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MORTGAGE FINANCING AND HOUSING DELIVERIES IN NIGERIA: ANY LINKAGES?

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ABSTRACT

The paper examined if there exist any linkages between mortgage financing and housing delivery in Nigeria from periods of 2002-2021. Specifically, the paper examined the effect of Primary Mortgage Bank Loans, Federal Mortgage Bank Loans to Mortgage, Microfinance Bank loans to mortgage, and Government Allocation to Housing on housing delivery in Nigeria. Data for the study were sourced from the Central Bank of Nigeria (CBN) statistical bulletin and the National Bureau of statistics (2021) from 2002 to 2021. Meanwhile, the study adopted the OLS estimate. Various pre-estimation and diagnostic tests considered include: Heteroskedascity test, Ramsey Reset Test, and variance inflation factors/multi-collinearity test. The study reported that, Primary Mortgage Bank Loans have significant adverse effects on housing delivery. Meanwhile, Federal Mortgage Bank Loans to Mortgage improves housing delivery minimally. More so, MBLM and finance Bank loans to mortgage and Government Allocation to Housing are major contributing factor to housing delivery in Nigeria within the periods under review. Hence, the paper concludes that, both microfinance loans to mortgage institutions and government allocations to housing are major drivers of housing delivery in the

periods under review. Accordingly, the paper recommends that, the primary Mortgage Bank should heighten efforts towards improving on reforms and policies that encourage the use of loans by mortgage institution for sustained growth and greater house development. More so, the federal Mortgage Bank should introduce new, flexible, and versatile loan policies suited to the prevailing conditions in the country taking into account dynamic changes in the environment.

Keywords: Mortgage Financing, Housing Deliveries, Linkages.

INTRODUCTION

Globally, governments at all strata are instituted with a view to either provide essential public good/services or create enabling environments for businesses to thrive. One of such essential public good/services is the provision of safe, affordable, comfortable, attractive, functional, and identifiable housing plan (National Housing Policy of Nigeria, 2021). This is premised on the fact that, However, due to its long-term nature and the huge capital requirement for its procurement, a house can rarely be purchased directly from a household's earnings. Access to external source of finance is indispensable in the acquisition of a house. Therefore, all over the world, housing finance is an indispensable component of the financial systems and both developed and emerging economies are promoting home financing through Mortgages.

Mortgage Financing has remained the de facto means of funding housing in developed countries; although it is just beginning to take root in most developing countries, Nigeria not an exception. In light of this fact, a lot has been done in the recent past to deepen Mortgage financing in Nigeria. Anidiobu, Okolie, and Ugwuanyi (2018) submitted that, the implementation of housing development in developing countries such as Nigeria is contingent largely on the availability of mortgage finance. Hence, housing policy is hinged on sustainable finance (Udoka & Owor, 2017).

One overriding issue lies on the fact that, while mortgage institutions are effective in developed economies like Canada, United States of America, Denmark, France, among others, but this is not so in the Nigerian context. This may be due to huge acquisition; title insecurities, information asymmetry; and asset mismatch (Asabere, McGowan & Sang, 2014). Again, policy makers in the Nigerian context are yet to come to a roundtable on how a house can be acquired (Udoka & Owor, 2017).

Till date, related studies in the Nigerian context seem to give contradictory outcomes. This has created a huge knowledge gap. For example, Yinusa, Ilo and Elumah (2017); Udeji and Efiog (2018) arrived at different results using different scope. More so, some scholars focused the challenges confronting the operations of PMBs, others focused on the contributions of primary mortgage institutions to economic growth (Agbada, & Ekakitie-Emonena, 2017). In light of this, this study examined the linkage between mortgage financing and housing deliveries in Nigeria. Specifically, the study examined the effect of primary mortgage bank loans, federal mortgage bank loans, microfinance bank loans, primary mortgage deposit, and federal government allocation on housing delivery in Nigeria.

