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Residential Property Value and Security Features in Gated Communities

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Abstract

In recent times, the fear of crime is growing globally including Nigeria. The more the fear grows the greater the reaction to address it. People are becoming more security conscious in their choice of residence. Some are turning to high walls and fences around residential areas. This has brought about the concept of gated community which is becoming the order of the day. If security is one cardinal reason for the gate, no single study has been able to look at the quantum of value contribution of this variable in gated communities (GCs). The study therefore examined the value contribution of security features on residential properties using the willingness to pay (WTP) and willingness to accept payment (WTA) models. The study adopted a survey method using snowball and captive sampling method to collect data that were analyzed with descriptive and inferential tools. A total of 124 questionnaires were administered on the resident households. Major finding showed that high security arrangements/features are ranked first & second as the determinant of the rental value paid in both gated communities observed. The conclusion is that security determines the willingness of consumers to pay and the decision of the investors to invest in gated community. The study therefore recommends that adequate security arrangements should be made available in gated community in order to ensure virile residential estate property value. .

Keywords: Gated community, Lagos, Nigeria, Residential property value, Security features, Willingness to pay

1.0 INTRODUCTION

The major goal aimed at in the provision of housing/dwelling unit is to give the user of the apartment value for money. This is not derived from the internal fabric of the apartment alone but also the level of presence of infrastructure in the neighborhood. Tse and Love (2000) viewed a residential property as a commodity that is multi-dimensional as they defined a house as a commodity that represents not only a collection of structural characteristics but also location-specific characteristics. Thus, a residential property is a combination of various variables and characteristics that produces value. While some consumers

look at accessibility to work, others look at amenities, yet some look at structural characteristics and environmental quality and some are interested in the neighborhood quality with emphasis on safety and security and so on. Usually, these preferences arises due to taste and experiences of would be consumer in previous other apartment or generally the prevailing public. These attributes usually sum up to become consumers' preference and investors takes them into consideration when they are to develop properties for investment purpose.

Our homes are the centers of our lives, where we are supposed to feel safe the most. As crime becomes more of a threat to that feeling of safety, people are becoming more security conscious in their choice of residence. Some are turning to high walls and fences as residential abode. Grant & Mittelsteadt (2004) citing Blakely and Snyder (1997); and Newman, (1995); asserted to this reality when they stated that Older neighborhoods in some cities are closing off streets to enhance local security and reduce traffic. In general, post modern cities are becoming more defended, and more defensible, than were industrial cities. What Ellin (1997) calls an ``architecture of fear'' is turning the urban environment into an enclosed and privatized realm. Those who can afford them are prime proponents of the latest methods to keep crime and criminals out. This however does not seem to be enough to curb the growing fear of crime. The need to prevent crime has become a dominant factor in our everyday living and choice of residence as people are reaching out to find additional ways not only to prevent crime but also to secure themselves if it occurs and one such a way is the enclosure of an entire neighborhood. This has resulted in most recent residential developments adopting the gated community style and even previously existing ones which were not gated became gated when threatened by incessant crime.

Golby (2011) however asserted that the current fast growth of this phenomenon has been predicated on the tripod of the desire for prestige, community organization and safety. This type of dwelling in the sub-urban and urban area has been in the mirror eyes of recent research work in urban design and a good number of researchers Mahgoub & Khalfani, (2012); Vesselinov, (2009); Grant & Mittelsteadt, (2004); Ajibola, Oloke and Ogungbemi, (2011); Le Goix & Webster (2008) are unanimous in their position concerning the cardinal reason for 'the gate' as being a value scoring point which gives the residents some sense of security whether real or perceived. Matloff (1995) citing an article in the *Christian Science Monitor,* corroborated this view when he intoned that "many suburban whites live in jail-like homes guarded by vicious dogs, razor wire, and armed security guards summoned by panic buttons." No matter how new this seems to be in terms of form, frame and sophistication, gated

community or enclave or fortress as it is variously referred to, is not a new phenomenon.

