307/2283324.
- xvii. Ball, M. (1973). Recent Empirical Work on the Determinants of Relative House Prices. *Urban Studies*, 10(2), 213 - 233. DOI: 10.1080/00420987320080311
- xviii. Bateman, I. J., Day, B., Lake, I. R., & Lovett, A. A. (2001). The effect of road traffic noise on residential property values: a literature review and hedonic pricing study. Scottish Executive Development Department, Edinburgh, UK
- xix. Belkin, J., Hempel, D. J., & McLeavey, D. W. (1976). An Empirical Study of Time on Market Using Multidimensional Segmentation of Housing Markets. *Real Estate Economics*, 4(2), 57–75. DOI: 10.1111/1540-6229.00156.
- xx. Bender, B., & Hwang, H. (1985). Hedonic house price indices and secondary employment centers. *Journal of Urban Economics*, 17(1), 90 – 107.
- xxi. Benefield, J., Cain, C., & Johnson, K. (2014). A review of literature utilizing simultaneous modeling techniques for property price and time-on-market. *Journal of Real Estate Literature*, 22(2), 149–175.
- xxii. Bhattacharjee, A., & De Castro, E. A. (2011). Spatial Interactions in Hedonic Pricing Models: The Urban Housing Market of Aveiro, Portugal. *Dundee Discussion Papers in Economics*, 1–44.
- xxiii. Bin, O., & Kruse, J. (2006). Real estate market response to coastal flood hazards. *Natural Hazards Review*, 7(4), 137–144.
- xxiv. Bin, O., & Polasky, S. (2003). Effects of flood hazards on property values: evidence before and after hurricane Floyd. *Land Economics*, 80(4), 490 – 500.
- xxv. Bin, O., & Landry, C.E. (2013). Changes in implicit flood risk premiums: Empirical evidence from the housing market. *Journal of Environmental Economics and Management*, 65(3), 361–376.
- xxvi. Bjorklund, K., Dadzie, J. A., & Wilhelmsson, M. (2006). Offer Price, Transaction Price and Time-on-market. *Property Management*, 24(4), 415 – 426.
- xxvii. Boarnet, M. G. (1994). The monocentric model and employment location. *Journal of Urban Economics*, 36(1), 79-97.
- xxviii. Bond, S., Hwang, S., Lin, Z., & Vandell, K. (2007). Marketing Period Risk in a Portfolio Context: Theory and Empirical Estimates from the UK Commercial Real Estate Market? *The Journal of Real Estate Finance and Economics*, 34(4), 447–461.
- xxix. Bourassa, S., Hoesli, M., & Peng, V. S. (2003). Do housing submarkets really matter? *Journal of Housing Economics*, 12(1), 12-28.
- xxx. Bowes, D., & Ihlanfeldt, D. (2001). Identifying the effects of rail stations on residential property values. *Journal of Urban Economics*, 50(1), 1–25.



- xxxvi. Brasington, D. M., & Hite, D. (2005). *Demand for Environmental Quality: A Spatial Hedonic Analysis*. *Regional Science and Urban Economics*, 35(1), 2005, 57-82. DOI: 10.1016/j.regsciurbeco.2003.09.001.
- xxxvii. Bui, T. (2020a). *Impacts of interest rate on housing prices: Evidence from Ho Chi Minh city, Vietnam*. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*, 11(5), 1-7.
- xxxviii. Bui, T. 2020b. *A study of factors influencing the price of apartments: Evidence from Vietnam*. *Management Science Letters*, 10(10), 2287-2292, DOI: 10.5267/j.msl.2020.3.007.
- xxxix. Butler, R. (1982). *The specification of hedonic indexes for urban housing*. *Land Economics*, 58(1), 96-102. DOI: 10.2307/3146079
- xl. Cajias, M., & Freudenreich, F. (2018). *Exploring the determinants of liquidity with big data –market heterogeneity in German markets*. *Journal of Property Investment and Finance*, 36(1), 3-18.
- xli. Case, K. E., Quigley, J. M., & Shiller, R. J. (2005). *Comparing Wealth Effects: The Stock Market versus the Housing Market*. *Advances in Macroeconomics*, 5(1), 1 – 32.
- xlii. Cebula, R. J. (2009). *The Hedonic Pricing Model Applied to the Housing Market of the City of Savannah and Its Savannah Historic Landmark District*. *The Review of Regional Studies*, 39(1), 9–22.
