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FACTORS INFLUENCING ACCESSING FUNDING OF HOUSING PROJECTS IN IMO STATE

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Abstract

This research was to analyze the factors influencing funding of housing project delivery in Imo State Nigeria. The specific objectives were, to: Determine the extent to which materials price fluctuation contributes to poor funding of housing projects; evaluate the effect that interest rate has on 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 materials price fluctuation, interest rate, foreign exchange rate and limited access to funds are significant funding 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 that fluctuation in cost of materials should be put into consideration during bidding process for building construction, fluctuation in foreign exchange rate should be factored in during costing of foreign materials, interest rate for loan should be considered especially for mega projects that require loan for funding.

Keywords:*Funding, Housing Projects, Foreign Exchange, Interest Rates, Price Fluctuations, Income Level*

Background Information

Article 25 of the Universal Declaration of Human Rights (UDHR) of United Nations provides that States must also take action to ensure that all citizens enjoy an adequate standard of living. It identifies the provision of housing as a global challenge which ranks along with family, food and clothing in the hierarchy of needs (Gleick, 1999).

In Europe and America, governments are better structured and therefore have been able to reduce the demands of housing through government interventions and also the introduction of the mortgage system.

In Africa, governments are not well structured to address infrastructural challenges and the mortgage system is nonexistent because most banks are too weak to provide mortgages to would-be home buyers. Without government intervention and near absence of bank financing, the real estate sector in Nigeria faces huge challenges of funding.

Problem Statement

Accessing funding for housing projects in Imo State and Nigeria as a whole has had its own changes over the years. This has impacted both quality of building construction and availability of adequate housing for the teeming populace.

Objectives

The main objective of this study is to analyze the influences of funding on housing project delivery in Imo State Nigeria.

The specific objectives include to:

1. Determine the extent to which materials price fluctuation affects funding of housing projects.
2. Evaluate the effect of interest rate on funding of housing projects.

Hypotheses

H_{01}: Materials price fluctuation does not affect funding of housing projects.

H_{02}: The level of effect that interest rate has on funding of housing projects is not significant.

Conceptual Review

Generally, real estate implies an item that consist of land and houses with some economic values. Again, real estate can be seen as a business involving of real property (housing) in general. Hence, real estate can be grouped based on the essence of the usage. It could be for residential purposes, industrial, commercial, recreation or administrative purposes.

However, housing projects are being undertaken by real estate firms and individuals for various purposes. Whatever the purpose is, the issue is whether they are adequately funded and delivered successfully within the planned time, cost and quality specifications. Before we proceed, it is imperative that we gain proper understanding of what housing projects or properties entails, different funding arrangements, obstacles of funding, etc.

Housing/Real Estate Property

Property connotes land or immovable as it is sometimes called and other objects known as chattels or movables (Megarry, 2018). Legally, these are known as real property and personal property respectively. Property is the exclusive right to possession, enjoyment and disposition of anything which can be the subject matter of ownership; and it also includes the exclusive right to the future benefits of an economic good, be it material or non-material, as determined by law.

The above rights constitute a bundle of rights (Denman, 2016). Real property refers to the interests, benefits and inherent right in the ownership of the physical land (real estate). But for the purpose of this study real property means land and buildings, which are categorized into different types according to the various uses to which they are being put and for which they are designed. These include residential, commercial, industrial, agricultural, recreational properties etc.

Development Concept

Development is the process of carrying out works involving a change in the physical use or in the intensity of an existing use of land or buildings (Balchin, 2018). The term 'development' as defined in section 2(1) of the Nigerian Town and Country Planning ordinance 1948, states that "development in relation to any land includes any building or rebuilding operation and any use of land or any building thereon for a purpose which is different from the purpose for which the land or building was previously being used".

In his own view, Lichfield (2015) pointed out that among the Architects, Planners, Engineers and Surveyors, the word development generally means "the process of carrying out construction involving a change in the intensity of the use of land or with a re-establishment ranging from the humble addition of a bedroom or a garage to a private house

or the ambitious re-development of a city centre. Development can also be seen as the application of capital, labour, managerial skill and entrepreneurial ability to land resources for the purpose of improving its productive capacity. Forms of property development include residential, commercial, industrial and office properties. The development of a particular piece of land is a process, which involves much than the mere carrying out of constructional works. It starts before, perhaps many years before, works and buildings are designed; and lasts, perhaps well beyond the time when the new works are completed, until the new accommodation is fully occupied and used.

Development generally means the process of carrying out the constructional works, which are associated with a change in the use of land or of land with its buildings, or with a change in the intensity of the use of land, or with a re-establishment of an existing use.

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 ₶19.7bn 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 ₦216bn as at 2017 to ₦449bn 2021a growth of ₦233bn contributed by 630,089 contributors, however only ₦282bn 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.

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.

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).

Long Term Loans:

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.

