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Effects of Interest Rate on Housing Prices in Lagos Metropolis

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Abstract

This paper examined the relationship that exists between lending interest rates and housing prices using Lagos metropolis as a case study. The paper employed both primary and secondary sources of data collection. The secondary source of data collection was used to gather information on lending interest rate for a period of fifteen (15) years. Information were extracted from Central Intelligent Agency (CIA) world fact book while questionnaire was used as primary method of data collection from registered Estate Surveying Firm (ESF) located in Lagos state. The formula developed by the Research Division of the National Education Association of the Minnesota and Texas University, United State of America ($S=X^2$ NP (-P) $+d^5$ (N-1) $+X^2P$ (1-P)) and cited by Ojo (2005) was adopted in order to determine the sample size. Thus, One Hundred and sixty five (165) firms were sampled but 50 percent questionnaires were returned. The simple random sampling technique was used to select the simple size and descriptive and inferential statistics were used to analysis data collected. There was a progressive reduction in the percentage increase of housing prices from a low class of housing type to a high class of housing type. Although the general price level of housing price was on the increasing side. However, between a period of 15 fifteen years there is a decrease in lending interest rate by 4.27%. The trend of lending interest rate was on the down slide. Factually all the factors under consideration affect housing prices in the study area. However the impact of Location is of great importance. There exist a significant correlation between the housing price (two bedroom flats, three bedroom flats, semi detached houses and detached Houses) and the lending interest rate. These correlations were fairly strong negative relationship. The paper recommended that the state government should re-strategizes in there development pattern so as to bring about a health competition in different part of the state. The financial institution should further reduce the lending interest rate especially to those involved in real estate sector and effort should be gear toward monitoring such loan. The paper concluded that it is evidence that there exist a significant relationship between the housing price of all types and the lending interest rate.

Keywords

Interest Rate, Lending Interest Rate and Housing Prices

1. Introduction

Currently Nigeria is in the midst of a housing boom, primarily due to the great demand created by a raising population. Nigeria's housing deficit is estimated to be 17 million as of august 2012. Yet demand is characterized by high inequality, creating a dichotomy between the demand for luxury secure accommodation for high income earners and low cost affordable housing for the masses. Lagos state is the second most populous state with a population figure of 9,013,334 representing 6.44% of Nigeria's total population. The metropolitan Lagos area (which covers 37% of the Lagos land mass) host about 85 % of the population resulting in an average population density of 20,000 people per sqkm. Population growth is estimated at about 275,000 per annum. Available statistic show that 60% of residents in Lagos are tenants and housing demand is estimated to be approximately 2.17 million, most of the existing accommodations are provided by private landlords and tenants have to pay rent as high as 50 -70% of their monthly incomes.

The Lagos state government in recognition of the importance of housing has embarked on various housing scheme. This ranges from site and service scheme to build

and sell. The bureau of Lands and Services is in charge of plot allocation while the Lagos State Property Development Corporation (LSDPC) is in charge of build and sell of all kinds of houses. There are two type of housing, the social housing, are housing provided by government and not for profit organizations. Often time public funds private funds are use for the benefit of many household, based on the degree of need, made available at below market price (Oyebanji, Akintoye and Liyanaage, 2013) and market housing.

In 2009, probably in recognition of the importance of housing price, the state (Lagos) is in the process of implementing a new Lagos mortgage scheme in conjunction with five banks, aimed at injecting N40 Billion towards the provision of facilities to enable people make payments for their homes over a 25 years period at moderate interest rates.

It has been established that the demand for housing is higher than supply. One we expect that while a building or housing unit is under construction there should be individual who should have make payment and wait till when the housing unit is ready to take possession. Unfortunately this is not the case has both private developers and government have to put up different advertisement in order to ensure the disposal of completed housing unit. Perhaps the public do not like the location of most housing unit. Perhaps, the design as well as the finishing of the housing unit, falls below the taste of the prospective home owner. May be the housing price is rather high for the target audience. Could it be the lending interest rate charged by the financial institution? This paper examines the relationship that exists between lending interest rates and housing prices using Lagos metropolis as a case study.