While its growth and popularity remains a global trend, there is no doubt about the growing spate of crime and insecurity in Nigeria including kidnapping and guerilla warfare being experienced in the country which has resulted in loss of lives and properties. Aderogba (2010) citing Mackay (2005) stated that people can be daunted by the "big picture" hence, choosing to bring their horizons (the family, the balcony, the street, the school, the weekend, the holiday) up closest to them as much as possible, mainly because the society is disengaged from politics, current affairs and social issues. The only alternative they have going for them to have control to some degree especially in terms of security of their lives and properties is achieved through the "gates" and "walls". This factor has become one of the selling point and marketing strategy of most developers as they build to meet up consumer needs especially in the residential real estate market.

The introduction of security checks in the form of gates comes with its own advantages and disadvantages in the overall property value index. This singular variable may not be the major reason why certain consumers prefer a neighborhood with a gate as a good number of authors (Ajibola et al, 2011; Aderogba 2010; Sanchez 2005 and Blakely & Snyder 1997) have also adduced motivations for residing in gates to include: fear of crime and desire for security; the need to live in an environment where people of like mind and status are; exclusivity; need for high quality living environment with recreational/leisure facilities; search for community; retreat from failing public government neighborhood; identity and social homogeneity. It was the submission of Ajibola et al, that the development and growth of GCs in Nigeria is more in response to the security challenges in urban centers in the country. If security is one cardinal reason for the gate, no single study has been able to look at the quantum of value contribution of this variable in GCs.

Arising from this background, the study examined the extent to which security features contributes to the determination of residential property values in gated communities, using Badore, in Ajah area of Lagos state, in Nigeria as a casestudy. To achieve this, the study adopted a survey method using snowball and captive sampling methods to collect data that were analyzed with descriptive and inferential methods. However, strict access to the communities is a major limitation in conducting the research. Finding revealed that high security arrangements/features are major determinant of rental value paid in the gated communities. It is expected that the finding would be beneficial to consumers in making choice and the investors in deciding to invest.

2.0 CONCEPTUAL AND EMPIRICAL ISSUES

The term value means different things to different people. This infinitude of meaning is the basic problem to the question "what is value?" However, as a general concept, value signifies the capacity of a commodity to satisfy some want or need. It defines utility (or satisfaction), among other things. Suffice it to say that a thing has value if it is useful or serves a purpose (Ifediora, 2005). Value is an enigmatic concept with infinitude of nuisances of meaning. Since the number of wants, needs or purposes is infinite, so also are the number of types of value is also infinite and also the variables that add up to command value in a good or service. For instance, the term value in economics has a precise definition – it is the price individuals are willing to pay in order to obtain a good or service. The basic economic concepts of supply and demand are employed to estimate willingness to-pay. Broadly speaking, value depends on the expectations and inputs of the human mind. The value of a property for instance to a particular purchaser or renter is therefore a function of many variables among which are the person's motive, expectation and estimate of the future benefits that would be derived from the property. (Ifediora, 2005). The determination of property value is a process that has been described as being more subjective than objective. This is because value of a property is subjected to a multitude of complicated influences. These influences according to Mackmin (1985) can be classified into those that are external and those that are internal to the property. External influences relate to the general state of the economy, population, employment, immigration, finance, location, transportation and neighborhood amenities. Internal influences are essentially the specific details of the property such as the size, accommodation, condition, design, layout, age, type and plot size (Adair et al, 1982).Generally, it is believed that individuals hold certain things dear to themselves and these things form their value bias which is reflected in their willingness to pay certain amount for a particular property in a particular location and/or neighborhood.

