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DETERMINANT OF HOUSING PRICE IN LAGOS RESIDENTIAL MARKET: ROLE OF AGENTS/INTERMEDIARIES

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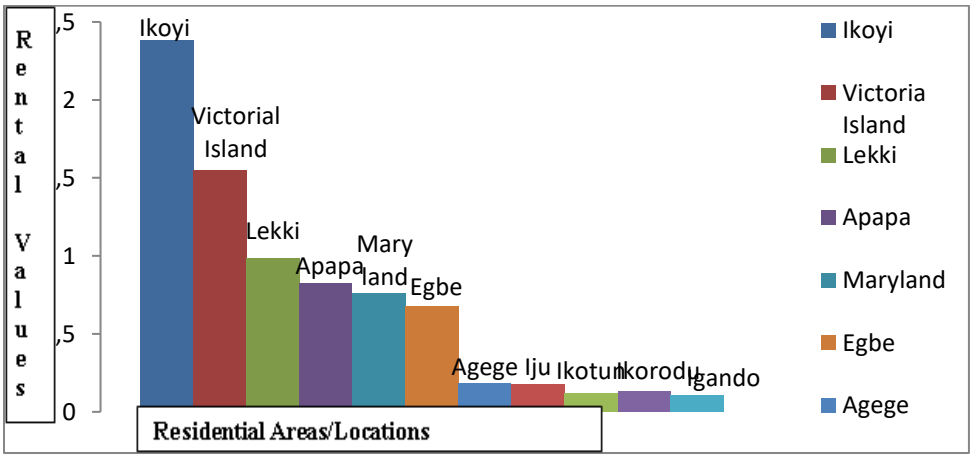
Abstract: *There is price discrepancy in similar housing goods in different parts of Lagos. Even in the same vicinity, similar housing goods still have different prices. This study investigates the discrepancy by looking at the role the intermediaries play in fixing housing price in Lagos residential market. A survey was carried out in Lagos metropolitan city with 751 respondents (41 producers, 33 intermediary and 677 consumers). The sample was selected through a multistage sampling technique and the data analyzed with descriptive statistic. The study found that there is a game played by the intermediaries in fixing prices. The intermediary often give incomplete information to the house consumers thereby, making the consumers pay more than their expectations. The study concluded that in Lagos residential market, price is influenced by the intermediary as a result of asymmetry information which makes the consumer pay more.*

1. Introduction

One of the most developmental challenges confronting both the developed and developing economies globally is inadequate housing supply over its demand. Housing problems are more noticeable in mega cities due to increasing population growth. The instances are a common place in a mega city like Lagos which is a center of attraction for many people from within and outside Nigeria (Ajide, 2011). Though, there can always be discrepancy in the prices of similar housing products in many cities, Lagos residential market is peculiar. Barometer (2015) report gives a confirmation about the disparity in prices of housing units in some selected areas of Lagos state (See figure 1 below).

Figure 1: Average Price per Bedroom in Selected Areas of Lagos State



Source: Lamudi Barometer(2015)[1]

From the chart, a bedroom type on average, whose price is N2.38 million per annum in Ikoyi goes for N112,000 in Igando. Even within the same vicinity, street or compound; consumers in Lagos residential market still pays different prices. The question is; why is there so much discrepancy in similar housing types in the Lagos residential market? Studies have tried to explain the cause of the difference in prices in Lagos residential market. Those studies showed that structural attribute, locational attribute, neighborhood attribute and environmental attribute of houses cause difference in price in different parts of Lagos (Bello and Bello; 2007, Ajide and Alabi; 2010, Babawale et al. 2012). This study however is particularly interested in the role of intermediaries in the difference in the housing prices which has not been explored by literature in Lagos residential market

Fundamental economic theory teaches that the price of a commodity is fixed by the interactions between demand and supply. However, some markets require an intermediary that will bring both the buyers and the sellers together in order to determine the price. Based on information search, intermediaries play the role of arbitration between becoming a market-maker or a matchmaker (Bessy and Chauvin, 2013). Residential market is noted for its heterogeneous features of housing product. Also, most producers (landlords/owners) do not search for consumers (tenants) themselves but trust the intermediaries to do the search for them. Intermediaries have access to information from both the producer and the consumer and mediate or negotiate for price with the information gathered.