LITERATURE REVIEW

Conceptual Linkages

Mortgage Financing Models

While term 'mortgage finance' is a loan granted for the construction of homes and other housing needs, Ogedengbe and Adesopo (2018) defined mortgage financing as the process by which a mortgage bank lend out a securitized loan to a borrower at a given give loan repayment schedule and interest/lending rate so as to enable the borrower to buy the property without much financial constraints while putting lien on the property being purchased. Furthermore, the most common mortgage financing models are Bundled, Unbundled, Depository-Based, and stock market based financing model. They are therefore explained thus:

- i. **Bundled-based Mortgage Financing Model:** Here, a single mortgage player/actor carryout the mortgage services. Accordingly, the mortgagors act as a loan originator, a risk manager, provides lending services among others. This model unlike the unbundled financing model is highly liquid but however possesses high likelihoods of default.
- ii. **Unbundled Mortgage Financing Model:** Here, the mortgagors go through a mortgage bank so as to out-source funds from the secondary/stock market, investors, as well as other mortgage bank/depositories as in the case of acting as syndicates (Olufemi & Oluwaseyi 2016).
- iii. **Depository-based Mortgage Financing Model:** Here, banks are engaged in mortgage lending. Within the Nigerian context, this approach/model became prominent after the 2005 bank recapitalization exercise since the Nigerian banks were had excess liquidity after the recapitalization exercise. Consequently, some other banks diversified majorly into mortgage banking. However, these banks were faced with mismatch between the tenor of the loans and the lending rate which these banks offered. This is as a result of the fact that mortgage loans' maturity periods were longer in nature as against the short loans which banks were known for (Amao, & Odunjo, 2014).
- iv. **Secondary/Stock Market-based Mortgage Financing Model:** This model is in line with the long-term loan requirements of the mortgage institutions unlike the depository-based mortgage financing model. Under this platform, the secondary/stock market being highly liquid, acts as a originate loans, and also involves in loan securitization (Olufemi & Oluwaseyi, 2016).

Worthy to note is that, all the foregoing mortgage financing models centers on Primary Mortgage Bank Loans-PMLM, Federal Mortgage Bank Loans to Mortgage-FMLM, Microfinance Bank loans to mortgage-MBLM, and Government Allocation to Housing-GOAH. Anidiobu, Okolie, and Ugwuanyi (2018) stated that, mortgage financing activities began in the Nigerian Building Society (NBS) in 1956. Following the Indigenization Policy/Act in 1972, the NBS was saddled with the responsibility of promoting, transfers of ownership, control, and management of foreign enterprises to Nigerian investors. The NBS was latter called the Federal Mortgage Bank of Nigeria, (FMBN) in 1979. Meanwhile, in 1994, the FMBN was fully became the apex and mortgage institution in Nigeria saddled with the responsibilities of: i. Encouraging the emergence primary mortgage institutions; ii. Mobilizing both on and offshore funds; ii. encouraging syndicate funding; and iv. acceptance and administration of the National Housing Funds (NHF) in line with NHF Act”.

Overview of Housing Deliveries

Housing has no universal definition. Popoola and Alamu (2016) viewed housing delivery to be the extent to which mortgage institutions give out houses to mortgagees. Hence, this approach is a service-oriented approach. Meanwhile, housing is a commercial enterprise that is profit driven and highly speculative and the primary activity is investing in land/buildings and subsequently improving them, typically through erecting new buildings or the provision of infrastructure and services. In Nigeria, housing is designed for show of wealth, success, and also to impress people. Hence, a house remains a major determinant of one's social status, achievements, and self-expression and is considered as a major social need (Amao, & Odunjo, 2014). Popoola and Alamu (2016) noted that, while housing contributes up to 30% to 70% of United Kingdom's, United States', Canada's GDP, it only contributes merely 0.38% of Nigeria's GDP. This reveals that the housing deficit in Nigeria is very high and with mortgage financing, this gap can be reduced significantly.

Theoretical Underpinning

The Lien theory was used to underpin the study. According to Chinwe and Okoli (2018), lien theory was authored by Hester in 1975. Lien theory infers that, mortgage loans/financing is likened to either a lien- i.e. encumbrance on the property. Under this approach, the mortgagor retains both legal and equitable titles though the property is under the care of the mortgagee. This theory further states that, if a borrower defaults or fails to meet the terms of the mortgage, the lender may go through formal foreclosure proceedings in order to gain legal title to secure repayment of the loan. By implication, through mortgage financing even the impoverished can acquire a house. Hence, the higher the mortgage financing, the higher the housing delivery provided the mortgagee fulfill his/her part of the arrangement.