2. Literature Review

2.1. Housing Prices

Housing price is the value paid for the purchase of residential property. However, housing price differs from different people such as developer, contractor, dealer and buyer (Lee, 2009). Michele (2012) is of the opinion that housing price is a value for a residential property which gets the perfect balance between attracting solid offers and ultimately receiving top money. Lee (op cit) considers it as a value to be paid for the transaction of buying a residential property which more to buyer's perspective. It is obvious that housing price is peculiar to residential properties and negotiation is usually done between the seller and the buyer.

The property market is such that real estate sellers try to sell as high as they can while buyers tries to buy for as little as they can. Agreements may work out from there and the final selling price is agreed upon. This simply suggests that it is not a buyers' market. However the housing price is expected to rise due to the imbalance between buyers and seller. Therefore, when there are more buyers than sellers, the market is one that is characterized by almost predictable cycles of boom and burst. The former are periods when the prices in market soar and almost inevitably they are followed by other periods when the prices plummet. There are actually people who make a living out of these cycles. Housing price can rise once updated with public infrastructure like highway and public transport nearby, while it will keep rising as property owner or broker bid up of price according to market demand. The rise in housing price often necessitate external fund for its acquisition.

House purchase generally requires external financing, the cost of mortgage credit and the conditions under which it becomes available play a major role in shaping the pattern of housing price dynamics. Researchers have shown that many people buy real estate because they are told that is a good form of investment (Onward, 1998). They do not bother to keep track of their investment returns to determine whether their purchase was worth the price. There are issues in real estate pricing and methods of research rarely receiver the critical attention and development it deserves. Lack of adequate data has limited the scope of empirical research on real estate transaction.

Theory of price asserts that the market price reflects interaction between two opposing considerations. On one side are demand considerations based on marginal utility, while on the other side are supply considerations based on marginal cost. At equilibrium price it is expected that the marginal utility from buyer's side equals the marginal cost from the seller's side. Moraham (2002) argued that price is the quantity of payment or compensation given by one party to another in return for goods or service. Prices are limited by various factors such as the incomes of potential buyers, the cost and ability to construct new property to increase supply and demand for rental unit. The ability to make payments, borrow money and the cost of borrowing money are major influences limiting how far prices can rise before hitting resistance due to prices hitting levels where potential borrowers are unable to qualify (Sharp, 1999).

Prices in most areas are influenced by the forces of demand and supply. However, the real estate market price in other areas seems to be dictated by what comes across as quite a different set of forces. Tze (2013) concluded that the Gross Domestic Product (GDP), population and Real Property Gain Tax (RPGT) are the key determinants of housing prices.

2.2. Factors Influencing Housing Prices

Various studies have examined factors influencing housing prices and have identified the following, age, location, size, economic activity, population, and transport and neighbourhood characteristics. The quality of the environment affects the value of land. Land value does not only depend on the physical characteristics of a building but also the environment that surrounds the building. As observed by Liews and Haron (2013) housing price can rise once updated with public infrastructure like highway and public transport nearby, while it will keeps rising as property owners or their brokers bid up of price according to market demand.

High-quality transportation networks often impact positively on property and land value than areas without such improvement. Housing and land prices are expected to continue to rise rapidly in cities with improved transportation system, rapid economic and population growth. Tze (2013) agreed that quite a number of factors influence housing price but we cannot deny the fact that one of the significant factors is growing population.

The study conducted by Cahill (2010) cited in Messah and Kigige (2011) in Philippines, reveals that varies in price was due to many factors. Among these factors, there are three that have the greatest influence. The first is location; the location of real estate in Philippines has one of the most if not the most effect on the real estate prices. The second is accessibility; this is why land supported with paved streets cost more than lands surrounded with dirt roads. The third is land developer. Big and widely recognized realty companies invest large sums of money on quality service and infrastructure in order to provide prime real estate and service smaller companies offer only real estate the bigger companies' offer land, road and other amenities. Similarly Messah and Kigige (2011) in a study on factors influencing real estate property prices opined that factors such as income of real estate investors, the influence of location on the price, demand and realtors influence on the price are the determinant of real estate property in Kenya. The finding further shows that incomes alone contributed almost 70% of the variations in price. Therefore income was found to be significant in determining real estate price.

