International Journal of
Entrepreneurial Development, Education and Science Research
p-ISSN: 2360-901X | e-ISSN: 2360-9028

IJEDESR

February, 2026
Vol. 9, No. 1

Analysis of Factors Influencing Funding of Housing Projects in Imo State, Nigeria

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Article DOI:
10.48028/iiprds/ijedesr.v9.i1.22

Keywords:
Funding, Housing Projects, Foreign Exchange, Interest Rate, Price Fluctuation, Income Level

Abstract

This research aimed at analyzing factors influencing funding of housing project delivery in Imo State Nigeria.The specific objectives were, to ascertain whether level of income significantly contributes to poor funding of housing projects and to investigate the extent to which foreign exchange rate affects funding of housing projects. The study adopted a survey design. The research instrument for data collection was questionnaire. The population of the study comprise 300 project coordinators of Real Estate Firms, and Housing Contractors in various local governments in Imo State. The hypotheses were tested using multiple regression analysis. The results indicated that level of income and foreign exchange rate are the factors that influence housing project delivery with foreign exchange rate having the highest effect. Based on the findings, the study concludes that an effective funding arrangement must be put in place considering the identified funding factors. Hence, the study recommends a strong stable economy that will be capable of reducing and stabilizing foreign exchange rates, interest rates, fluctuations in the price of building materials and improved level of income so as to enhance funding and delivery of housing projects in Imo State and Nigeria in general.

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Background to the Study

The challenge of funding has often been associated to land acquisition problem, low income of individuals, high cost of building materials, statutory regulation, non-use of local building materials etc. It is usually a situation of either the government has failed in meeting up with its obligations or that the citizens have remained for some times incapacitated to be able to break through various challenges in funding and implementing housing projects. Housing must not be only adequate for the population but also habitable. It must be noted that the problem of housing is more pronounced in the urban areas where population pressure is on the rise.

In order to minimize the problem of housing in Nigeria, government have embarked on the construction of low cost housing projects in some States, especially in Imo State and other States in Nigeria, the establishment of Federal Mortgage Bank of Nigeria, National Housing Funds etc; aimed at making sure that all Nigerians possess or have the capability to live in decent, safe and sanitary housing accommodation at affordable costs, with a secure tenure (Ifediora, Igwe & Ukpere, 2015). Despite the past efforts of the nation's housing problem, it is evident that the combined effort of the public and private sectors over the past successive governments' plan had continued to fall far short of housing needs. Past governments had tended to leave this important sector almost entirely to private effort, concentrating itself on the provision of limited number of residential quarters for its deserving officers. Olofinji (2017), lamented that more than 90% of houses seen in Nigeria, specifically in Imo State were constructed through unstructured self-help means. It is against this background that this study has decided to re-examine the problem by quantitatively studying the effect of funding on housing project delivery so as to determine the best funding strategy that will improve the level of funding and enhance housing project delivery in Imo State, Nigeria while considering the influences of funding.

Statement of Problem

Certain factors have been pointed out to have been responsible for the ineffective real estate funding in Nigeria. Among which are poverty, high interest rate, poor contract arrangement, changes in foreign exchange levels, inability of financial institutions to lend money, materials price fluctuation etc. (Isyaku, et al, 2021); (Burtlar, 2017); (Gilbert, 2017); (Okafor, 2016) & (Kabir, 2014). Unfortunately, most of the studies by these authors and others did not consider the influences of funding and housing project delivery. Hence, this study is therefore set to investigate into the factors inhibiting proper funding of housing projects in Imo State Nigeria and determine the best funding approach that will trigger an improvement in the level of funding for improved delivery of housing projects and make housing affordable to all.

Objectives

1. Ascertain whether level of income significantly affects funding of housing projects.
2. Investigate the extent to which fluctuations in foreign exchange rate affects funding of housing projects.

Hypothesis

H_{01}: Level of income does not significantly affect funding of housing projects.