Empirical Studies

Anidiobu, Okolie, and Ugwuanyi (2018) studied the effect of mortgage financing on housing deliveries in Nigeria from 1992 to 2016. The researchers used the multivariate analysis in line with the modified mortgage financing model. They found that mortgage deposits improved housing deliveries in Nigeria significantly. Meanwhile, mortgage loans reduced housing deliveries insignificantly.

Chinwe and Okoli (2018) in a study on mortgage financing models on housing delivery and its drivers evidenced that, an efficient legal system, efficient credit information systems; stable macroeconomic environment and an efficient stock market increased housing delivery across different countries significantly.

Ogedengbe and Adesopo (2018) examined the problems of financing real estate development in Nigeria through the administration of questionnaires and a simple descriptive analysis. The study revealed that high interest rates and several other requirements for loan application bedeviled the financing of real properties in Nigeria.

Using the Error Correction Model-ECM approach, Udoka and Owor (2017) reported that, mortgage deposits improved mortgage investment in Nigeria though inflation rate affected mortgage investment adversely from 1990 – 2014.

Aliyu (2017) did a panel survey on the effects of households' indebtedness on mortgage financing in Central and Eastern Europe during financial crises. The authors reported that, even during financial crises, the mortgage institutions still give out loans to mortgagors. More so,

households’ indebtedness during the financial crises periods did not stop mortgage institutions from not performing their roles.

Using both t-test and correlation analysis, Delson and Egbe (2016) found that, Primary Mortgage Institutions (PMIs) are few and that the few ones cannot meet the housing deficits in Nigeria. Meanwhile, there is a huge disparity between the amounts which the mortgagors applied for and the amounts that are approved. Hence, conclude that, PMIs in Nigeria are performing below expectations.

In a different study, Olufemi and Oluwaseyi (2016), also reported that, the financial system/mortgage financing models used by the government have not been efficient.

Again, Adetiloye and Eke (2016) reported that, the financial architecture of the Nigerian mortgage institutions is not efficient enough to improve the economic development of Nigeria. This therefore calls for urgent attentions of mortgage institutions to fill this huge gap recorded.

METHODOLOGY

This paper adopted the Ex-Post Facto research design since this type of research design is one that takes place after the event or fact had taken place. Accordingly, the study population and sample size is the entire Nigerian mortgage industry. Hence, the sample equals our population. Since the population equals the study population, the study adopted the census sampling technique. Meanwhile, the paper sourced data from CBN and the NBS, 2021 from 2002 to 2021. Meanwhile, the study adopted the OLS estimate. Various pre-estimation and diagnostic tests considered include: Heteroskedascity test, Ramsey Reset Test, and variance inflation factors/multi-collinearity test.

The study modeled after the works of Anidiobu, Okolie, and Ugwuanyi (2018). The model is stated thus:

$$Y_{it} = \alpha_{it} + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \dots \beta_n X_{nit} + \varepsilon_{it} \dots \dots \dots 1$$

Where:

- Y = the regressand
- α = constant term (Y-intercept)
- β = the coefficient of the regressors
- x = the regressor
- ε = error term
- t = measure of time
- i = number of firm observation

Econometrically, the regression equation is formulated thus:

$$HODE_{it} = \alpha_{it} + \beta_1 PMBL_{it} + \beta_2 FMBL_{it} + \beta_3 MBLM_{it} + \beta_4 GOAH_{it} + U_{it} \dots \dots \dots 2$$

Where:

- HODE_{it} = Home Delivery (annual %)
- PMBL_{it} = Primary Mortgage bank Loans to Mortgage at time t
- FMBL_{it} = Federal Mortgage bank Loans to Mortgage at time t
- MBLM_{it} = Microfinance Bank loans to mortgage at time t
- GOAH_{it} = Government Allocation to Housing at time t
- α_0 = Intercept
- $\alpha_1 - \alpha_4$ = Coefficient of the Regressor.

RESULTS AND DISCUSSIONS

Data Analysis

The sourced data were analysed using descriptive and correlation analysis. They are discussed in table 1 and 2. Meanwhile, the robustness check was also considered alongside.