However, to a large extent, the determination of value have been hinged on such environmental factors as closeness to water body, amenities such as hospitals, schools, recreational parks and good roads amongst others. (Brown & Pollakowski, 1977). These however do not exhaustively represent all the variables there are to determining value. Hence the ability to know consumers' preference for residential property is prime in any property, especially new developments. Miles et al (2007) as quoted in Otegbulu, Osagie and Famuyiwa (2010) asserted that the excitement of identifying an unfilled human need and creating a product to fill it in a project is the stimulus that drives development. The best idea is the one that results in a product, which serves the user better, adds value to the community and does so at a profit. Whatever the type of development being proposed, several fundamental questions are basic for any

market research effort, which may include trends in the type of development, depth of the market and market perceived value as they sum up to become marketing points for most investors. Housing products evolve in response to market and consumer demands. A property is a commodity that is heterogeneous and distinguished by a wide variety of attributes.

A couple of studies have looked at the relationship between security and residential property value coming up with split opinion as to its effect on property value. In South Africa, Standish et al (2005) regressed 11 variables as major influencers of residential property value over a 10year period, security and crime was reported as the top 3 influencers that can lead to severe drop in residential property prices. Marco's study of New York's Bronx city however looked at the relationship between crime rate and residential rental value. The study revealed that in the city of Bronx, New York, crime rate is often high in prime location that commands high rental values. The criminals are well of the opinion that only the rich in the society would be able to afford the high rent. This further shows that there have to be some way of securing those prospects that would eventually reside in such locations.

In Ghana, Owusu-Ansa (2012) studied the determinants of housing values in urban area of Kumasi over a 6 year period, excluding security as a variable, the study revealed that housing characteristics such as number of rooms, floors, property age, location of the property, availability of garage, fence wall, swimming pool and land registration together account for 49% increase in residential property value in the study area. These variables were however lumped up without a clear demarcation as to those features that appear based on security reason.

Also, in a another study carried out in Onistha in the eastern part of Nigeria, Emoh, Oni and Egolum (2013) adopted 31 variables including security as determinants of residential land values in the study area. The outcome of the factor analysis found 18 variables as not being significant including security. The top five were accessibility, neighborhood quality, land title, zoning regulation and transportation. The outcome of this result can however be explained especially as to why security was not significant in the 15 locations used for the study. The explanation will not fall short of the fact that security may not be prime in mind of purchasers as at the time of purchase as it is just the land and what is uppermost in their mind is the title or the interest that exists in the land and then accessibility or location of the land. Security can become significant only when the land is developed and is put to use.

While the studies of Owusu-Ansa (2012) and Emoh et al (2013) seem to have played down the importance of security as a significant contributor to residential

property value, some other indigenous studies Aderogba (2010) and Ajibola et al (2011) however were unanimous in their position about the importance of security as a value contributory variable in residential property

2.1 Meaning and Historical Background of Gated Community (GC)

Whilst the name given to a GC differs from country to country, so also is its form and characteristics and according to Mahgoub & Khalfani (2012), there are different reasons for their development in relation to security, ethnicity and prestige. The nomenclatures given to this residential development type is as varied as the definitions offered by various authors. These nomenclatures include: "doors" as referred to by Shimmel (1994), "bridge and door" and "enclaves" as defined by Wetering (2002); Low (2003) called them Gated Residential Development (GRDs); Giglia (2003) viewed the phenomenon as "closed spaces"; Grant and Mittelsteadt (2004) refers to it as "gated community"; Ajibola et al (2011) referred to it as either "security village" or "enclosed neighbourhood" and Golby (n.d) calls it "fortification" regardless of the nomenclature, the concept remains the same and the gate is a common feature hence, this study adopts the term "gated community" and subsequently (GC).

Grant & Mittelsteadt (2004) viewed GCs as a spatially defined residential community with some shared amenities and thus the potential for developing social networks. Furthermore, Quintal & Thompson (2007) in their study defined GC as a residential development characterized by a focus on physical security measures such as gates, walls, guards and closed-circuit television cameras. A common feature is a perimeter fencing which encloses the development. Other devices such as vehicular and human access restriction by use of gate, booms are further put in place and access controlled by use of access card or pin code, car sticker, resident's identification and security personnel. Also the use of patrol guards, alarm systems and panic buttons; trained dogs; electric fencing and spikes amongst others. Sanchez, Lang & Dhavale (2008) further describe them as a community entirely surrounded by physical walls with gates, and sometimes restricted entry with guards or other means of access control.