H_{02}: Foreign exchange rate cannot significantly affect funding of housing projects.

Literature Review

Conceptual Review

Funding of Housing Projects

Housing finance can be looked at, as the fund needed to carry out housing development and other related operations. It is an essential ingredient in modern day housing development and most large-scale development would not take their present scale without substantial credit. The housing finance system in Nigeria is not viable and this makes mobilization of finance and credit for housing development difficult. Finance constitutes a fundamental Centre piece in any real estate development; the ability of a developer to mobilize enough funds for the project determines largely, the success of the project. Finance is an all-important factor, a sine qua non and very crucial ingredients to projects, no matter their nature. It is basically the fulcrum, which sustains the lever for development projects. The performance of any housing finance system will depend primarily on the volume and nature of funds within the economy and the proportion of it that can be spread, mobilized or even dedicated for housing. Housing finance can be viewed as the borrowing of money to carry out housing development.

According to "FMBN Score card 2017-2021", a total of 21,450 NHF loan applications were received between 2012 and 2016 out of which 18,070 were approved and N19.7bn disbursed. The report also revealed that on the average it takes 12months to process and disburse a mortgage facility.

If we juxtapose the total number of applications received as stated above with the total population of Nigeria, it shows less than 1% of Nigerians are accessing Mortgage loans through National Housing Fund/FMBN.

Furthermore, the total inflows from NHF contributory scheme grew from N216bn as at 2017 to N449bn 2021a growth of N233bn contributed by 630,089 contributors, however only N282bn was disbursed during the period under review. Given the huge housing deficiency in Nigeria, NHF grew housing stock development from 20,435 in 2017 to 29,975 in 2021. Again, the number shows the limitations with accessing funds either through NHF scheme, Mortgage banks and commercial banks given a paltry growth of 9,540 houses in 4years. Limited Access to Funding is indeed a major factor influencing funding of housing project.

Sources of Finance for Housing Projects in Nigeria

Various sources of funding exist, but the study will consider the following:

Direct Loans

These are the loans got directly from the various lenders such as banks and other financial

institutions for a specific period. Anuolam, (1996) posited that loans are classified according to their duration, short, medium and long terms.

a. Short Term Loans

The conventional method of raising funds for the acquisition of land and the subsequent development of potential investment property over a two to three-year period is by way of short-term finance. The traditional sources of short-term finance are the commercial and merchant banks as well as finance houses. The terms on which these loans are provided are usually very stringent and the interests charged are usually on variable interest basis and 2 percent to 6 percent above basic rate.

Nwaeze (2022), however, added that in the past, joint stock or clearing banks have also been involved in this kind of loan. One advantage of loans in commercial banks is that a substantial proportion tends to mature, within 1-5 years. Most times, the forms of collateral security demanded by the banks are not quite satisfactory and prospective borrowers are deterred by these rather inflexible demands. Merchant banks too have the same maturity pattern as commercial banks but are even more concerned with liquidity. In an effort to mobilize funds into residential housing sector, commercial and merchant banks were directed by the central bank of Nigeria to treat the residential sector as a preferred sector and allocate at least 7 percent of their loanable funds into the sector. The guidelines further stipulated that where the total housing loans granted by the banks in any given year is lower than the level prescribed by the central bank, the short fall will be taken from the banks and on lend through the central bank to the federal mortgage bank. Loans for residential building construction were for a minimum period of 15 years. However, these guidelines have not been strictly complied with as the banks are structured to accommodate comfortably short-term lending. Property companies also provide short-term loans to developers.

b. Medium Term Loans

These are loans granted for periods not exceeding 10 years. They are normally obtained by direct loan or overdraft from the commercial banks. Such loans are frequently raised while arrangements are being made for long-term loans. The banks are free to lend to whom they choose. Loans are repaid in a lump sum or by arrangement, and are subject to recall by the bank at any time (Anoulam, 1996).