Intermediation always come with a cost as the intermediating agents charge a fee for the service rendered; therefore, making the price the consumer will pay on housing to be higher and the producer to lose a certain amount from his rent (charges are usually in percentage of rent and they differ from place to place depending on the law and practice of the place). The higher the rent the higher will be the profit realized by the intermediary. The intermediary can strategize to make the price higher by providing asymmetry information to the buyer, thereby making the buyer to pay more. This study however wants to investigate if such exists in Lagos residential market.

Another peculiarity about Lagos residential market is that there is no price ceiling or working housing price index; therefore, each producer can offer their products for the price they wish based on their personal or professional judgment. Hence, this study identified three kinds of prices for Lagos residential market which are; the actual price, the asking price and the bid price. The actual price is fixed by the producer expressing the amount that house owner is willing to offer the housing unit/s for a period of time (willingness to receive). The asking price is fixed by the intermediary comprising of the actual price, commissions and service charged by the intermediaries. Also, the bid price is given by the consumer after taken into cognizance the quality and quantity of housing and the amount the consumer is willing to offer for the product. This is similar to bid price theory (Rosen, 1974) which factors in the equilibrium between the consumer and the producer but the intermediary plays a role in fixing prices in this residential market.

Hence, this study seeks to investigate if the intermediaries in Lagos residential market are contributing to price hikes of the market. Section 2 contains the literature review and Section 3 contain the data source and description. The result is presented in section 4 and conclusion was presented in section 5.

2. Literature Review

Lancaster (1966) was the first author to discuss hedonic utility without pricing models. Lancaster preference theory states that a commodity can be disintegrated into a bundle of characteristics or attributes; hence consumers make their purchasing decision based on the number of commodity attributes as well as per unit cost of each characteristic. The theoretical foundation of Lancaster appear to fill in the gap created by previous studies (Ridker and Henning, 1967) but the interpretation of hedonic functions was widely misapplied and misunderstood until the modeling foundation for market supply and demand

of a commodity based on its characteristics using the hedonic price theory to establish equilibrium model (Rosen 1974).

Rosen (1974) was the first to present a theory of hedonic pricing. Rosen opined that commodity can be valued by its characteristics; where commodity's total price can be considered as a sum of price of each homogeneous attribute, and each attribute has a unique implicit price in an equilibrium market. This implies that price of a commodity can be regressed based on the characteristics to determine the way in which each characteristic uniquely contributes to the overall composite unit price. Rosen presented the modeling foundation for the hedonic price theory by identifying the equilibrium model of market supply and demand based on housing characteristics. He developed the theoretical support for the application of HPM in housing price through critical appraisal of housing attributes. The physical consideration of housing as a commodity embody varying number of attributes and environmental quality that are differentiated by its characteristic composition each possess. It is important to establish that these attributes are not most times explicitly traded; it is difficult to observe the prices of these attributes and environmental quality directly.

Studies on residential choice behavior are voluminous particularly in the developed nations but such studies are sparse in case of the Africa continent in general and sub-Saharan Africa in particular. In Nigeria, however, they are few thus suggesting that a lot still needs to be done in order to bring it close if not at par with foreign counterparts. The few ones that had been conducted in Nigeria to the best of our knowledge include among others: Megbolugbe, (1989); Arimah, (1992); Olatubara, (1996 and 2003); Paz, (2003); Aluko, (2003); Adewusi and Onifade, (2006) Bello et al, (2007 and 2008); Sanni and Akinyemi, (2009); Akinjare et al, 2011 Aluko, (2011); Babawale et al, (2012); Oluseyi (2014); Kemiki et al (2014); Umeh and Oladejo (2015) Noor et al, (2015); Ajide, (2016); Afolayan et al, (2016) and Umar et al, (2019).

Megbolugbe, (1989) applied HPM on three categories of housing traits (structural, neighborhood and locational traits) to examine housing market in Jos, Nigeria. He presented the results using Box-Cox λ transformation parameter is 0.2 for the multi-family and -0.1 for the single-family submarket. In his study the hedonic parameters of these functional forms are significantly different from linear functional forms and log-linear which usually available in literature. The author justified this position through comparison with similar studies conducted in other developed countries with results obtained.