Housing price can be influenced by macroeconomic factors, such as the Gross Domestic Product (GDP), interest rate, construction cost, population and inflation rate. The GDP was considered a popular indicator because of the relationship between the macroeconomic activity and the housing price (Wheeler and Chowdhury, 1993). Investigation related to the importance of inflation as a driver of housing price was carried out by Debelle (2004). On average, across countries, inflation accounts for more than half of the total variation in house price in the short run, the size of the impact is even larger. Debelle (op cit) alludes that it contributed nearly 90% of the total price variation in the one quarter horizon and drop to about two thirds over the one year horizon. This strong influence of inflation is more important when one consider that house prices are measured in real terms. Tsatsarovus and Zhu (2004) showed the strong and long-lasting between inflation and housing price. During inflation, most things in the economy will increase their price. However, the cost of the raw material for building a house will equally increase. Tsatsarovus et. al, (op cit) opined that housing price generally depend on inflation, the yield curve and bank credit, but national different in the mortgage markets also matter.

In china, Shanghai to be specific, lending rates and GDP impact commodity housing prices higher (Guo and Wu, 2013). GDP is the total market value overall final goods and services produced in a country in a particular year. The formula for GDP is total consumer, investment and government spending, plus the value of exports minus the value of imports. According to Hii, Latif and Nasir (1999) fluctuation in the GDP are significantly related to the number of terraced, semi detached and long houses constructed in Sarawak. It was observed that terraces increase when the GDP is growing. While mean, the study failed to estimate the level of significant.

Housing supply was also agreed by researchers to have strong influence on house price dynamics. Liew and Haron (2013) concluded that fluctuation in housing market, increasing in construction cost, population growth and increasing demand are factors which give major influence to rise of housing price. Glaeser, gyourko and Saks (2005) were of the opinion that the rising of housing price was related to decrease of new housing construction. Vries and Boelhouwer (2005) argued that the increase in supply triggers a fall in prices. It has already been established in literature that housing supply is affected by different factors. As pointed out by Singell and Lillydahl (1990) quantity of housing was found to be reduced because of impact fees or development fees imposed to developers or buyers of homes that affects the price of houses. Painter and Redfearn (2002) holds a contrary view, to them housing supply was sensitive to changes in interest rates. Although the study did not reveal how sensitive is change in interest rate to housing supply. However, it was discovered that interest subsidy had no effect in the supply of housing stocks in a highly demanded region but in low demand region interest subsidy contributed a lot to the supply of housing especially multifamily houses.

In Malaysia, the government re-imposed the Real Property Gain Tax (RPGT) on 1st January 2010. Any gain from the sales of a house within 5 years will attract 5% tax. These way speculators are not encouraged to resell their property within 5years. However the result of this strategy is not clear regarding it influence on housing price whether it will bring about a fall or not. Control on price has often brought about high price. Taylor (2010) pointed out that price of real estate in Ecuador have been improving but fail to relate to us the factors responsible for the soaring in housing prices. Conversely, Gauteng (2010) attributed the continuous buying of houses in South Africa to the low interest rates in the country.

2.3. Interest Rates and Housing Prices

Quite a number of studies have examined the relationship between interest rates and housing prices. The study carried out by Gupta and Kabundi (2010) reveals that the relative effect of interest rates in housing price was diverse in different regions. Therefore it will be very challenging or difficult to give precise verdicts base on previous studies as there were discrepancies among different findings.

In Hong Kong for instance, Joe, Eddie and Seabrook (2003) conducted an empirical study on the impact of interest rates upon housing price. It was found that lower interest rates were accompanied by higher house prices during the inflation period. However, during deflationary period, lowering interest rates did not have impact on falling real

housing price. It was discovered that in a short term there is no effect of mortgage rate on housing price change but that there is a relationship in long term (McGibany and Nourzad, 2004). Although the study failed to establish the strength of the relationship, however in a previous study by Bunnie (1998) it was found that mortgage rate was very important determinant of housing price changes and sensitivity of housing price changes for mortgage rate was found to be very high. Similarly He, Hu and casey (2009) concluded that change in mortgage rate affect American residential real estate market that can affect millions of households and many financial institutions. Chen and Patel (1998) concluded that there was long-term relationship between house price and interest rates, household income, house completion, construction cost and stock price index. In Sweden, Debelle (2004) show that most households are very sensitive to changes in interest rates.