- xliiii. Ceccato, V., & Wilhelmsson, M. (2011). *The impact of crime on apartment prices: evidence from Stockholm, Sweden*. *Journal of Geografiska Annaler: Series B, Human Geography*, 93(1), 81-103. DOI: 10.1111/j.1468-0467.2011.00362.x
- xliiiii. Chang, H. J., & Lee, Y. H. (1999). *Specification of the Hedonic Price Model for Taipei Housing Market*. *Information and Management Sciences*, 10(4), 1–13.
- xl. Cheng, P., Lin, Z., & Liu, Y. (2008). *A Model of Time-on-Market and Real Estate Price under Sequential Search with Recall*. *Real Estate Economics*, 36(4), 813-843.
- xli. Chau, K. W., & Chin, T. L. (2003). *A critical review of literature on the hedonic price model*. *International Journal for Housing Science and Its Applications*, 27(2), 145–165.
- xlii. Choy, L., Mak, S., & Ho, W. (2007). *Modeling Hong Kong real estate prices*. *Journal of Housing and the Built Environment*, 22(4), 359–368.
- xliiii. Cirman, A., Pahor, M., & Verbic, M. (2015). *Determinants of Time on the Market in a Thin Real Estate Market*. *Engineering Economics*, 26(1), 4-11.
- xliv. Clapman, E., Englund, P., Quigley, J. M., & Redfoearn, C. (2006). *Revisiting the past and settling the score: Index revision for house price derivatives*. *Real Estate Economics*, 34(2), 275-302.
- xlv. Clapp, J. M., & Giaccotto, C. (1998). *Residential hedonic models: A rational expectations approach to age effects*. *Journal of Urban Economics*, 44(3), 415-437. DOI: 10.1006/juec.1997.2076
- xlvi. Colwell, P. F., & Dilmore, G. (1999). *Who Was First? An Examination of an Early Hedonic Study*. *Land Economics*, 75(4), 620-626.
- xlvii. Coulson, N. E. (1991). *Really useful tests of the monocentric model*. *Land Economics*, 67(3), 299-307.
- xlviii. Courant, P. N. (1978). *Racial Prejudice in a Search Model of the Urban Housing Market*. *Journal of Urban Economics*, 5(3), 329-345. DOI: [10.1016/0094-1190\(78\)90014-1](https://doi.org/10.1016/0094-1190(78)90014-1).
- xlix. Cox, D. R. (1972). *Regression models and life-tables*. *J. R. Stat. Soc., B* 34, 187–220
- l. Cronin, F. J. (1982). *The Efficiency of Housing Search*. *Southern Economic Journal*, 48(4), 1016-1030.
- li. Cubbin, J. (1974). *Price, Quality and Selling Time in the Housing Market*. *Applied Economics* 6(3), p171-187.
- lii. Day, B., Bateman, I., & Lake, I. (2007). *Beyond implicit prices: recovering theoretically consistent and transferable values for noise avoidance from a hedonic property price model*. *Environmental and resource economics*, 37(1), 211-232.
- liiii. Day, B., Bateman, I., & Lake, I. (2003). *What price peace? A comprehensive approach to the specification and estimation of hedonic housing price models*. *Centre for Social and Economic Research on the Global Environment (CSERGE) Working Paper EDM 03-08, University of East Anglia*.

Downloaded on January 12, 2017 from  
<https://www.econstor.eu/bitstream/10419/80269/1/36778145X.pdf>

- liv. Debrezion G., & Pels, E. (2007). *The Impact of Railway Stations on Residential and Commercial Property Value: A Meta-Analysis. The Journal of Real Estate Finance and Economics*, 35(2), 161-180.
- lv. Dubin, R. A., & Goodman, A. C. (1982). *Valuation of education and crime neighborhood characteristics through hedonic housing prices. Population and Environment*, 5(3): 166–181.
- lvi. Elder, H. W., Zumpano, L. V., & Baryla, E. A. (2000). *Buyer brokers: do they make a difference? Their influence on selling price and search duration. Real Estate Economics*, 28(2), 337–362.
- lvii. De Wit, E. R., & van der Klaauw, B. (2013). *Asymmetric information and list-price reductions in the housing market. Regional Science and Urban Economics*, 43(3), 507 – 520.