What however is constant in the various definitions offered in previous studies is the fact that GCs are residential developments characterized by perimeter fence with a major access gate. This is meant to control entry and exit of persons; especially non-residents and characterized with the presence of shared amenities.

In time past, settlements were usually close to mountains, valleys or mot, rivers and the likes which serve as natural barrier from the invasion of enemies especially during periods of war. Aderogba (2010) commented that there is little

doubt from archaeological evidence that the early human settlements in the Nile river valleys were walled against hunter-gatherer tribes that roamed the deserts foraging for food. History has it also that the Roman Empire popularized the trend due to the several territories she conquered. The wealthiest Romans built compounds for their families and entourage outside the polyglot city. The walls were built to protect the Romans from potential dangers of those they perceived as lower classes who inhabited the city that kidnapped and stole from the wealthy. Furthermore, as mirrored by Christensen & Levinson (2010) during wars fought outside an originally conquered territory, the Roman government found it increasingly difficult to gather all her warriors back. This was because most of the warriors were treated as third class citizens and slaves thus after war they preferred to otherwise remain in conquered territories. They are eventually rewarded with land and some amount of other resources including slaves that would serve them. There, they build and establish themselves, but because they were the minority group, they fortify themselves by walling up their compound to make access difficult to external wards. This trend was first noticed in England were retired Roman soldiers built gated/walled communities as early as 300BC (Blakely & Snyder, 1997). This eventually became a trend for both the Royal and wealthy English families even after the exit of the Romans. It is now a global trend, although with little modifications from country to country based on a country's social, political, legal and architectural/cultural inclination.

2.2 Study *Area*

Badore in Ajah was adopted as the study area. Two gated estates the Cooperative Villa estate and Unity Estate which are two estates standing side by side each other were used including the streets abutting the two estates were also used. Badore is one of the fastest growing locations in the Lekki-Epe axis of Lagos state a region that is reputed for large concentration of housing estate as the area is opening up.

Historically, the Cooperatives Villa estate gave birth to the Unity estate as the neighborhood was not originally designed to be a GC but due to her proximity to Cooperatives Villa and the problem of flooding the residents were having which they felt was caused by the residents of Cooperatives Villa, the residents association came together and chartered a new cause and identity for themselves. They constructed their drainage and also road and then built a gate at the major entrance of the neighborhood which is manned 24 hours by corporate security guards. It have lesser security features vis a vis Cooperatives Villa and while there is only one access way in and out of Cooperatives Villa, the same cannot be said of Unity estate which have more than one exit points.

The abutting streets or neighborhood are characterized by free entry and exit both by residents and non-residents. This is so since they are without gates

which are supposed to restrict movement. Their roads are not tarred and there is also the absence of drainages.

3.0 RESEARCH METHOD

The research adopted the survey method. The study population comprised of the resident households of Cooperatives Villa Estate and Unity Estate (both of them are gated estates) and the two streets in the neigbouring community abutting both estates. 250 questionnaires were prepared for the resident households of the study area and 50, 100 and 100 questionnaires were distributed to residents in Cooperatives Villa, Unity Estate and Neighbouring community and the following were retrieved 32, 41 and 51 residing in Cooperative Villa Estate, Unity Estate and the neighboring community.

Two sampling methods were adopted in the administration of the questionnaire namely the snowball sampling method and the captive sampling method. The snowball sampling method was used to gather information from those households in Cooperatives Villa because of the difficulty in accessing them in hence referrals were needed to access the residents. For Unity Estate and the abutting streets, the captive sampling method was employed and this was achieved by visiting the residents on their residents' meeting day which happens to be on sanitation Saturday and questionnaires were administered on the households' heads/representatives that were present during the association meeting. Data collected include socio-economic characteristics, factors that determine rental value, factors that attract residents to the estates, crime incidence, crime preventive measures, security responsiveness, rent paid and neighbourhood satisfaction level. Descriptive (such as frequency, percentages, mean) and inferential statistics (ANOVA) were used for the data analysis.