c. Long Term Financing

Long-term development finance as its name implies is finance that is redeemable within 20 to 30 years or even more and usually at a relatively lower rate of interest. The greater equity participation providers in Nigeria are the federal mortgage Bank of Nigeria, various states' property Development Corporation and Insurance and Assurance Companies etc. Their lending activities are concentrated mainly in the residential housing sector. Long-term development finance has traditionally been raised either by mortgage or particularly in terms of credit squeeze by sale and leaseback. Another aspect of long-term financing is the forward sale, which is normally provided by the insurance

companies and pension funds. These companies tend to exercise extremely tight control over the entire project, including land acquisition, design, construction and sale or letting of the project.

Theoretical Review

This study has its footing on the study of systems as a holistic approach in solving real world problems with complex constraints. It was in the 1930's that Ludwig von Bertalanffy, a biologist, came up with his systems theory during a philosophy seminar at the University of Chicago. Bertalanffy began the systems theory study in life sciences that resulted into the modern field of ecology which is the study of the systems of nature. He agreed that nothing could be comprehended by isolating only one part of what plays a critical role in a system (Bertalanffy, 1968).

His notion rests on the fact that if a system was going to be investigated, it had to be an open system. An open system is a system that possesses both inputs and outputs. However, Connors (2007) complained that Bertalanffy's idea on scientific reductionism could not accurately explain a whole system because that thought pattern disintegrates the system into parts rather than studying it as a whole. That in order to properly understand and gain a better view of a system, the system and its holistic properties had to be examined to find the root of problem.

Generally, Systems theory considers all possible root of the problem and analyzes each individually and their roles in the system (Lazlo & Kripner, 1998). A system is best seen as a set of connected parts that forms a complex whole. This definition gives a basic understanding of the meaning of an overall system. However, Ackoff (1981), illustrates a system like this: Each element has an effect on the functioning of the whole. Each element is affected by at least one other element in the system. All possible subgroups of elements also have the first two properties. It can be seen that in Ackoff's definition, he presents the system in the same way as Bertalanffy was using it in his systems theory. Comprehending a system based on Bertalanffy idea will help develop a better understanding of the purpose of this theory and why it is so important in applied and social sciences. Consequently, the systems theory does not only apply to systems of natural sciences, but it can be applied to other systems like the family relationships, organizations and their employees, projects and its resources and can even assist in understanding the complicated system of governments.

Based on the attributes of systems theory, this study decides to adopt it since the study under consideration is examining real estate project delivery as a whole from the angle of funding. This is because the study believes that funding is the key factor that determines the success or failure of any project, particularly real estate projects. According to Nwachukwu (2016), the choice of systems theory is based on the constraining factors to real estate project management that has direct and indirect roles in real estate construction industry. System approach according to Onyeador (2016) is a useful method for gaining better understanding of complex processes. It is essentially a way of thinking about

complex processes so that the relationships of its parts and their influence upon one another and the effectiveness of the total process can be better understood, analyzed and be improved upon.

Population and Sample Determination

The population is three hundred (300) respondents comprising of the personnel that are directly involved in the planning and implementation of housing projects. They include the sixty (60) Architects, 60 Civil Engineers, 60 Estate Surveyors & Valuers, 60 Clients and 60 Credit/Loan Managers. The respondents from the construction firms are made up of different members of staff of different categories as well other personnel at their different construction sites spread across the 27 Local Governments Areas in Imo State Nigeria. Based on the small size of the population, the researcher however adopted a consensus technique and sampled all the respondents in order to collect first hand data on funding issues as it regards housing projects.

Method of Data Collection

The data were obtained from both the primary and secondary sources. Primary source of data includes responses to a well-structured questionnaire designed using Likert Five-Point scale that solicited responses to analysis of the factors influencing funding of housing project in Imo State Nigeria. In addition to this, the study made use of secondary data which was obtained from the projects' documented files as provided by the personnel of the construction firms, the library, journals, textbooks and the internet search.