- lviii. Eshet, T., Baron, M. G., Shechter, M., & Ayalon, O. (2007). *Measuring Externalities of Waste Transfer Stations in Israel Using Hedonic Pricing. Waste Management*, 27(5), 614 – 625.
- lix. Eves, C. (2002). *The long-term impact of flooding on residential property values. Property Management*, 20(4), 214 – 227.
- lx. Ferreira, E. J., & Sirmans, G. S. (1989). *Selling Price, Financing Premiums, and Days on the Market. Journal of Real Estate Finance and Economics*, 2(3), 209 – 222.
- lxi. Filippova, O., & Fu, S. (2011). *Time on market and house prices in Auckland, New Zealand. Pacific Rim Property Research Journal*, 17(1), 70 - 91. DOI: 10.1080/14445921.2011.11104318
- lxii. Fletcher, M., Gallimore, P., & Mangan, J. (2000). *Heteroskedasticity in hedonic house price models. Journal of Property Research*, 17(2), 93 – 108.
- lxiii. Follain, J. R., & Jimenez, E. (1985). *Estimating the demand for housing characteristics: A survey and critique. Regional Science and Urban Economics*, 15(1), 77 – 107.
- lxiv. Follain, J. R., & Malpezzi, S. (1981). *Another Look at Racial Difference in Housing Prices. Urban Studies*, 18(2), 195-203.
- lxv. Franklin, J. P., Waddell, P., & Evans, D. J. (2003). *A hedonic regression of home prices in King County, Washington, using activity-specific accessibility measures. Paper presented at the Transportation Research Board (TRB) Annual Meeting. Accessed at https://www.researchgate.net/publication/228695852\_A\_hedonic\_regression\_of\_home\_prices\_in\_King\_County\_Washington\_using\_activity-specific\_accessibility\_measures.*
- lxvi. Gardiner, J., Heisler, J., Kallberg, J. G., & Liu, C. H. (2007). *The impact of dual agency. Journal of Real Estate Finance and Economics*, 35(1), 39-55.
- lxvii. Garrod, G., & Willis, K. (1992). *Valuing Goods' Characteristics: An Application of the Hedonic Price Method to Environmental Attributes. Journal of Environmental Management*, 34(1), 59 – 76.
- lxviii. *General Statistics Office of Vietnam (GSO). The 2009 Vietnam Population and Housing Census: Major Findings; General Statistics Office of Vietnam: Hanoi, Vietnam, 2010.*
- lxix. Glower, M., Haurin, D. R., & Hendershott, P. H. (1998). *Selling Price and Selling Time: The Impact of Seller Motivation. Real Estate Economics*, 26(4), 719–740.
- lxx. Goodman, J. L., & Ittner, J. B. (1992). *The accuracy of Homeowners' Estimates of House value. Journal of housing economics*, 2(4), 339 – 357.
- lxxi. Gordon, P., Richardson, H. W., & Wong, H. L. (1986). *The distribution of population and employment in a polycentric city: The case of Los Angeles. Environment and Planning A*, 18(2), 161-173. DOI: [10.1068/a180161](https://doi.org/10.1068/a180161).
- lxxii. Grether, D. M., & Mieszkowski, P. (1974). *Determinants of real estate values. Journal of Urban Economics*, 1(2), 127 – 145.
- lxxiii. Hamilton, B. W. (1989). *Wasteful commuting again. The journal of political economy*, 97(6), 1497-1504.
- lxxiv. Han, L., & Strange, W. (2015). *The microstructure of housing markets: search, bargaining, and brokerage. In: Duranton, G., Henderson, J.V., Strange, W. Eds. 2015. Handbook of Regional and Urban Economics Volume 5B. Amsterdam: Elsevier, 813 – 886.*

- lxxv. Hansen, J. (2009). *Australian House Prices: A Comparison Of Hedonic And Repeat-Sales Measures*, *The Economic Record*, 85(269), 132 – 145.
- lxxvi. Hansen, W. G. (1959). *How accessibility shapes land use*. *Journal of the American Institute of Planners*, 25(2), 73 – 76.
- lxxvii. Hardin, W. G., Johnson, K. H., & Wu, Z. (2009). *Brokerage Intermediation in the Commercial Property Market*. *Journal of Real Estate Research*, 31(4), 397-420.