Arimah (1992) estimated housing attributes in Ibadan, Nigeria using data from both tenants and owner-occupier. The results identified income, household considerations, head of household occupational status and monetary value attached to the attributes being considered as important determinants in the demand for housing in Ibadan. The author concluded that since the coefficient of estimated variables are below unity then; the demand for housing qualities is inelastic.

Few studies like Adewusi et al (2006) and Bello et al (2007) applied HPM in Surulere and Ojota, Lagos Nigeria to examine the property value of housing based on proximity of units to urban solid waste and dumpsite. These studies revealed that distance away and close distance presented higher value and lower values of properties respectively. Similarly, Bello et al (2008) considered residents' willingness to pay for environmental amenities in Akure, Nigeria. The authors identified, distance away from refuse dump site along with household income and regularity of electricity supply as driving force towards households' willingness to pay for better environmental amenities. Akinjare et al (2011) used HPM to examine the impact of solid waste landfills on the value of housing units in Lagos residential market. The results equally confirmed that proximity to environmental pollution is a key determinant on the value of property in Lagos, Nigeria.

Furthermore, studies like Aluko (2011) examined the effect of location and neighborhood characteristics on housing prices in Lagos residential market. The study area was subdivided into 8 from the 16 metropolitan local government areas of Lagos, authors realized that location and neighborhood

attributes are more significant on housing price, mostly when small housing units are being considered geographically. However, the author did not explain the rationale behind for using a sample size of 1500 out of a population of 135,820 in the study giving consideration to a bias judgment. Babawale et al (2012) employed HPM to examine the housing market in Ikeja, Lagos Nigeria. Authors considered rental apartments, the sub-market under consideration and where plot size is unimportant. In their study, floor level was irrelevant, because the market did not cater for any price difference between flats on different floors, such as floors where 4 or even 5 exist. The age of building was excluded from the variables based on the fact that rental values (different from sale values) respond more to the physical condition than of the age of property age.

Oluseyi (2014) investigated the critical factors that influence the rental value of housing in Ibadan residential market, Nigeria. The author applied HPM as the estimating tool to examine the influence of housing component (structural and location attributes) on housing price; The study revealed that for bungalow and detached houses in the low-density area the key factor that influence rental value is residential location while in the medium density areas burglary alarm is the major determinant of house rental price.

Kemiki et al (2014) used the double log functional form of HPM to examine the effect of dust level and noise on rental value of dwelling apartments surrounding Lafarge Cement Factory in Ewekoro, Ogun State. The authors in their finding discovered that noise and dust significantly affect rental prices of those houses around the factory negatively. The effect of noise and dust caused environmental discomforts that reduce prices of houses to 22% and 1.5% respectively depending on the proximity of any of houses to the factory. This also laid another premise for source of noise known as industrial noise.

More recently studies like Umeh and Oladejo (2015) identified the housing quality traits that influenced rents in Ikeja GRA, Lagos. The study revealed showed that neighborhood quality and number of bedrooms influenced house prices in the area considered. Also, the study equally supported that Waste disposal variables has a positive significant influence but not higher than the two other variables. Ajide, (2016) used HPM to examine the impact of structural features on housing rent in Lagos, Nigeria. The study revealed that hedonic pricing models consumer will prefer to pay more for desirable structural, locational and neighborhood traits in demand for housing units. However, this study suffers the dynamism of time where true picture of reality is lacking; the data used was based on the Lagos State Housing Survey of 2006 to analyze Lagos residential market in 2016. The Lagos residential market presents unique characteristics where both commodity and buyers are heterogeneous in nature.