4.0 RESULT AND DISCUSSION

Table1 below descriptively looked at the characteristics of the respondents. The table reveals that varying degree in the employment sectors of the respondents across the three study locations. In Cooperatives Villa there are more of Oil & Gas sector workers residing there while Unity Estate have more of self employed and others as residents and the abutting streets have more of Finance/Insurance workers. with respect to duration of stay the statistics reveals that the two estates are newer compared to the abutting streets as majority of the respondents from the abutting streets have lived there an upward of 21 years while majority of the respondents in Unity estate have lived there for less than 5 years and the majority in Cooperatives Villa estate have lived there for between

5 and 10 years. Furthermore, more of the respondents in the estates live in detached houses (for majority in Cooperatives Villa) and duplex/semi detached (for majority in Unity Estate) but an evenly split percentage of those in the abutting streets live in flats and bungalows. Lastly, there are more tenants than property owners in both Unity Estate and the abutting streets while there are more property owners as respondents in Cooperatives Villa than tenants.

Table 1. Respondents' Characteristics

	Cooperative Estate		Unity Estate		Abutting street	
	Freq.	%	Freq.	%	Freq.	%
Employment sector						
Military/Para-Military					8	15.7
Finance/Insurance	5	15.6	6	14.6	14	27.5
Oil & Gas sector	12	37.5	5	12.2	8	15.7
Telecommunications	5	15.6	-	-	11	21.5
Federal/state ministry	-	-	6	14.6	-	-
Self Employed	9	28.2	12	29.3	8	15.7
Others	1	3.1	12	29.3	2	3.9
Duration of stay in the estate						
< 5 years	5	15.6	22	53.7	5	9.8
5-10 years	17	53.1	13	31.7	10	19.6
11-15 years	10	31.3	6	14.6	2	3.9
16-20 years	-	-	-	-	4	7.8
21 years and above	-	-	-	-	30	58.9
House type						
Flat	-	-	5	12.1	24	47.1.8
Duplex/Semi Detached house	7	21.9	22	53.7	3	5.8
Bungalows and semi/detached bungalow	11	34.4	10	24.4	24	47.1
Terrace house	1	3.1	-	-	-	-
Detached house	13	40.6	3	7.3	-	-
Others	-	-	1	2.5	-	-
Resident's status						
Tenant	3	9.4	26	63.4	45	88.2
Owner	29	90.6	15	36.6	6	11.8

Osagie and Ilechukwu, 2015

Table 2 below, looked at the factors that determine value. The table revealed that a high security arrangement in the estate (with average score of 4.57) is the

major value determinants of residents to Cooperative estate. Serenity of the estate and quality of accommodation and its services were ranked second (3.93) and third (3.92) respectively. Similarly, security was placed on the important scale in Unity Estate. In this particular estate, high security arrangements was scored 4.13 and ranked second to location (with 4.15). The third in the ranking is the quality of accommodation and its services. On the other hand, respondents from abutting streets ranked high security arrangements lowest in rental determination with a mean rating of 1.00. Location was ranked the most important factor that determines rental value in the abutting streets with a mean rating of 4.88. An important trend in the result shows that the level of infrastructural facilities also enjoyed appreciable consideration across the three study locations as it ranked 4th in cooperative villa and abutting streets (with mean of 3.64 and 2.35 respectively) but a distant 6th (3.08) in unity estate.