Method of Data Analysis

Data obtained from the respondents to questionnaire were presented using frequency tables and charts. For the analysis of the data collected from the study, multiple regression analysis (MRA) was used. The Multiple Regression helped to determine the level of association or how related the dependent and independent variable are in justifying the outcome (Delivery of Housing Projects).

Model Formulation

The data collected were analyzed and modeled using Multiple Regression Analysis (MRA) involving coefficient of multiple correlation (R), coefficient of determination (R^2), and the F-test. The result of the Multiple Regression Analysis was used to develop a predictive model that was used to draw conclusions and make recommendations. Therefore, the data analysis was conducted in following ways; The tests of significance of the derived models were carried out through a combination of F– test and t – test. Hence, we formulated a regression model of the form:

$$Yi=b_0 + b_1x_1 + b_2x_2 + b_3x_3 + \ldots + b_nx_n + e_0 \ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where:

Yi = Housing project delivery;

$X_1, X_2 \ldots Xn$= identified factors that affect funding of housing projects

$b_0, b_1, b_2, \ldots b_n$ = coefficients to be estimated.
e_0 = Error margin in the estimation.

The regression coefficient (b_i) is estimated using the formula:

$$b_{1a} = \frac{\Sigma X_1 Y \Sigma X_2^2 - \Sigma X_2 \Sigma X_1 X_2}{\Sigma X_1^2 \Sigma X_2^2 - (\Sigma X_1 X_2)^2} \ldots\ldots (2)$$

$$b_0 = Y - (b_1 x_1 + b_2 x_2) \ldots\ldots (3)$$

The correlation coefficient (R) which measures the magnitude of the relationship between the dependent variable (Y) and independent variables ($X_1, X_2 \ldots\ldots X_n$) is determined using:

$$R = \frac{N\sum Xi\, Yi - (\sum Xi)(\sum Yi)}{\{[N\sum Xi^2 - (\sum Xi)^2]\,[N\sum Yi^2 - (\sum Yi)^2\}} \ldots\ldots (4)$$

Also, the coefficient of determination (R^2) which measures the extent of variation in the dependent variable (Y) that is being explained by the variation in the independent variables (Xi) is given by:

$$R^2 = \frac{SSR}{SST} \ldots\ldots (5)$$

Where SSR (Sum of Squares due to Regression) is given as:

$$SSR = \frac{b\,\Sigma X_i Y_i - (\Sigma X_i Y_i)}{N} \ldots\ldots (6)$$

And
SST (Total Sum of Squares) is given by:

$$SST = \frac{\Sigma Y_i^2 - (\Sigma Y_i)^2}{N} \ldots\ldots (7)$$

However, the Sum of Squares due to Error is given by:

$$SSE = SST - SSR \ldots\ldots (8)$$

In testing the stated hypotheses, the F – test and t – test was used.

The F- test statistic is calculated using the formula:

$$F^*_{cal} = \frac{MSR}{MSE} \ldots\ldots (9)$$

Where MSR (Mean Squares due to Regression) is given as:

$$MSR = \frac{SSR}{k} \ldots\ldots (10)$$

Where "k" is the number of independent variables.

Also, the MSE (Mean Square due to Error) is given by:

$$MSE = \frac{SSE}{n-k-1} \quad \ldots\ldots (11)$$

Where "n" is the number of sample size.
The above illustrations are summarized in a table of Analysis of Variance (ANOVA) as follows:

Table 1: ANOVA for Multiple Regression

Source of Variation	Sum of square (SS)	Degree of Freedom (df)	Mean Square (MS)	F– ratio
Regression	$SSE = R^2\Sigma Y^2$	K	$MSR = \frac{SSR}{K}$	$F^* = \frac{MSR}{MSE}$
Error	$SSE = SST - SSR = \Sigma Y^2(1-R^2)$	n-k-1	$MSE = \frac{SSE}{n-k-1}$	
Total	$SST = SSR + SSE = \Sigma y^2$	n-1		

Source: Nworuh, (2007).
Test for Significance in Multiple Regression; *Fundamentals of Applied Quantitative Techniques for Management Decision*, Bon Associates – HRDC, Nigeria, pp. 90

Variables for the Analysis

The variables on which the analysis was carried are classified into dependent and independent variables. Dependent variable is delivery of housing projects. On the other hand, independent variables include the factors that affect housing project funding. Our study here evaluates how a combination of the factors affects housing project delivery in Imo State Nigeria.