Afolayan et al, (2016) appraised users' willingness to pay for improved housing in Lagos, Nigeria. The authors analyzed stated preferences of home-buyers considering high- and medium-income groups residential using 12 selected public and private housing estates. Authors used Contingent Valuation Method (CVM) in replace of HPM to analyze willingness to pay based on the futuristic consideration of variables considered. The results revealed that upgraded plumbing service is significant in both private and public estates that could influence willingness to pay for housing services. However, the study of Whittington et al. (1991) identified that if facilities are available CVM would not be appropriate as it will invalidate the results, as most existing demand function relatively determines the future demand. Umar et al, (2019) examined the residents' satisfaction level with public housing in Lagos, Nigeria. The study confirmed that there is still so much to do as regards housing issue in Lagos residential market. The results showed that the majority of the residents are highly dissatisfied with space allocation, quality of services

infrastructural facilities. However, this paper did not consider publicly provided houses. Simply because rents paid on such institutional housing do not reflect prevailing market values, as it is a form of transfer payment.

From the foregoing, studies have been using hedonic pricing methodology to analyze price and housing quality traits. However, considering the uniqueness of Lagos residential market where commodity and buyers are heterogeneous in nature and the proposed position of the eleventh goal of SDG where housing quality (decent homes) is the main focus. Therefore, this study considered the three main stakeholders in the provision of housing units. Again, to the best of our knowledge hardly have any of the previous studies considered "household considerations'' from the perspectives of consumers, producers and intermediaries (Estate Agents). This is an identified gap that this study intends to fill.

3. Data

The population for this is the adult residents of Lagos State who resides in the urban centers of the state. Specifically, Lagos Metropolitan City consists of 16 Local Government Areas out of 20. Multistage sampling technique comprising of both probability and non-probability techniques were employed for sample selection. The respondents were stratified into income groups; low, medium and high income groups. Table 1 shows the sample size across income groups. 41 producers, 33 intermediary and 677 consumers were sample chosen and analyzed for this research paper.

Table 1: Respondents' Categories across Income Levels

			Income Level			Total
			Low	Medium	High	
Which of the following best describes your participation in this research?	Producer	Count	32	7	2	41
		% within income level	8.0%	2.9%	1.8%	5.5%
	Intermediary	Count	18	12	3	33
		% within income level	4.5%	5.0%	2.8%	4.4%
	Consumer	Count	350	223	104	677
		% within income level	87.5%	92.1%	95.4%	90.1%
Total		Count	400	242	109	751
		% within income level	100.0%	100.0%	100.0%	100.0%
		% of Total	53.3%	32.2%	14.5%	100.0%

Source: Author's computation (2019)

A well-structured questionnaire was used to survey the selected sample size. The pilot study carried out reflected the data is 93% reliable. This research work does not include those living in houses provided by the public sector. The method of analyses employed in this research work is descriptive statistics.

4. Result

4.1 Price determination (Producers)

We started by asking the producer what informs the choice of his/her price setting? The question is to have a general knowledge of the features/characteristics that the producers put together in order for them to arrive at the value of and hence, the price charge on housing in Lagos residential market. The response is displayed in Table 1 bellow. 31.7% of the producers, which is the modal class, admitted that the intermediating agents tell them the value and price of their products. Location is the next characteristics that the producers in Lagos residential market consider. 22% of the producer charge their prices based on location. Other attribute that inform producers' rent charges are displayed in Table 1.

Table 2: The Producers' House Rent Determinants

			Income Level			Total
			Low	Medium	High	
What informs you of the price you set on your house/apartment ?	Age of the house	Count	1	0	0	1
		% within Income Level	3.1%	0.0%	0.0%	2.4%
	Agent	Count	10	3	0	13
		% within Income Level	31.3%	42.9%	0.0%	31.7%
	Apartment type	Count	1	0	0	1
		% within Income Level	3.1%	0.0%	0.0%	2.4%
	Location	Count	7	1	1	9
		% within Income Level	21.9%	14.3%	50.0%	22.0%
	Availability of water	Count	1	0	0	1
		% within Income Level	3.1%	0.0%	0.0%	2.4%
	Borehole	Count	0	1	0	1
		% within Income Level	0.0%	14.3%	0.0%	2.4%
	Closeness to bus/stop	Count	1	0	0	1
		% within Income Level	3.1%	0.0%	0.0%	2.4%
	Comfort	Count	1	0	0	1
		% within Income Level	3.1%	0.0%	0.0%	2.4%
	Neatness	Count	0	1	0	1
		% within Income Level	0.0%	14.3%	0.0%	2.4%
	Neatness and fence	Count	1	0	0	1
		% within Income Level	3.1%	0.0%	0.0%	2.4%
	Neatness and security	Count	1	0	0	1
		% within Income Level	3.1%	0.0%	0.0%	2.4%
	Neatness, closeness to main areas, security	Count	1	0	0	1
		% within Income Level	3.1%	0.0%	0.0%	2.4%
	Neigboorhood	Count	1	0	0	1
		% within Income Level	3.1%	0.0%	0.0%	2.4%
	Normal tradition	Count	3	0	1	4
		% within Income Level	9.4%	0.0%	50.0%	9.7%
	Standard of the building	Count	1	0	0	1
		% within Income Level	3.1%	0.0%	0.0%	2.4%
	Steady payments	Count	1	0	0	1
		% within Income Level	3.1%	0.0%	0.0%	2.4%