Interest rate is often expressed as an annual percentage of the principal. The construction cost is expense incurred by a contractor for labour, raw materials, equipment, financing from bank and the service involved in building the house. Bank lending interest rate may affect the housing price through various liquidity effects. The housing price is like the price of any asset, it can be determined by the discounted expected future stream of cash flow. If the financial banks increase the availability of credit, it means that the bank will provide lower lending rates and encourage current and future economic activity. Better availability of credit will caused the demand for housing to increase when the households are borrowing constrained (Barakova, 2003). The growth in demand will then be reflected in higher housing prices.

Painter and Redfearn (2002) found out that housing supply was sensitive to change in interest rate. However, in a study conducted by Warsane, Wilhemson and Borg (2010) on the impact of interest subsidy on single and multifamily house in Sweden, it was discovered that interest subsidy had no effect in production of housing stocks in a highly demanded region. The effect was reflected in low demanded region and interest subsidy contributed a lot to the production of multifamily houses in the country.

High interest rates and capital cost will suppress the corresponding desire to buy a house. Instead loan interest rates and low cost of capital will increase the desire to buy a house. On the other hand, when interest rate is high, the corresponding cost is also high; so that investment in housing construction decreases and developers reduce the quantity otherwise develop increase. An examination of the effects of interest rates on housing prices was carried out by Getahun (2011). The study adopted correlation analysis and multiple regression analysis to test the impact of changes of interest rates on house price. The result shows that there is strong inverse elation ship between interest rates and housing price.

3. Research Methodology

The research work employed both primary and secondary sources of data collection. The secondary source of data collection was used to gather information on lending interest rate for a period of fifteen (15) years. Information were extracted from Central Intelligent Agency (CIA) world fact book while questionnaire was used as primary method of data collection from registered Estate Surveying Firm (ESF) located in Lagos state. This is because housing price index is yet to be developed in Nigeria.

The research therefore makes use of the 8th edition of the Nigerian Institution of Estate Surveyors and Valuers directory of members and registered firm. In all two hundred and five (205) firms were registered in Lagos state. The formula developed by the Research Division of the National Education Association of the Minnesota and Texas University, United State of America and cited by Ojo (2005) was adopted to determine the sample size. The formula was given thus: $S=X^2$ NP (-P) $+d^5$ (N-1) $+X^2P$ (1-P) and this resulted into One Hundred and sixty five (165) firms. The simple random sampling technique was used to select the simple size and descriptive and inferential statistics were used to analysis data collected.

4. Discussion of Findings

Table 1. *Background information of registered estate Surveyors and Valuers in the study area.*

Background information	Respondents	Percentage
Professional Membership Status		
Students	4	4.9
Probationers	27	33.3
Associates below 10 years	26	32.1
Associates Above 10 years	17	21.0
Fellow	8	9.9
Total	82	100
Location of Firm		
Lagos Island	32	39.0
Victoria Island	2	2.4
Mainland	16	19.5
Ikeja	32	39.0
Total	82	100
Firm Active Area		
Lagos Island	13	15.9
Victoria Island	21	25.6
Mainland	21	25.6
Ikeja	27	32.9
Total	82	100
Years of Experience		
1-5	30	36.6
6-10	19	23.2
11-15	18	22.0
16-20	6	7.3
21 and above	9	11.
Total	82	10