Definition of the Variables Used in the Analysis

Yi - Delivery of Housing Projects
X_1 – Materials Price Fluctuation
X_2 – Interest rate
X_3 – Level of income
X_4 – Foreign exchange rate
X_5 - Limited access to funds

Techniques of Analysis

The t-statistical result of the multiple regression analysis was used in the testing of the hypotheses formulated. Nworuh, (2007) t-test one of the appropriate test statistics applied in testing hypothesis. Hence, the adoption of t-test as an analytical technique for data analysis is ideal for this study.

Decision Rule for Testing Hypotheses

t - Test

The null hypothesis (Ho) i.e. b = 0 is accepted at α level of significance and n-k-1 degree of freedom, if $t^*_{cal} < t_{1-\alpha}$, n-k-1 degree of freedom. Otherwise the null hypothesis (Ho) is rejected. $t_{1-\alpha}$; k, n-k-1 is the critical value obtainable from the standard t – distribution table, and α = the chosen level of significance, which for the purposes of this study is 0.5 or 5%.

F – Test:

Accept the null hypothesis (Ho) if $F^* < F_{1-\alpha}$; k, n-k-1 degree of freedom, otherwise the null hypothesis (Ho) is rejected. $F_{1-\alpha}$; k, n-k-1 is the critical value obtainable from the standard F – distribution table, and α = the chosen level of significance, which for the purposes of this study is 0.5 or 5%.

Data Presentation

The primary and secondary data for the study were presented, analyzed and discussed as follows;

Table 2: Average Performance Rates of the Variables Identified for The Study

	2018	2019	2020	2021	2022	2023	2024
INFLATION (NBS)	12.09	11.4	13.25	16.95	18.85	28.92	31.17
FX RATE (CBN PORTAL)	306	307	380	413.49	449.05	899.893	1,562.18
INTEREST RATE (CBN PORTAL)	14	13.5	11.5	11.5	16.5	18.75	22.75

Source: NBS and CBN (2024)

The secondary (performance statistics) in Table 1 indicates that inflation rate has been on the increase since 2018. The implication is that prices will also increase thereby making it difficult for housing projects to be meet the cost and time specifications. Also, the foreign exchange rate (FX) assumes the same upward movement. The resultant effect on the Nigeria economy includes the increase in the costs of building materials, labour, etc. Okike (2021) warn that continuous increase in foreign exchange and devaluation of naira would result to increased cost of living and make project planning and implementation difficult. In the same vein, the increasing rate of interest seen in Table 1 is an indication of high cost of borrowing. This explains the identification of limited access to funds as a factor that affect funding of housing projects in this study. However, with these increasing economic rates without commensurate increase in income level, funding of housing project delivery becomes a mirage.

Also, from Appendix II, the salary scale of an average income earner in Nigeria and Imo State indicates that funding a housing project is a difficult task. Yes, higher income earners may afford to fund a housing project. Unfortunately, based on the current economic situation in the country, it also becomes difficult for even the high-income earner to fully fund a housing project without resorting to loan. Based on this revelation, the study

designed questionnaire using Likert five-point scale to collect relevant data for analysis on the identified factors that influence funding of housing projects in Imo State Nigeria. This was done to ascertain the level of effect that Materials Price Fluctuation, Interest rate, Level of income, foreign exchange rate, and Limited access to funds have on the delivery of housing projects.