	Structure and location	Count	0	1	0	1
		% within Income Level	0.0%	14.3%	0.0%	2.4%
	The environment, structure of the building and security	Count	1	0	0	1
		% within Income Level	3.1%	0.0%	0.0%	2.4%
Total		Count	32	7	2	41
		% within Income Level	100.0%	100.0%	100.0%	100.0%

Source: Author's compilation (2019)

The next question we asked the producers is who determines the price? This is different from the first question because the first one is asking for the attribute while the second one is asking for the person. The result is shown in Table 3 below. 58.5% of the producers say that the agents fix the price while 41.5% of the producers admitted that they fix the prices themselves. It was observed that from the producers' view, the intermediaries are what and who determines the price set on housing in Lagos residential market; hence performing the role of both price maker and matchmaker.

Table 3: Who determines Price Charged as Rent

Who determines the housing price?						
			Income Level			
			Low	Medium	High	Total
Who determines the housing price?	Agents	Count	18	4	2	24
		% within Income Level	56.3%	57.1%	100.0%	58.5%
	The owner	Count	14	3	0	
		% within Income Level	43.7%	42.9%	0.0%	41.5%
Total		Count	32	7	2	41
		% within Income Level	100.0%	100.0%	100.0%	100.0%

Source: Authors' compilation (2019)

4.2 Price determination (Intermediaries)

From the intermediaries, we asked the question of who determines the price of housing good in Lagos residential market; about 67% of them claims that it is the producers that determines the price. This is somewhat contradictory to the producers' response that about 59% of the producer responded that the intermediaries fix the price. This study envisaged that there is a game being played by both the producers and the intermediaries. As a result of this, went further to asking the consumers some questions from the consumers that will be discussed in the next subsection.

Table 4: Determination of Price Charged as Rent

Who determines the housing price?						
			Income Level			
			Low	Medium	High	Total
Who determines the housing price?	Your company	Count	6	3	2	11
		% within Income Level	33.3%	25%	66.7%	33.3%
	The owner	Count	12	9	1	22
		% within Income Level	66.7%	75%	33.3%	66.7 %
Total		Count	18	12	3	33

	% within Income Level	100.0%	100.0%	100.0%	100.0%

Source: Authors' compilation (2019)

4.3 Consumers' Response on house pricing and information

Table 5 shows the consumers' response. The first question we asked the consumers is if they ever met or speak with their landlord before payment for their apartment? Only less than 15% of them has met or speak with their producer before the payment of rent. The implication for this is that the intermediaries acts as meddle men and price makers for about 85% of the consumers in Lagos residential market. This also suggests that majority of house consumers may not have access to full information on price negotiation. Also, 9 out of 10 respondents said that their agents do not assist them to negotiate the asking price downwards but will rather encourage them to pay it. This reveals the typical nature of middlemen whose main objective is to make profit. A rational intermediary will always seek to maximize his profit by encouraging the consumer to pay more; bearing in mind that the higher the rent, the higher will be their commission/charges. 51% of the respondents said they did not meet the exact facilities and/or attributes that the intermediaries told them before they paid and move in to the apartment. Some house consumers in Lagos residential market have to spend more money on repairs and fixing before the house can be habitable while some have to pay bills (e.g. electricity) left by the former house occupants. The implication for this is a distortion on information on the expected facility that the consumer negotiated for and the facility he actually paid for; making housing more costly in real terms. Lastly, we asked if the consumers consider the intermediaries as economically helpful in assisting them to maximize their utility in housing consumption with minimum cost. The response was negative as 82% of the respondent said no. Obviously, most consumers are not satisfied with the services of the intermediaries because of the games involved in their practices.