Source: Field survey 2015

Table 2. *Housing prices in lagos metropolis from 2000 to 2014.*

YEARS	TYPE OF HOUSING			
	2 Bedroom Flat	3 Bedroom Flat	Semi detached house	Detached house
2000	6,150,833.33	9,272,727.27	20,090,909.09	36,041,666.67
2001	7,112,500.00	9,504,545.45	20,736,363.64	38,875,000.00
2002	8,125,000.00	11,172,727.27	22,445,454.55	41,395,833.33
2003	8,650,000.00	11,772,727.27	23,372,727.27	43,020,833.33
2004	9,620,833.33	12,795,454.55	28,190,909.09	46,145,833.33
2005	10,673,076.92	14,291,666.67	25,716,666.67	45,557,692.31
2006	10,623,076.92	15,416,666.67	30,050,000.00	49,750,000.00
2007	15,444,444.44	18,811,764.71	32,537,500.00	52,485,294.12
2008	15,926,190.48	20,950,000.00	33,644,444.44	54,223,684.21
2009	17,042,857.14	21,785,714.29	36,610,526.32	58,513,157.89
2010	20,048,484.85	30,790,000.00	57,731,428.57	85,367,647.06
2011	21,387,222.22	29,901,020.41	58,284,693.88	83,744,680.85
2012	22,662,068.59	32,827,868.85	63,177,966.10	87,588,793.10
2013	26,188,524.59	36,437,500.00	67,934,426.23	98,834,426.23
2014	29,413,934.43	41,007,692.31	75,040,983.61	116,157,258.06

Source: Field survey 2015

Table 2, revealed the housing prices from 2000 to 2014 in Lagos metropolis. In year 2000 a 2bedroom flat sells for N6,150,833.33 but in 2014 same sells for N29,413,934.43, it implies that between a period of 15 fifteen years there is an increase of 378.21% in the housing price of two bedroom flat in the study area. 3bedroom flat, semi detached and detached house had the following percentage increase 342.24%, 273.51% and 222.29% respectively. This implies that the numbers of people who have the effective demand for a 2bedroom flats are more than all other residential housing types. As a matter of fact there is a progressive reduction in the percentage increase of housing prices from a low class of housing type to a high class of housing type.

Table 2, revealed the lending interest rate in Nigeria from 2000 to 2014. In year 2000 the lending interest rate was put at 21.27% but in 2014 it was 17%, 4.27% less than what it was in 2000. From 2003, it is obvious that the lending interest rate has been on a down ward slide from year to year except in 2009. Given the above people are encouraged to borrow. It therefore, implies that between a period of 15 fifteen years there is a decrease in lending interest rate by 4.27%.

Table 3. *Lending interest rate from 2000 to 2014.*

Year	Percentage (%)
2000	21.27
2001	23.44
2002	24.77
2003	20.71
2004	19.18
2005	17.95
2006	16.90
2007	16.94
2008	15.48
2009	18.36
2010	17.59
2011	16.02
2012	16.79
2013	16.72
2014	17.

Source: Central Intelligence Agency (CIA) world fact book (2015)

Table 4. *Effects of interest rate on housing prices in lagos metropolis.*

One-Sample Test						
Factors affecting housing prices	**Test Value = 0**					
	t	**Df**	**Sig. (2-tailed)**	**Mean Difference**	**95% Confidence Interval of the Difference**	
					Lower	**Upper**
Location	50.818	81	.000	4.671	4.49	4.85
Transportation	37.105	81	.000	3.744	3.54	3.94
Quality of Environment	49.314	80	.000	4.346	4.17	4.52
Housing Supply	37.476	80	.000	3.827	3.62	4.03
Lending interest Rate	34.336	63	.000	3.672	3.46	3.89
Income of real estate investors	36.883	76	.000	3.688	3.49	3.89
Demand	40.819	81	.000	4.159	3.96	4.36
Real property gain tax	29.885	73	.000	3.243	3.03	3.46
Gross Domestic product	29.712	76	.000	3.299	3.08	3.52
Population	37.736	80	.000	3.815	3.61	4.02
Inflation rate	36.147	79	.000	3.788	3.58	4.00
Household income	34.508	80	.000	3.679	3.47	3.89
Land price	55.694	81	.000	4.439	4.28	4.60
Labour force	6.326	80	.000	4.074	2.79	5.36

Source: Field survey 2015

Table 4, shows the effects of factors affecting housing prices in the study area. From this table, the only factor that had a mean value of 4.7 is Location. Given this outcome it implies that the respondents strongly agreed that location affect housing price. This result corroborates the work done by Cahill (2010) in Philippines, where it was revealed that varies in price was due to many factors. Among these factors, there are three that have the greatest influence. The first is location; the location of real estate in Philippines has one of the most if not the most effect on the real estate prices. Next to location is Land price with a mean value of 4.4. This implies that the respondent agreed that land price affect the housing. Following Land price are Quality of environment, Demand and Labour force with a mean value of 4.3, 4.2 and 4.1 respectively. With these result it implies that the respondents agreed that the quality of environment, Demand and Labour force affect the housing price.