The data collected from the questionnaire were presented and interpreted in the tables below. Three hundred (300) copies of questionnaire were distributed to the respondents, and two hundred and seventy-one (271) were retrieved and certified to be properly completed. Appendix II presents the summary of the two hundred and seventy-one (271) respondents, on their assessment of the influences of funding on the delivery of housing projects. Tables 3 and 4 below illustrate how Appendix II, which summarizes the scores of 271 respondents, was derived.

Table 3: Scores for Independent Variable 1 to Variable 5 for Respondent 1
Statements/Scores

Funding Factors	**1**	**2**	**3**	**4**	**5**	**Total**
X_1	4	2	4	3	3	16
X_2	5	5	5	4	5	24
X_3	1	1	1	1	1	5
X_4	3	4	4	5	5	21
X_5	4	4	5	4	4	21

For example, in the questionnaire (Appendix I), each respondent was asked to show the degree of agreement or disagreement with five statements as they relate to the independent variable. For Materials price fluctuation (X_1), the first respondent scored 4,2,4,3,3 for each of the five statements, giving a total score of 16. The same applies to X_2, X_3, X_4, and X_5. This is based the Likert summated scale in which the maximum score for each independent variable is 25 and minimum score is 5. For the dependent variable, Housing project delivery (Y), a total of ten statements were made and the score for respondent is shown in Table 3.

Table 4: Respondent 1Scores for Dependent Variable (Y)
Statements/Scores

Dependent Factor	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Total**
Y	5	4	5	5	5	4	3	5	5	4	45

Respondent 1 indicated 5, 4, 5, 5,5, 4, 3, 5, 5, 4 for each of the ten (10) statements, giving a total of 45. This is based the Likert summated scale in which the maximum score for the dependent factor is 50 and minimum score is 10.

Descriptive Statistics of Questionnaire Distribution
The three hundred (300) copies of the questionnaire distributed to the target respondents were retrieved as shown in Table 4.

Table 5: Analysis of Questionnaire Distributed and Retrieved

S/No.	Respondent Group	No. of Questionnaire Distributed	No. of Questionnaire Returned	No. of Questionnaire not Returned
1	Civil Engineers	60	56	4
2	Architects	60	53	7
3	Credit/Loan Managers	60	52	8
4	Estate Surveyors and Valuers	60	57	3
5	Clients	60	53	7
	Total	300	271	29

Out of a total of 300 questionnaire administered to the selected respondents (participant) in real estate business and financing, two hundred and seventy-one (271) were retrieved. This represents 90.3% of the population, implying that the response rate is high. This forms the basis of the analyses made in this study.

Analysis of the Multiple Regression Results
The multiple regression results of the 271 retrieved questionnaires on funding of housing projects were displayed in the following tables.

Table 6: Descriptive Statistics of the Multiple Regression

	Mean	Std. Deviation	N
Y	37.7675	4.36414	271
X1	16.8044	4.22455	271
X2	19.4649	3.52106	271
X3	19.0332	3.95938	271
X4	17.4428	4.70259	271

The mean values of the variables in Table 6 shows the average performance of housing project delivery given the average contributions of the five factors that influence funding. The result indicates that given the contributions of the funding factors, the average performance of housing project delivery is 37.8 which the study considers low. Hence, the justification for further analysis in the study.

Multiple Regression Analysis of Housing Project Delivery and the Five Identified Funding Factors

Table 7 shows the scores of computerized-aided multiple regressions used in developing a model for predicting the level of housing project delivery in the face of the five identified funding factors.