As a means of confirming the responses of respondents in the previous question, the research also asked rank major motivating factor responsible for their choice of residence. Security of estate was a major motivating factor in cooperative villa (6.36 ranking 1st) as against the low scores it recorded in unity estate (3.35 ranking 7th) and abutting street (2.77 ranking 6th). The low score recorded in unity estate can be explained because the estate did not start as a GC but it metamorphosed after sometime. However, the outcome of the responses validated the objectivity of the responses in the previous question. (See Table 3) Furthermore, the level of crime incidence in the study areas was sought (Table 4). The low scores from cooperative villa and unity estates suggests rare occurrence of any of the listed crimes, while relatively high scores obtained from the abutting streets is an indication of frequent incidence of crime most especially car vandalism, armed robbery, car theft and burglary.

Table 2. Factors that determine rental value

	Cooperative		Unit		Abutting street	
	Mean	Rank	Mean	Rank	Mean	Rank
The location where the estate is situated	2.85	7	4.15	1	4.88	1
Quality of accommodation and its services	3.92	3	4.04	3	4.37	2
Quality of the cleaning services of common parts	3.46	5	2.65	7	4.00	3
Level of infrastructural	3.64	4	3.08	6	2.35	4

facilities						
Serenity of the estate	3.93	2	3.23	5	2.05	5
Aesthetics/beauty of the estate	3.36	6	3.35	4	1.92	6
High security arrangements of the estate	4.57	1	4.13	2	1.00	7

Osagie and Ilechukwu, 2015

Table 3. Factors that attract residents to the estates

	Cooperative		Unity		Abutting street	
	Mean	Rank	Mean	Rank	Mean	Rank
Security of the estate	6.36	1	3.35	7	2.77	6
The social status of the residents	3.38	7	4.20	5	4.17	5
The prestige that comes with living in the estate	3.69	5	4.56	2	5.71	3
The level of infrastructural facilities in the estate	3.86	4	4.46	3	2.23	7
Closeness of the estate to children school	6.28	2	4.43	4	4.95	4
It was the only option open at the moment	1.86	8	5.68	1	6.62	2
It was the best option financially	3.43	6	3.88	6	7.85	1
Closeness of the estate to work	5.31	3	2.85	8	1.45	8

Osagie and Ilechukwu, 2015

Table 4. Crime incidence in the study location

	Cooperative		Unity		Abutting street	
	Mean	Rank	Mean	Rank	Mean	Rank
Car vandalism	1.43	2	1.76	3	3.83	1
Armed robbery	1.07	10	1.85	2	3.57	2
Car theft	1.14	8	1.64	6	3.17	3

Burglary	1.79	1	1.88	1	3.07	4
Physical assault	1.36	3	1.72	4	2.90	5
Pick pocketing	1.14	8	1.72	4	2.90	5
Kidnapping	1.29	5	1.16	10	2.29	7
Vandalization of infrastructure	1.36	3	1.42	7	2.02	8
Rape	1.29	5	1.20	9	1.10	9
Assassination	1.21	7	1.24	8	1.05	10

Osagie and Ilechukwu, 2015

Table 5 records the provision of preventive measures that are in place in the study locations in order to forestall the activities of criminals. In the abutting streets, all the measures enumerated were 100% not provided except "installation of security alarm" which have a low 2.2% in provision and other forms of security arrangement was 95.6% provided; no security check-points; no security patrols; no CCTV; no vehicle checking; no policing. On the other hand, the two estates to some level made provision of these measures. cooperative villa has 100% level of provision for security check-points, security patrols and prevention of unauthorized persons and vehicles, while unity estate has 100%, 55.6% and 44.4% level of provision for the similar preventive measures as cooperative villa, accordingly. CCTV and policing were provided at 50% and 57.1% in cooperative estate while they are at 11.1% and 37% in unity estate.

The study further sought the perception of residents with respect to the relationship of security and rental value; and crime prevention. Table 6 revealed that there is high level of agreement to the three assertions in both cooperative villa and unity state showing a good relationship between the gate and rental value and effectiveness of the gate in curbing crime and by extension affecting the surrounding neighborhood. On the other hand, none of the assertions were agreed with by residents of the abutting streets.