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 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 models of the form:

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

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:

$$b_{1a} = \frac{\Sigma X_1Y\Sigma X_2^2 - \Sigma X_2\Sigma X_1X_2}{\Sigma X_1^2\Sigma X_2^2 - (\Sigma X_1X_2)^2} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

$$b_0 = Y - (b_1x_1 + b_2x_2) \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

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:

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

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:

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

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

$$SSR = \frac{b\ \Sigma X_iY_i - (\Sigma X_iY_i)}{N} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (6)$$

And

SST (Total Sum of Squares) is given by:

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

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

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

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

The F- test statistic is calculated using the formula:

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

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

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

Where “k” is the number of independent variables.

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

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

Where “n” is the number of sample size.

The above illustrations are summarized in a table of Analysis of Variance (ANOVA) as follows:

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 = SSR / K	F*= MSR / MSE
Error	SSE=SST-SSR $=\Sigma Y^2(1-R^2)$	n-k-1	MSE = 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 statistic applied in testing hypothesis. Hence, the adoption of t-test as an analytical technique for data analysis is ideal for this study.

Decision Rule

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;

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 4.1 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) assume the same upward movement. The resultant effect on the Nigeria economy include 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 above 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 this 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 become 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 1 and 2 below illustrate how Appendix II, which summarizes the scores of 271 respondents, was derived.

Table 1 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 2.

Table 2:Respondent Scores 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 4.4.

Table 3: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 questionnaire on funding of housing projects were displayed in the following tables.

Table 4 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 4 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 4, shows the scores of computerized-aided multiple regression used in developing a model for predicting the level of housing project delivery in the face of the five identified funding factors.

Table 5 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 4.6 is shown in equation 4.1;

$$\mathbf{Y = 78.832 + 0.573X_1 - 0.548X_2 + 0.679X_3 - 0.830X_4 + 0.498X\ldots\ldots\ldots\ldots (12)}$$

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 6 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 (4.1) 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 7 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 7, 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 4.6 renamed as Table 7 becomes relevant;

Table 8 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

Hypothesis I

H_{01}: Materials price fluctuation does not affect funding of housing projects.

H_{A1}: Materials price fluctuation has significant effect on funding of housing projects.

From Table 8, the t-calculated value of 3.779 is significant in the prediction of housing project delivery given the p-value of 0.008. It means that at 0.05 level of significance, materials price fluctuation is a significant factor. We therefore reject the null hypothesis (H_{01}) with a conclusion that Materials price fluctuation contributes to poor funding of housing projects.

Hypothesis II

H_{02}: The level of effect that interest rate has on funding of housing projects is not significant.

H_{A2}: The level of effect that interest rate has on funding of housing projects is significant.

The t-calculated value of -3.223 is significant in the prediction of housing project delivery at a p-value of 0.015, implying that at 0.05 level of significance, interest rate is a significant factor. We therefore reject H_{02} and conclude that the level of effect that interest rate has on funding of housing projects is significant.

Summary of Findings

The findings made in this study can be summarized as follows;

1. A predicting model has been developed for ascertaining the level of housing development given the five major funding factors identified. The model established that foreign exchange rate with a Beta coefficient of -.830 is the factor with the highest influence on funding housing projects in Nigeria.
2. Materials price fluctuation is a critical funding factor that affects funding and delivery of housing construction projects in Nigeria. This is because the t_{cal} value of 3.779 > t_{tab} value of 1.96. Test hypothesis one confirmed this with asymptotic significance = 0.008 < $\alpha = 0.05$.

Discussion of Results

From the analyses made, the following can be deduced.

The model generated from Table 8 is significant in predicting the factors that influence funding of housing project and possibilities of delivering housing projects. The implication is that participants in housing projects can predict the success or otherwise of project delivery, if the variables in the derived model are considered and managed for prompt and adequate funding.

From Table 4.9, materials price fluctuation is a significant factor consider in an effort to successfully fund and deliver housing construction projects Imo State Nigeria. This result exemplified the real situation in Imo State Nigeria as prices of building materials keeps increasing and decreasing on a daily basis. The findings made by Gilbert (2017), Isyaku, Dzurlikanian & Usman (2021), and Wahab (2013) corroborates with this finding that constant changes in the cost of materials makes funding unpredictable thereby affecting the prompt delivery of construction projects.

Hence, the fluctuations in the cost of building materials should be controlled and stabilized to assist project planners to effectively plan and fund construction projects adequately for prompt delivery. Interest rate has significant effect on funding of housing projects as seen in Table 8. However, Okafor (2016) confirmed this finding in his study by

lamenting on the drastic effect of high interest rate on the funding real estate projects in Rivers State Nigeria. In the same vein, Clois and Joan (2009) discovered that high interest rate is the major factor that is inhibiting adequate funding of housing projects in India.

Isyaku, Dzurlikanian and Usman (2021) and Kabir (2014) also confirmed this result in their various studies. This therefore, implies that high interest has been affecting the sourcing of funds to plan and implement housing projects in Imo State and other States in Nigeria. It is important that economic variables that determine interest rates should be properly managed to reduce and stabilize the rate of interest on loans.

Recommendations

1. Fluctuation in cost of materials should be put into consideration during bidding process for building construction.
2. Fluctuation in foreign exchange rate should be factored in during costing of foreign materials.
3. Interest rate for loan should be considered especially for mega projects that require loan for funding.

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