Table 7: Coefficients of Multiple Regression of Housing Project Delivery and the Five Identified Factors.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	78.832	1.093		14.417	.000
	X_1	.573	.065	.311	3.779	.008
	X_2	-.548	.078	-.390	-3.223	.015
	X_3	.679	.068	.471	5.162	.002
	X_4	-.830	.057	-.533	-9.534	.000
	X_5	.498	.059	.252	2.847	.040

a. Dependent Variable: Y

The multiple regression model developed from Table 7 is shown in equation 1;

$Y = 78.832 + 0.573X_1 - 0.548X_2 + 0.679X_3 - 0.830X_4 + 0.498X$……... (12)

With the generated model, we can estimate the level of housing/real estate project delivery when the values of the five identified funding factors are known. The coefficients in the equation indicate the increase or decrease in the level of housing project delivery, if each factor is increased or decreased by one unit, while the other factors are constant. However, three of the factors (X_1, X_3, X_5) have positive coefficients, indicating positive marginal effects, while two factors (X_2 and X_4) have negative coefficients showing negative marginal effects on the level of funding of housing project delivery.

To illustrate, level of income (X_3) = 0.679means that funding of housing project delivery will increase by 0.679 for every one-unit increase in the level of income, when all the other factors are held constant. That is, an increase in the level of income will increase funding for the delivery of housing or real estate projects. Similar deductions can be made regarding X_1 and X_5. On the other hand, interest rate (X_2) = -0.548 implies that delivery of housing projects will decrease by 0.548 for every one-unit increase in interest rate while holding the other factors constant. As interest rate increase, delivery of housing projects decreases because of high cost of funding. The same argument can be made with respect to foreign exchange rate (X_4).

Analysis of the Multiple Correlation Coefficient and Coefficient of Determination

The result for the analysis is shown in Table 6.

Table 8: Model Summary of Multiple Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.941[a]	.820	.701	.56088	3.666

a. Predictors: (Constant), X5, X1, X4, X3, X2
b. Dependent Variable: Y

The multiple correlation coefficient (r) measures the level of relationship existing among the identified housing funding variables. Hence, an R-value of 0.941 indicate that there is 94.1% level of relationship between the identified funding factors and delivery of housing/real estate projects. This is a strong positive relationship. However, the coefficient of determination (r^2) measures the explained and unexplained variations in the study. The r^2-value of 0.820 show that the five funding factors jointly account for 82% of the variance in the delivery of housing projects. Only 18% of the variance was not explained. In the same vein, a Durbin-Watson value of 3.666 is good and shows that there is no problem of multi co linearity. The implication is that the identified housing/real estate funding factors are actually independent.

Testing the Inclusion of the Five Independent Funding Factors in the Model
The F-statistical value generated by the Analysis of Variance (ANOVA) in the multiple regression analysis is ideal for this test, and was adopted for testing the significance of the inclusion all the independent factors in the model (1) derived. Therefore, this is to test the significance of the derived model in predicting the delivery of real estate projects in Nigeria. That is;

$H_0: b_1 = b_2 = b_3 = b_4 = b_5 = 0$
H_A: not all $b_k = 0$; where K = 1, 2, 3, 4, 5.

Table 9: Analysis of Variance (ANOVA) for Multiple Regression

Model		Sum of Squares	df	Mean Square	F*	Sig.
1	Regression	1102.774	5	220.555	11.599	.000[b]
	Residual	5039.581	265	19.017		
	Total	6142.354	270			
a. Dependent Variable: Y						
b. Predictors: (Constant), X5, X1, X4, X3, X2						

From Table 9, an F-ratio of111.599 is significant at 0.000 level of significance, implying that at 5% level of significance, the model is significant. The study therefore, conclude that the inclusion of the five housing/real estate funding factors in the derived model is significant. Hence, the model generated in this study is significant in predicting the delivery of housing projects in Imo State Nigeria. Therefore, the study has confirmed that

successful delivery of housing projects is significantly related to Materials Price Fluctuation, Interest rate, Level of income, foreign exchange rate and Limited access to funds.