Table 1

Summarized Descriptive Statistics

Variables	Mean	Standard Deviation	Minimum	Maximum	Observations
PMBL	407840.5	239028.1	45981.7	996778.8	22
FMBL	20.27809	22.24063	0.08835	81.8814	22
GOAH	52.30714	41.34784	8.99384	172.738	22
MBLM	465540.6	261829	83367.5	829286.7	22
HODE	4.5848	0.242807	4.054	4.863	22

Source: E-Views version 9 (2022)

Table 1 reported that PMBL, FMBL, GOAH, MBLM, and HODE had average values of 407840.5, 20.27809, 52.30714, 465540.6, and 4.5848 but fluctuated by 239028.1, 22.24063, 41.34784, 261829, and 0.242807. This reveals that, PMBL, MBLM, GOAH, and HODE clustered around their average/mean values while FMBL deviated far away from its mean value. More so, they reported a maximum value of 996778.8, 81.8814, 172.738, 829286.7, and 4.863 but had minimum values of 45981.7, 0.08835, 8.99384, 83367.5, and 4.054. It is therefore an indication that, the model falls within the confine of normality.

Table 2

Correlation Analysis

Variables	HODE	PMLM	FMBL	MBLM	GOAH
HODE	1.000000				
PMLM	-0.608602	1.000000			
FMBL	0.307237	0.096183	1.000000		
MBLM	0.556478	0.025831	0.087337	1.000000	
GOAH					1.00000
	0.797506	-0.305201	0.314141	-0.261678	0

Source: E-Views version 9 (2022)

The correlation analysis in table 2 evidenced that, PMLM is negatively (-0.608602) related with HODE and that such relationship is moderate. Meanwhile, the relationship between GOAH and HODE is positive and strong (0.797506). More so, the relationship between FMBL and HODE and MBLM and HODE are positive and moderate (0.307237 and 0.556478 respectively).

Lastly, none of the regressors exhibits high correlation against each other since their coefficient values are below 70%. This assertion was championed by Agbogun and Ehiedu (2022); Ehiedu, Odita, & Kifordu (2020); Onuorah (2018).

Diagnostic Test

To ensure that the model is feasible for policy formulation, the model was subjected to diagnostic test. They are stated below:

Table 3

Diagnostic Tests

Diagnostic Test	F-statistic	Prob.
Heteroskedasticity Test: Breusch-Pagan-Godfrey	0.599710	F(4,15)=0.6167
Breusch-Godfrey Serial Correlation LM Test	1.554288	Prob. F(1,15)= 0.2156
Ramsey Reset Test	1.467208	Prob. F(1,15)= 0.2288

Source: E-Views version 9 (2022)

Table 3 affirmed that, Heteroskedasticity Test, Breusch-Godfrey Serial Correlation LM Test, and Ramsey Reset Test reported p-values of 0.6167, 0.2156, and 0.2288. This implies that, the

model is Homo-skedastic, free from Serial Correlation issues, and well-specified. By implication, the model is fit for prediction.

Table 4
Multicollinearity Tests

Variable	Centered VIF	Tolerance Value
PMLM	1.032111	0.968888
FMBL	1.077070	0.9284448
MBLM	1.009739	0.9903549
GOAH	1.608649	0.6216396
PMLM	1.510186	0.6621701

Source: E-Views version 9 (2022)

The VIF reported that none of the study variables are faced with multi-collinearity problems. Hence, it is feasible to conclude that the model is free from multi-collinearity problems. According to Onuorah and Osuji (2014); Onuorah and Ogbonna (2016); & Ehiedu, and Ogbeta (2014), once VIF is below 5, it indicates that the model is free from multicollinearity issues. Justifiability, their tolerance values are within the benchmark for acceptance of no multi-collinearity issues.