- lxxviii. Harding, J. P., Knight, J. R., & Sirmans, C. F. (2003). *Estimating Bargaining Effects in Hedonic Models: Evidence from the Housing Market*. *Real Estate Economics*, 31(4), 601-622.
- lxxix. Harrison, D. M., Smersh, G. T., & Schwartz, A. L. Jr. (2001). *Environmental determinants of housing prices: the impact of flood zone status*. *Journal of Real Estate Research*, 21(1/2), 3 – 20.
- lxxx. Haurin, D. R. (1988). *The Duration of Marketing Time of Residential Housing*. *American Real Estate and Urban Economics Association*, 16(4), 396 – 410.
- lxxxii. Havlicek, J., Richardson, R., & Davies, L. (1971). *Measuring the impacts of solid waste disposal site location on property values*. *American Journal of Agricultural Economics*, 53(5), 869 – 886. DOI: [10.2307/1238121](https://doi.org/10.2307/1238121).
- lxxxiii. Heikkila, E., Gordon, P., Kim, J. I., Peiser, R. B., Richardson, H. W., & Dale-Johnson, D. (1989). *Whatever happened to the CBD-distance gradient?: Land values in a polycentric city*. *Environment and Planning A*, 21(2), 221 – 232.
- lxxxiv. Hellman, D. A., & Naroff, J. L. (1979). *The impact of crime on urban residential property values*. *Urban Studies*, 16(1), 105 – 112.
- lxxxv. Hoerberichts, M., Rooij, M. & Siegmann, A. (2008). *Market Thinness, List Price Revisions and Time to Sell: Evidence from a large-scale housing dataset*. DNB Working Papers 176, Netherlands Central Bank, Research Department.
- lxxxvi. Hui, E., Wong, J., & Wong, K.T. (2012). *Marketing Time and Pricing Strategies*. *Journal of Real Estate Research*, 34(3), 375 – 398.
- lxxxvii. Hwang, S., & Thill, J. C. (2010). *Influence of Job Accessibility on Housing Market Processes: Study of Spatial Stationarity in the Buffalo and Seattle Metropolitan Areas*. *GeoJournal Library*, 373–391. [https://doi.org/10.1007/978-90-481-8572-6\\_19](https://doi.org/10.1007/978-90-481-8572-6_19).
- lxxxviii. Ismail, S., & Macgregor, B. (2006). *Hedonic Modeling Of Housing Markets Using a Geographical Information System (GIS) And Spatial Statistics: A Case Study Of Glasgow, Scotland*. Truy cập 19/6/2018 từ <http://eprints.utm.my/id/eprint/7320/1/REER-UTMKL-26-270905.1of6.pdf>
- lxxxix. Israel, G. (n.d.) *Determining Sample Size*. University of Florida IFAS Extension. Article posted on Tarleton State University website. Truy cập 14/11/2020 tại <https://www.tarleton.edu/academicassessment/documents/Samplesize.pdf>
- lxxxix. Jim, C. Y., & Chen, W. Y. (2009). *Value of scenic views: Hedonic assessment of private housing in Hong Kong*. *Landscape and Urban Planning*, 91(4), 226–234. DOI: 10.1016/j.landurbplan.2009.01.009.
- xc. Johnson, K. H., Benefield, J. D., & Wiley, J. A. (2008). *The Probability of Sale for Residential Real Estate*. *Journal of Housing Research*, 16(2), 379 – 395.
- xcii. Jud, G. D., Seaks, T. G., & Winkler, D. T. (1996). *Time on the Market: The Impact of Residential Brokerage*. *Journal of Real Estate Research*, 12(3), 447 – 458.
- xciii. Kain, J. F., & Quigley, J. M. (1970). *Measuring the value of housing quality*. *Journal of the American Statistical Association*, 65(330), 532 – 548.
- xciv. Kalra, R., & Chan, K.C. (1994). *Censored Sample Bias, Macroeconomic Factors and Time on Market of Residential Housing*. *Journal of Real Estate Research*, 9(2), 253–262.
- xcv. Kang, H. B., & Gardner, M. J. (1989). *Selling Price and Marketing Time in the Residential Real Estate Market*. *Journal of Real Estate Research*, 4(1), 21 – 36.
- xcvi. Kim, A. M. (2004). *A Market Without the 'Right' Property Rights*. *Economics of Transition*, 12(2), 275–305.