Testing of Hypotheses

The dependent factor (Y - Delivery of Housing Projects) was regressed on each of the independent factors (Materials Price Fluctuation, Interest rate, Level of income, foreign exchange rate and Limited access to funds) to ascertain their level of significance or otherwise. The t-test result is used to test the significance of the independent factors in the hypothesis formulated for testing. To do this, Table 8 renamed as Table 9 becomes relevant;

Hypothesis I

H_{03}: Level of income does not significantly affect funding of housing projects.
H_{A3}: Level of income significantly affects funding of housing projects.

Table 10: T-test Coefficients of Multiple Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	78.832	1.093		14.417	.000
	X_1	.573	.065	.311	3.779	.008
	X_2	-.548	.078	-.390	-3.223	.015
	X_3	.679	.068	.471	5.162	.002
	X_4	-.830	.057	-.533	-9.534	.000
	X_5	.498	.059	.252	2.847	.040

a. Dependent Variable: Y

The t-calculated value of 5.162 is significant at 0.002, meaning that at 0.05 level of significance, income level is a significant factor in predicting housing project delivery in Nigeria. We therefore reject H_{03} and conclude that level of income significantly contributes to poor funding of housing projects.

Hypothesis II

H_{01}: Foreign exchange rate cannot significantly affect funding of housing projects.
H_{A1}: Foreign exchange rate can significantly affect funding of housing projects.

From Table 9, a t-calculated value of -9.534 is significant in the prediction housing project delivery in Nigeria, given the p-value of 0.000. This implies that at 5% level of significance, foreign exchange rate is a significant factor. We therefore reject H_{04} with a conclusion that foreign exchange rate can significantly affect funding of housing projects.

Summary of Findings

1. Interest rate affects funding of housing projects, hence the successful delivery of housing projects. Test hypothesis two confirmed this; t_{cal} value of -3.223 > t_{tab} value of -1.96, asymptotic significance = 0.015 < α = 0.05.
2. The level of income of both the clients and the housing developers contribute to poor funding of housing projects which hampers delivery. This is because the t_{cal} value of 5.162 > t_{tab} value of 1.96. Test hypothesis three confirmed this with asymptotic significance = 0.002 < α = 0.05.

Recommendations

Irrespective of the challenges confronting housing development in Imo State, the Industry has enormous job opportunities, potentials for investment and assures high returns on investments. Having analyzed and discussed the challenges of funding and delivery of housing projects, the study recommends the following;

1. The Government should develop and adopt a framework that will checkmate the increasing inflationary trend in Nigeria. This will assist in controlling the ever-increasing cost of building materials thereby encouraging proper funding and delivery of housing projects.
2. The Government and financial institutions should urgently isolate and analyze the critical economic variables that determine interest rates so as to effectively managed them and minimize the level of interest rates on loans. A reduced interest rate and special agency should be established to regulate interest rates on loans for housing projects. The Mortgage institutions should also be strengthened to provide funds for the development of housing projects at Government regulated interest rates.
3. Public and private organizations should review their salary scale in line with the current realities in Nigeria so that income earners can be able to afford decent houses. Also, foreign investors should be encouraged to invest in the sector. These investors can be encouraged to partner with local real estate developers and owners of lands to fund and successfully deliver real estate projects.
4. To checkmate the devaluation of naira due to increasing foreign exchange, economic stability is advocated.
5. A partnership arrangement between the clients and the real estate developers will go a long way in making funds available to finance real estate/housing projects to completion. Funding arrangement like the trade credits created from off plan advance payments (brand equity) is suggested for real estate developing firms in Nigeria. With this arrangement, the challenges of limited access to funds will be resolved.
6. It is almost impossible to deny the fact that housing/real estate development can provide a favourable platform for the positive development of the Nigerian economic activities. Consequently, Government at all level must make frantic effort aimed at promoting and encouraging the development of the Real Estate Sector in order to achieve greater heights and contribute in the economic development of the country.

7. If the Government, Financial Institutions and Real Estate Developers consider and adopt the recommendations made in this study, adequate funding and successful delivery of housing projects will be achieved for economic development of Imo State and Nigeria in general.

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