In table 7, a one-way analysis of variance conducted to examine if there is significant difference in the crime incidence among the three locations is reported above. The test gives test statistics (F) significant at 5% level. Hence, crime incidences in Cooperative villa (M = 1.31, SD = 0.281), Unity estate (M = 1.56, SD = 0.318) and Abutting streets (M = 2.03, SD = 0.161) are statistically significantly different. This, tallies with the outcome of table 6.

Response was only provided by respondents in Cooperative villa and Unity estate on the effectiveness of security measure provided. The analysis of the data gathered gives the outcome provided in table 8. In the two estates, five security measures are provided namely security guard (corporate), security guards (private), CCTV, Vigilante groups and the Nigerian Police. From the aforementioned, CCTV and corporate security guards are the most effective.

The CCTV with average effective score of 3.67 is ranked second most effective while corporate security guard with 3.93 is ranked first in the ranking, in Cooperative estate.

Table 5. Preventive measure to forestall criminal activities

	Cooperative		Unity		Abutting street	
	Provided	Not provided	Provided	Not provided	Provided	Not provided
Security check-points	100.0	-	100.0	-	-	100
Security patrols	100.0	-	55.6	44.4	-	100
Installation of security alarm	100.0	-	33.3	66.7	2.2	97.8
Use of CCTV	50	50	11.1	88.9	-	100
Prevention of unauthorized persons and vehicles	100	-	44.4	55.6	-	100
Policing	57.1	42.9	37	63	-	100
Others	14.3	85.7	18.5	81.5	95.6	4.4

Osagie and Ilechukwu, 2015

Table 6. Response as regards some security assertions

	Estate	Strongly disagreed	Disagreed	Indifferent	Agreed	Strongly Agreed
The cost of effective security in the estates is high and has led to high rental value	**Cooperative**	-	16.7	16.7	33.3	33.3
	Unity	-	3.7	22.2	59.3	14.8
	Abuting	69.0	31.0	-	-	-
Gating of the estate has proved effective in crime prevention	**Cooperative**	-	-	-	41.7	58.3
	Unity	-	3.7	3.7	55.6	37.0
	Abuting	63.2	36.8	-	-	-

There is less crime in this estate compared to surrounding neighborhood as a resulting of gating	**Cooperative**	-	-	7.7	53.8	38.5
	Unity	3.7	3.7	3.7	25.9	63.0
	Abuting	74.4	25.6	-	-	-

Osagie and Ilechukwu, 2015

Table 7 Variance test (ANOVA) on crime incidence

	N	Value	Std. Dev.	Degree of freedom	F-statistic	Sig
Cooperative Villa	14	1.31	0.281	2	214.015	0.000
Unity Estate	25	1.56	0.318	74		
Abutting streets	38	2.03	0.161			

Osagie and Ilechukwu, 2015

Table 8 Effectiveness of security measures in the study location

	Cooperative			Unity		
	Mean	Rank	Level of Effectiveness	Mean	Rank	Level of Effectiveness
CCTV	3.67	2	Effective	3.78	1	Effective
Security guards (corporate)	3.93	1	Effective	3.70	2	Effective
Vigilante group	2.85	5	Fair	3.54	3	Effective
Nigerian police	2.86	4	Fair	2.63	4	Fair
Security guards (private Maiguard)	3.00	3	Fair	2.58	5	Fair

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Table 9 Variance test (T-test) on effectiveness of security measures

	N	Value	Std. Dev.	Degree of freedom	t-statistic	Sig
Cooperative Villa	31	3.11	0.373	32	-0.587	0.562
Unity Estate	43	3.21	0.499			

Osagie and Ilechukwu, 2015

An independent sample t-test that examined significant difference in the level of effectiveness of security measures in place in the two estates is given above. The test statistic gives a very low value ($t_{(32)}$ = -0.587) that is statistically insignificant, p > 0.05. Thus, implying no significant difference in the effectiveness of security measures between Cooperative villa (M = 3.11, SD = 0.373) and Unity estate (M = 3.21, SD = 0.499).