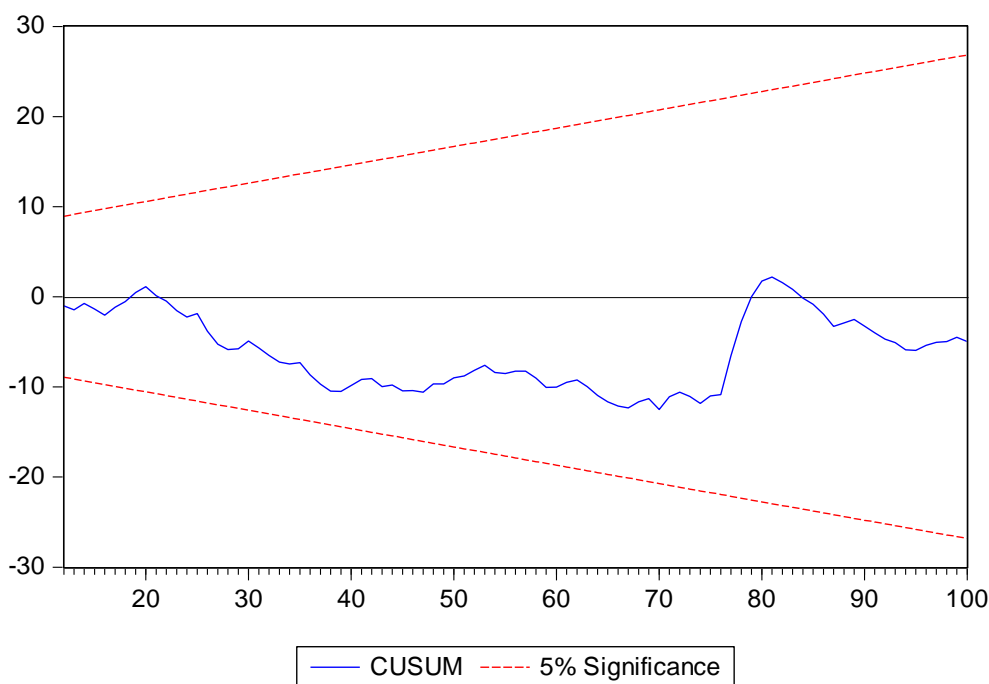


Figure 1: CUSUM Test

Source: E-Views version 9 (2022)

The CUSUM Test in figure evidenced that, the model relatively stable since it is below the danger line. This is in line with Ehiedu, Onuorah, and Okoh (2021) assertions.

Result’s Presentation and Discussions

Since the various diagnostic tests are devoid of variable perturbation, the main result is presented in table 5.

The R-squared value of 0.879896 (87.99%) and adjusted r-squared value of 0.773967(77.40%). This implies that the model has a high explanatory power. As evidenced by the Prob.(F-statistic) value of 0.000000 implies that mortgage financing on the overall has a high significant effects on housing delivery in Nigeria. Meanwhile, the Durbin Watson stat. stood at 2.112463 indicating that the variables did not exhibit auto-correlation issues.

Table 5

Ordinary Least Square Estimates

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.810059	0.350863	5.158875	0.0000
PMLM	-0.630325	0.145128	-4.343247	0.0000
FMBL	0.016508	0.018265	0.903796	0.3664
MBLM	0.559616	0.147471	3.794750	0.0002
GOAH	0.318715	0.111693	2.853489	0.0044
R-squared	0.879896	Mean dependent var		22.75159
Adjusted R-squared	0.773967	S.D. dependent var		1.644949
F-statistic	30.34439	Durbin-Watson stat		2.112463
Prob.(F-statistic)	0.000000			

Source: E-Views version 9 (2022)

The regression result evidenced that, PMLM have a significant adverse effects on HODE such that a unit rise in PMLM will reduce HODE by a significant value of 63.03%. Meanwhile, FMBL improves HODE minimally. More so, MBLM and GOAH are major contributing factor to HODE in Nigeria within the periods under review. By implication, a unit rise in both MBLM and GOAH will increase HODE by 55.96% and 31.87%, respectively. This view was further buttressed by the findings of Anidiobu, Okolie, and Ugwuanyi (2018) but deviated from Chinwe and Okoli (2018) Ogedengbe and Adesopo (2018); and Olufemi and Oluwaseyi (2016); Delson and Egbe (2016); Adetiloye and Eke (2016). The possible reason why our findings differ from their lies in periods covered and variable considered.

CONCLUSION AND RECOMMENDATIONS

The study examined if there exist any linkages between mortgage financing and housing delivery in Nigeria from periods of 2002-2021. Specifically, the paper examined the effect of Primary Mortgage Bank Loans, Federal Mortgage Bank Loans to Mortgage, Microfinance Bank loans to mortgage, and Government Allocation to Housing on housing delivery in Nigeria. In line with our major findings, the study concludes that, both microfinance loans to mortgage institutions and government allocations to housing are major drivers of housing delivery in the periods under review. Hence, the paper recommends:

1. Primary Mortgage Bank should heighten efforts towards improving on reforms and policies that encourage the use of loans by mortgage institution for sustained growth and greater house development.
2. Federal Mortgage Bank should introduce new, flexible, and versatile loan policies suited to the prevailing conditions in the country taking into account dynamic changes in the environment
3. Government Allocation to Housing regulatory authorities should be appropriately incorporated as these have proved to impact significantly on housing development.
4. Microfinance Bank loans authorities should create an enabling environment so as to further improve the housing development in the country.