Table 5: Consumers' Response on house pricing and information

Who determines the housing price?						
			Income Level			Total
			Low	Medium	High	
Did you meet or speak to your landlord before rent payment?	Yes	Count	68	25	6	99
		% within Income Level	19.4%	11.2%	5.8%	14.6%
	No	Count	282	198	98	578
		% within Income Level	80.6%	88.8	94.2	85.4%
Total		Count	350	223	104	677
		% within Income Level	100.0%	100.0%	100.0%	100.0%
Does your agent help you to negotiate the asking price of your rent downwards?	Yes	Count	24	12	32	68
		% within Income Level	6.9%	5.4%	30.8%	10%
	No	Count	326	211	72	609
		% within Income Level	93.1%	94.6%	69.2%	90%
Total		Count	350	223	104	677
		% within Income Level	100.0%	100.0%	100.0%	100.0%
Did you meet the exact facilities that your agent told you	Yes	Count	201	119	11	331

prior payment about the house when you started living in the house?		% within Income Level	57.4	53.4%	89.4%	49.9%
	No	Count	149	104	93	346
		% within Income Level	42.6	46.6%	10.6%	51.1%
Total		Count	350	223	104	677
		% within Income Level	100.0%	100.0%	100.0%	100.0%
Do you consider your agents as economically helpful in helping you to select the best facilities at the lowest cost possible?	Yes	Count	55	56	9	120
		% within Income Level	15.7%	25.1%	8.7%	17.7%
	No	Count	295	167	95	557
		% within Income Level	84.3%	74.9	91.3%	82.3%
Total		Count	350	223	104	677
		% within Income Level	100.0%	100.0%	100.0%	100.0%

Price determination according to economics is centred on the producers/suppliers of such commodities as well as the government in some climes. As of today, in Nigeria, there is no government regulation on the facilities that must be available in the houses built by individuals based; thus, the housing market is a free market in such that, the producer is the major one determining the price of such goods and services. Investigation on price determination in Lagos residential market was looked into through the intermediaries and evidence showed that 6 out 10 producers claim that the intermediary fixes the price while about 7 out of intermediaries showed that it is the producer that determines the price of housing. The position of the intermediary that it is the producers that determines the price of rent is contradictory There seem to be a game between the producer and the intermediary on the position of price determination; and this may account for the root cause in price variation in Lagos metropolitan.

Considering the descriptive statistics, it was found that there is a game between the producer and intermediary on price determination; while the producers admit that the intermediary fixes the price, the intermediary also admits that the producers fixes the price (see Table 3 and Table 4). Thus, the intermediary may deliberately hike the price and reduce consumer's bargaining power. Second, it should be noted that in this market, there is information asymmetry from the intermediary; the intermediary would not give complete price and billing information to both the consumer and the producer. Intermediaries make more profit when information is hidden. Also, the presence of middle man (intermediaries) increases housing price.

5. Conclusion

This study investigated the role of intermediaries in price determination in Lagos residential market. Primary data was sourced from Lagos metropolis (16 out of 20 LGA) with sample size of 751. The sample size comprises of 41 producers, 33 intermediary and 677 consumers. The study found that there exist a game in price determination between the producers and intermediaries on who determines price. We also found that the intermediary plays the game by giving asymmetry information to the buyer and persuades them to pay the asking price, therefore increasing price of housing in order for them to maximize profit. In addition, consumers are not finding the services of the intermediaries economically helpful as they ended up paying more and sometimes for facilities that are not functioning (or bills of previous occupier). The study concluded that in Lagos residential market, price is influenced by the intermediary as a result of asymmetry information which makes the consumer pay more.

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