Table 10 Estimated average rent and willingness to pay for improved security measures (in Naira)

	Cooperative Villa	Unity Estate	Abutting Streets
Average rental payment by tenant	800,000	920,000	1,237,500
Estimated average rental payment by owner	2,375,000	2,166,650	920,000
Willingness to pay for additional rent for improved security measures	16,249	14,999	25,951.50

Osagie and Ilechukwu, 2015

There is an inverse relationship between the average rent paid by tenants and landlords in the three study locations. Average rent paid by tenants experience increase from Cooperatives Villa, Unity Estate to the abutting streets increased. This is shocking however but on further enquiry, residents in abutting streets pay more in rent because they have to pay for their individual security on a monthly basis and also take care of other infrastructural needs not provided as against those in the gated communities where all these are collectively provided, hence reducing the cost. The relationship is inverse for the landlords where the perceived rent paid by them increases from cooperatives villa thru unity estate and then the abutting streets.

Statistically, respondents in abutting streets are willing to pay rent that is 59.7% higher when compared to those in the cooperative villa and 73.02% more in comparison to those staying unity estate.

Finally, with regards to willingness to pay for additional rent for improved security measures the respondents in the abutting streets are willing to pay more for security features vis a vis the other two estates that are gated and which have security features in them.

Table 11 Level of satisfaction for living in the estate (Neighbourhood)

	Cooperative		Unity		Abutting street	
	Frequency	%	Frequency	%	Frequency	%
Disappointed	-	-	2	4.9	-	-
Not satisfied	-	-	-	-	25	49.0
Fairly satisfied	-	-	10	24.4	15	29.4
Satisfied	8	25.0	10	24.4	9	17.7
Very satisfied	24	75.0	19	46.3	2	3.9

Osagie and Ilechukwu, 2015

With regards to the satisfaction level of the respondents, from table 11, it is evidently clear that more respondents from the GCs are very satisfied residing in the estate compared to those residing in the abutting streets of whom majority are not satisfied. Security may not be the major factor behind this the study however have shown that residents in GCs have a higher level of satisfaction vis a vis those in non-gated communities.

5.0 CONCLUSION AND RECOMMENDATION

This paper has examined the contribution of security arrangements to residential property value in gated communities (GCs). The research adopted a survey method whereby snowball and captive sampling methods were used to collect data. The results gotten from the data analysis showed that security arrangement factor is of high priority for the residents in determining the rental value paid. However, there are other factors such as location of children's school and closeness to work place that motivate the residents in the gated estates to pay. This is at variance with the estate that was not planned to be GCs from inception. This goes to show that there are actually a class of the residential property market that is concerned with security of their lives and property whilst considering other factors. Therefore, security issue is of great importance for the consumers to make their choice and the investors to make decision to invest.

The purpose for which GCs came to be in the founding days appears to still be same and the "gate" still serves as key marketing point for investors who are into residential property development. Whilst investors especially along the lekki-Ajah corridor (where there is a very high concentration of housing estates spring up) continue to look at this residential property development model, it is also important for them to note that the quality of infrastructure provided is key to alongside the security measures put in place. Also basic amenities should also be factored in as this is also a major selling point but it is also one which is

almost a missing feature in most GCs such as the ones examined in this study and it makes residents drive out of the estate on school run or hire a drive for that which becomes an additional cost to them on the long or pay for school bus that would be picking and dropping the children at home.

Be that as it may, the degree of security measures put in place goes a long way in determining the level of effectiveness of the gates and hence rental value. It is against this background that the paper recommends that security measures should be improved through adequate provision of CCTV, security guards, corporate guards, private security (known as mallams) and of course, Nigerian Police in the GCs. Such improvement will lessen crime but will lead to high rental value due to the cost of ensuring these security measures. Further studies, however, should be extended to commercial property value to see if security is a major determinant also.

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