Housing supply, Population, Inflation rate, Transportation, Income of real estate investor, Household income and Lending interest rate has the following mean value respectively 3.827, 3.815, 3.788, 3.744, 3.688, 3.679 and 3.672. These mean value can be rounded up to 4.0. When this is done, the implication is that the respondents agreed that Housing supply, Population, Inflation rate, Transportation, Income of real estate investor, Household income and Lending interest rate affects housing prices. Although the level of agreement cannot be compared to that of Quality of environment, Demand and Labour force.

Gross domestic product has a mean value of 3.3 while Real property gain tax has a mean value of 3.2. This clearly shows that all the factors under consideration affect housing prices in the study area. However the impact of Location is of great importance. This research work collaborates the earlier work of Gubta and Kabundi (2009) that reveals the relative effect of interest rates in housing price was diverse in different regions.

Table 5A. *Descriptive Statistics.*

	Mean	**Std. Deviation**	**N**
Interest rate	18.6020	2.76008	15
Detached	62513453.3660	25053884.72820	15

Source: Field survey 2015

The average price for a 2 Bedroom flat between year 2000 and 2014 was N15, 271,269.82 (with a standard deviation of N7,353,250.94) while the average lending interest rate was 18.6% (with a standard deviation of 2.76%).

Table 5B. *Correlations.*

		Interest rate	**detached**
Interest rate	Pearson Correlation	1	-.588*
	Sig. (2-tailed)		.021
	N	15	15
Detached	Pearson Correlation	-.588*	1
	Sig. (2-tailed)	.021	
	N	15	15

*. Correlation is significant at the 0.05 level (2-tailed).
Source: Field survey 2015

From the correlation table 5B above it could be seen that there exist a significant (P-value) correlation between the housing price of two bedroom flat and the lending interest rate. This correlation (-0.686) is a fairly strong negative relationship; which implies that the higher the housing price of two bedroom flat the lesser the lending interest rate.

Table 5C. *Model Summary.*

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.686[a]	.470	.429	5554064.89736

a. Predictors: (Constant), Interest rate
Source: Field survey 2015

The R-square and the adjusted R-square explains the amount of variation (42.9%) in the dependent variable (Housing price of two bedroom flat) that could be explained by the independent variable (lending interest rate).

Table 5D. *ANOVA*[a].

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	355964911125559.060	1	355964911125559.060	11.539	.005[b]
	Residual	401019279493420.300	13	30847636884109.254		
	Total	756984190618979.400	14			

a. Dependent Variable: two bedroom flat
b. Predictors: (Constant), Interest rate
Source: Field survey 2015

From the ANOVA table 5D above the p-value (<0.005) shows that the model is well fitted (significant) and could not be used for predictions since the P-value is less than the conventional level of significant (0.05). Hence the null hypothesis is rejected.

Table 5E. *Coefficients*[a].

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	49255467.611	10106505.543		4.874	.000
	Interest rate	-1826910.966	537804.879	-.686	-3.397	.005

a. Dependent Variable: two bedroom flat
Source: Field survey 2015

The coefficient table 5E shows the regression coefficient that fits the model. The model is given as: Housing price of two bedroom flat = 49,255,467.61- 0.686 (lending interest rate). The above model implies that the price of two bedroom flat in Lagos metropolis will be N49,255,467.61 if there is no lending interest rate to be paid. Taking loan that attract lending interest rate reduces the price of two bedroom flat by 0.686

Table 6A. *Descriptive Statistics.*

	Mean	Std. Deviation	N
Three bedroom flat	21115871.7147	10534582.15332	15
Interest rate	18.6020	2.76008	15

Source: Field survey 2015

The average price for a 3 Bedroom flat between year 2000 and 2014 was N21,115,871.71 (with a standard deviation of N10,534,582.15) while the average lending interest rate was 18.6% (with a standard deviation of 2.76%).