- xcvi. Kluger, B. D. & Miller, N.G. (1990). *Measuring Real Estate Liquidity, Measuring Real Estate Liquidity. Journal of Real Estate Economics*, 18(2), 145 – 159.
- xcvii. Knight, J. R. (2002). *Listing Price, Time on Market, and Ultimate Selling Price: Causes and Effects of Listing Price Changes. Real Estate Economics*, 30(2), 213–237.
- xcviii. Kolbe, J. & Wustemann, H. (2015). *Estimating the Value of Urban Green Space: A hedonic Pricing Analysis of the Housing Market in Cologne, Germany. SFB 649 Discussion Paper, No. 2015-002. Available at <https://www.econstor.eu/bitstream/10419/107911/1/815374305.pdf>*
- xcix. Krainer, J., & LeRoy, S. F. (2002). *Equilibrium valuation of illiquid assets. Economic Theory*, 19(2), 223–242.
- c. Krainer, J. (2001). *A Theory of Liquidity in Residential Real Estate Markets. Journal of Urban Economics*, 49(1), 32 – 53.
- ci. Laibson, D. (1997). *Golden Eggs and Hyperbolic Discounting. Quarterly Journal of Economics*, 112(2), 443–477.
- cii. Lamond, J., Proverbs, D., & Hammond, F. (2010). *The Impact of Flooding on the Price of Residential Property: A Transactional Analysis of the UK Market. Housing Studies*, 25(3), 335–356. DOI: 10.1080/02673031003711543.
- ciii. Lancaster, K. J. (1966). *A New Approach to Consumer Theory. Journal of Political Economy*, 74(2), 132–157. <https://doi.org/10.1086/259131>.
- civ. Larsen, J. E., & Park, W. J. (1989). *Non-Uniform Percentage Brokerage Commissions and Real Estate Market Performance. Real Estate Economics*, 17(4), 422–438. <https://doi.org/10.1111/1540-6229.00501>
- cv. Leung, C. K., Leong, Y. C., & Chan, I. Y. (2002). *TOM: Why isn't Price Enough?. International Real Estate Review*, 5(1), 91 – 115.
- cvi. Levitt, S. D., & Syverson, C. (2008). *Market Distortions When Agents Are Better Informed: The Value of Information in Real Estate Transactions. Review of Economics and Statistics*, 90(4), 599–611. <https://doi.org/10.1162/rest.90.4.599>.
- cvii. Li, X. B., & Motiwalla, L. (2009). *For sale by owner online. Communications of the ACM*, 52(2), 110–114. <https://doi.org/10.1145/1461928.1461957>.
- cviii. Lin, Z., & Vandell, K. D. (2007). *Illiquidity and Pricing Biases in the Real Estate Market. Real Estate Economics*, 35(3), 291–330. <https://doi.org/10.1111/j.1540-6229.2007.00191.x>
- cix. Lisi, G. (2013). *On the Functional Form of the Hedonic Price Function: A Matching-theoretic Model and Empirical Evidence. International Real Estate Review*, 16(2), 189 – 207.
- cx. Lutzenhiser, M., & Netusil, N. R. (2001). *The effect of open spaces on a home's sale price. Contemporary Economic Policy*, 19(3), 291 – 298.
- cxii. Lynch, A. K., & Rasmussen, D. W. (2001). *Measuring the impact of crime on house prices. Applied Economics*, 33(15), 1981–1989.
- cxiii. Malpezzi, S. (2001). *Hedonic Pricing Models: A Selective and Applied Review. In: T. O'Sullivan & K. Gibb, eds. 2002. Housing Economics and Public Policy. Oxford: Blackwell Science Ltd. Ch.5. <https://doi.org/10.1002/9780470690680.ch5>*
- cxiiii. Malpezzi, S., Ozanne, L., & Thibodeau, T. (1987). *Microeconomic Estimates of Housing Depreciation. Land Economics*, 63(4), 372 – 385.
- cxv. McDonald, J. F., & McMillen, D. P. (1990). *Employment subcenters and land values in a polycentricurban area: The case of Chicago. Environment and Planning A*, 22(12), 1561-1574.
- cxvi. McGreal, S., Adair, A., Brown, L., & Webb, J. R. (2009). *Pricing and Time on the Market for Residential Properties in a major U.K. City. Journal of Real Estate Research*, 31(2), 209 - 233.