References

- Adetiloye, K.A., & Eke, P.O. (2016). Financial architecture, real estate market and economic development in sub-Saharan African countries: Evidence from Nigeria. *Journal of South African Business Research*, 1-16.
- Agbada, A.O., & Ekakitie-Emonena, S. (2017). Empirical analysis of primary mortgage institutions fundamentals and gross domestic product increase in Nigeria. Available at <https://doi10.11114/afa.v2i1.1257>. Accessed on 13th July, 2022
- Agbada, E.O., & Ekakitie, E. F (2017) Empirical analysis of primary mortgage institutions fundamentals and gross domestic product increase in Nigeria. *International Journal of Applied Finance and Accounting*, 2(1), 91-100.
- Agbogun, O.E., & Ehiedu, V.C. (2022). Trade policy drivers and economic performance of OPEC Member States. *International Journal of Academic Accounting, Finance, and Management Research*, 6(8), 109-118.
- Aliyu, F. H., & Bakere, G. (2018). The determinants of other financial institution in economic development in real estate business in Nigeria. *International Journal of Business Management*, 18(4), 141-146
- Anidiobu, G.A., Okolie, P.I.P., & Ugwuanyi, W.N. (2018). Effect of mortgage finance on housing delivery in Nigeria: The primary mortgage institution (PMI) perspective. *Journal on Banking Financial Services & Insurance Research*, 8(2), 36-49.
- Ehiedu V.C., & Odita A.O. (2014). Application of budgeting techniques in fiscal institutions in Nigeria. *Developing Country Studies. International Institute for Science, Technology & Education*, 4(6), 20-27.
- Ehiedu, V.C., Odita, A.O., & Kifordu, A.A. (2020). Financial integration and growth volatility nexus: the Nigeria experience. *Webology*, 17(2), 404-415.
- Ehiedu, V.C., & Olanye P. (2014). Mergers and acquisition as instrument of corporate survival and growth. *European Journal of Business and Management*, 6(8), 151-156.
- Ehiedu, V.C., Onuorah, A.C., & Okoh, E. (2021). Automated teller machine (ATM) penetration and financial inclusiveness in Nigeria: a tripod banking system approach. *Indian Journal of Economics and Business*, 20(3), 1093-1104
- National Housing Policy of Nigeria (2021). The Nigerian housing policy and its challenges. available at <https://nigerianfinder.com/housing-policy-in-nigeria/> Accessed on 13th July, 2022
- Onuorah A.C., & Ogbonna G.N. (2016). Capital structure performance and the determinant factors in Nigeria. *International Journal of Empirical Finance, Research Academy of Social Sciences*, 5(2), 69-77.
- Onuorah A.C., & Osuji, C.C. (2014). Exchange rate and the economic development in Nigeria. *International Journal of Management Sciences*, 4(2), 27-54
- Onuorah A.C. (2018). Role of non-oil exports in the economic growth of Nigeria. *Journal of Emerging Trends in Economics and Management Sciences*, 9(3), 1-15.
- Oyewole, D. L., & Gbaburi, S. E. (2018). The challenges of housing finance by primary mortgage institutions in Nigeria. *Journal of Economic and Development Studies*, 6(3), 73-84.
- Popoola O. O., & Alamu O. I. (2016). Financing housing services delivery and its challenges in Nigeria: *Journal of Economics and Sustainable Development*, 7(4), 128-131.

- Shuaribu, R. G., & Aliyu, O. (2018). Mortgage financing in Nigeria: issues and challenges. *International Journal of Business and Financial Studies*, 45(8), 373-384.
- Udeji, D. F., & Efiang, D. (2018). Impact of primary mortgage finance institutions on real estate development in Nigeria. *International Journal of Development Economics*, 5(9), 357-374.
- Udoka, C.O., & Owor, M.K. (2017). Mortgage financing and housing development in Nigeria. *International Journal of Research-Granthaalayah*, 5(5), 182-206.
- Yinusa, O.G., Ilo, B.M., & Elumah, L. (2017). Mortgage financing and housing development in Nigeria. *Osogbo Journal of Management (OJM)*, 2(1), 57.