Table 6B. *Correlations.*

		three bedroom flat	Interest rate
Pearson Correlation	three bedroom flat	1.000	-.665
	Interest rate	-.665	1.000
Sig. (1-tailed)	three bedroom flat	.	.003
	Interest rate	.003	.
N	three bedroom flat	15	15
	Interest rate	15	15

Source: Field survey 2015

From the correlation table 6B above it could be seen that there exist a significant (P-value) correlation between the housing price of three bedroom flat and the lending interest rate. This correlation (-0.665) is a fairly strong negative relationship; which implies that the higher the housing price of three bedroom flat the lesser the lending interest rate.

Table 6C. *Model Summary.*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics R Square Change	F Change	df1	df2	Sig. F Change
1	.665[a]	.442	.399	8164118.78274	.442	10.310	1	13	.007

a. Predictors: (Constant), Interest rate
Source: Field survey 2015

The R-square and the adjusted R-square explains the amount of variation (39.9%) in the dependent variable (Housing price of three bedroom flat) that could be explained by the independent variable (lending interest rate).

Table 6D. *ANOVA*[a].

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	687197034546233.100	1	687197034546233.100	10.310	.007[b]
	Residual	866486861483365.900	13	66652835498720.450		
	Total	1553683896029599.000	14			

a. Dependent Variable: three bedroom flat
b. Predictors: (Constant), Interest rate
Source: Field survey 2015

The p-value (<0.007) shows that the model is well fitted (significant) and could not be used for predictions since the P-value is less than the conventional level of significant (0.05). Hence the null hypothesis is rejected.

Table 6E. *Coefficients*[a].

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	68334576.063	14855914.229		4.600	.000
	Interest rate	-2538367.076	790538.640	-.665	-3.211	.007

a. Dependent Variable: three bedroom flat
Source: Field survey 2015

The coefficient table 6E shows the regression coefficient that fits the model. The model is given as: Housing price of three bedroom flat = 68,334,576.06 - 0.665 (lending interest rate). The above model implies that the price of two bedroom flat in Lagos metropolis will be N68,334,576.06 if there is no lending interest rate to be paid. Taking loan that attract lending interest rate reduces the price of two bedroom flat by 0.665

Table 7A. *Descriptive Statistics.*

	Mean	Std. Deviation	N
semi detached	39704333.2973	19076860.02142	15
Interest rate	18.6020	2.76008	15

Source: Field survey 2015

The average price for a Semi detached between year 2000 and 2014 was N39,704,333.30 (with a standard deviation of N19,076,860.02) while the average lending interest rate was 18.6% (with a standard deviation of 2.76%).

Table 7B. *Correlations.*

		semi detached	Interest rate
Pearson Correlation	semi detached	1.000	-.617
	Interest rate	-.617	1.000
Sig. (1-tailed)	semi detached	.	.007
	Interest rate	.007	.
N	semi detached	15	15
	Interest rate	15	15

Source: Field survey 2015

From the correlation table above it could be seen that there exist a significant (P-value) correlation between the housing price of two bedroom flat and the lending interest rate. This correlation (-0.686) is a fairly strong negative relationship; which implies that the higher the housing price of Semi detached the lesser the lending interest rate.

Table 7C. *Model Summary.*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.617[a]	.381	.334	15573608.46337	.381	8.007	1	13	.014

a. Predictors: (Constant), Interest rate
Source: Field survey 2015

The R-square and the adjusted R-square explains the amount of variation (33.4%) in the dependent variable (Housing price of Semi detached) that could be explained by the independent variable (lending interest rate).

Table 7D. *ANOVA*[a].

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1941987588461389.000	1	1941987588461389.000	8.007	.014[b]
	Residual	3152984647416364.000	13	242537280570489.530		
	Total	5094972235877753.000	14			

a. Dependent Variable: semi detached
b. Predictors: (Constant), Interest rate
Source: Field survey 2015

The p-value (<0.014) shows that the model is well fitted (significant) and could not be used for predictions since the P-value is less than the conventional level of significant (0.05). Hence the null hypothesis is rejected.

Table 7E. *Coefficients*[a].

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	119081693.675	28338660.634		4.202	.001
	Interest rate	-4267141.188	1508005.896	-.617	-2.830	.014

a. Dependent Variable: semi detached
Source: Field survey 2015

The coefficient table shows the regression coefficient that fits the model. The model is given as: Housing price of Semi detached = 119,081,693.68- 0.617(lending interest rate). The above model implies that the price of two bedroom flat in Lagos metropolis will be N119,081,693.68 if there is no lending interest rate to be paid. Taking loan that attract lending interest rate reduces the price of Semi detached by 0.617

Table 8A. *Descriptive Statistics.*

	Mean	Std. Deviation	N
Detached House	62513453.3660	25053884.72820	15
Interest rate	18.6020	2.76008	15

Source: Field survey 2015

The average price for a Detached House between year 2000 and 2014 was N62,513,453.37 (with a standard deviation of N25,053,884.73) while the average lending interest rate was 18.6% (with a standard deviation of 2.76%).

Table 8B. *Correlations.*

		Detached House	Interest rate
Pearson Correlation	Detached	1.000	-.588
	Interest rate	-.588	1.000
Sig. (1-tailed)	Detached	.	.011
	Interest rate	.011	.
N	Detached	15	15
	Interest rate	15	15

Source: Field survey 2015

From the correlation table 8B above it could be seen that which implies that the higher the housing price of detached house the lesser the lending interest rate.

Table 8C. *Model Summary.*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.588[a]	.346	.296	21026491.33292	.346	6.877	1	13	.021

a. Predictors: (Constant), Interest rate
Source: Field survey 2015

The R-square and the adjusted R-square explains the amount of variation (29.6%) in the dependent variable (Housing price of detached house) that could be explained by the independent variable (lending interest rate).

Table 8D. *ANOVA*[a].

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3040286568581444.000	1	3040286568581444.000	6.877	.021[b]
	Residual	5747473391052860.000	13	442113337773296.940		
	Total	8787759959634304.000	14			

a. Dependent Variable: detached
b. Predictors: (Constant), Interest rate
Source: Field survey 2015

The p-value (<0.005) shows that the model is well fitted (significant) and could not be used for predictions since the P-value is less than the conventional level of significant (0.05). Hence the null hypothesis is rejected.

Table 8E. *Coefficients*[a].

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	161832076.034	38261049.365		4.230	.001
	Interest rate	-5339136.795	2036013.232	-.588	-2.622	.021

a. Dependent Variable: detached
Source: Field survey 2015

The coefficient table 8E shows the regression coefficient that fits the model. The model is given as: Housing price of detached house = 161,832,076.03 - 0.588 (lending interest rate). The above model implies that the price of two bedroom flat in Lagos metropolis will be N161,832,076.03 if there is no lending interest rate to be paid. Taking loan that attract lending interest rate reduces the price of two bedroom flat by 0.588

5. Recommendations and Conclusion

Since housing price is driven by location it is therefore suggested that the state government need to strategies in there development pattern so as to bring about a health competition in different part of the state. This will reduce concentration in certain area and ensure the demand is spread in different parts of Lagos metropolis. As part of the development strategy the state government should ensure that the quality of environment is improve upon.

Though there exist a significant correlation between the housing price and the lending interest rate. This correlation is a fairly strong negative relationship. However an interest rate of 17% is still on a higher side, not many people can afford to take a loan because of the percentage. The financial institution should further reduce the lending interest rate especially to those involved in real estate sector and effort should be gear toward monitoring such loan.

From the discussion of findings it is evidence that there exist a significant relationship between the housing price of all types and the lending interest rate. The relationship is a fairly strong but negative; which implies that the higher the housing price the lesser the lending interest rate. There is strong agreement that location affect housing price. Next to location is Land price with a mean value of 4.4.

The amount of variation ranges from 29.6% to 42.9% depending on the type of housing in the dependent variable (Housing price) that could be explained by the independent variable (lending interest rate). In Lagos metropolis, lending interest rate though impact on housing prices, however there are other factors that influence housing a major factor is location as far housing price is concerned in the study area.

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