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# FACTORS AFFECTING PRIVATE HOUSING DEVELOPMENT IN ABUJA, NIGERIA

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## ABSTRACT

**Purpose**: Housing demand in most part of the world, especially Africa surpasses housing supply. The population is trending in geometric progression compared with arithmetic progression in housing provision. It is on this note that this study examined the factors responsible for the large gap created between demand and supply of housing.
**Design/Methodology:** The Both primary and secondary sources of data were utilized for the study. The study analysed 250 returned questionnaires administered to registered developers under Real Estate Developer association of Nigeria (REDAN). The information relating to interest rate on real estate financing in Nigeria was sourced from Federal Mortgage Bank of Nigeria (FMBN), Land cost and building cost per meter square were sourced directly from registered estate surveyors and quantity surveying firms respectively. The study utilized both descriptive and inferential method of analysis.
**Findings:** The result revealed that inadequate finance and cost of building materials were major factors affecting private housing development. Furthermore, the result of revealed that building cost/m2, land cost/m2 and interest rate on real estate finance jointly influenced variation in private housing development by 85%.
**Originality/Value:** The study assesses relationship between land cost (/msq), building cost (/msq) and interest on real estate finance.
**Keywords**: Factors, private housing, development, real estate sector.

## 1. INTRODUCTION

Land is a prerequisite for effective housing provisions and its accessibility is vital to sustainable housing delivery. More so, land issues for housing development are interpreted as land accessibility for housing development, as well as the nature of government intervention in the use and control of land. Land accessibility therefore entails the process of land possession for the sole purpose of immediate or future use and control. The intention of individuals seeking access to land is to have the opportunity to develop properties. In the same vein, Olaore, (1991) noted that land accessibility determines the form in which housing is offered as a commodity for consumption. In other words, land accessibility determines the extent to which housing development can take place. By implication, where there is ease of land acquisition then housing development can take place with much dexterity and vice-versa. According to Omirin (2002), Land accessibility involves land tenure security, land affordability, land availability and the ease with which land is acquired. It has been observed that access to land for housing development remains

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a huge problem most developing countries including Nigeria are being faced with today. This has subjected majority of urban residents to live in slums and squatter settlements characterized by lack of secured tenure, basic services and general poor housing conditions harmful to human, physical and economic development. Shelter has been basic need since the beginning of civilization and has been central to man's struggle (Ibrahim and Kwankur, 2012). According to Israel (2008), shelter is internationally ranked as the most basic need of man after food. However, the problem of providing adequate housing has long been a concern, not only to individuals but to the government. In most of our urban centres, the problem of housing is not only restricted to quantity but to the poor quality of available housing units. The establishment of Abuja as the Federal Capital Territory of Nigeria has led to a variety of real estate developments spanning from residential, commercial, industrial, agricultural, institutional and recreational developments. Abuja the Federal Capital Territory has witnessed an unprecedented growth both in population and infrastructure as a result of rapid influx of people not only from all over the country, but indeed all over the world. (Ibrahim and Kwankur, 2012). It is clear that the factors affecting private residential housing development in Abuja is enormous before the investors; However, the need to examine factors that affect the developers has remained an issue that requires prioritized attention.

## 2. LITERATURE REVIEW

Babalakin (2006) posited that the real estate sector is fraught with a number of challenges.From the legal point of view, he explained the listed government policies and planning constraints as the major issues facing real estate development in Abuja. However, Jinadu (2007) and Eleh (2010) cited lack of access to land, shortage of long term funds, development control issues, poor development of infrastructure and increasing cost of building materials as some of the challenges of housing development in Nigeria.

Housing demand in most part of the world, especially Africa surpasses housing supply. The trend in arithmetic progression in housing provision compared to the geometric progression in population growth has created a large gap that can only be solved through radical approach (Ukabam, 2007). This has led to acute shortage of adequate housing in urban centres and has continued to attract global attention in most developing countries. The regulatory aspect according to Egolum (2002) includes the use of regulatory instruments such as the Zoning and Building Regulations. Moreover, one of the most challenges facing the developers is the approval of building plans, according to Ajoku and Nubi (2009) described it as a "slow planning approval process" which has not helped matters, rather has accelerated slum formation for reasons which include high cost of approval, administrative corruption and ineffectiveness.

Egolum (2002) described Zoning as the most commonly used local instrument for regulations and direction on land use. It involves the division of municipalities into Districts (Zones) for certain uses such as residential, commercial, industrial and agricultural. Jinadu (2007) opined that it incorporates the building type permitted in an area which may include block of flats, bungalows or high – rise buildings. By implication, the use is prohibited if it does not conform to the designated use for the zone. It specifies the height of structures, minimum allowable plot size, minimum setback from the streets or property line and allowable density (low, medium and high densities) for development. Obabori, Obiuwevbi and Olomu (2007) opined that Zoning regulations featured in the official city plan but actually, thereby providing specifications that is expected to be strictly adhered. It normally specifies the uses to which property may be legally put and the intensity of development allowed. It serves as "police power" for communities, as they adopt it as a measure for controlling urban land uses and densities including the restriction of many other uses such as developments in hazard – prone areas and to separate conflicting land uses. Although zoning has been considered effective in land uses planning and control, the effect is seen to be negative as it prevents land owners, developers and households from acting freely in the land under their control as well as burdening the public with an ill – suited development. However, for effective operation, it requires highly well trained bureaucrats and strong enforcement arm.

Building Regulations define the way new structures are to be built and the materials to be used. They ensure safety, resistance of the building to natural disasters, sanitation and aesthetics; restrictions on positioning of building on plot, setbacks, the height and depth or use of the building after erection. Jinadu (2007) noted that building regulations are generally enforced through the use of Building and Housing Codes. While Housing codes are designed to prevent overcrowding, unsanitary condition, inadequate heat and structural hazards**,** building regulations involve other control measures which include height control, setbacks, car parking standards and density control. It is unarguable that the concept of Building regulation has a positive effect on the environment and protects the inhabitants but it equally has an adverse effect on housing development as strict adherence or enforcement to these regulations often discourage developers. For instance, window opening areas which are not reasonable when considering relationship between one house and another are stipulated by the building code. Similarly, there are building codes that does not allow for modest new houses usually the narrow ones. Again, the cost at which building materials are sold significantly affects housing development in Nigeria. Ordinarily, the higher the cost of building materials and housing construction, the fewer the number of people who can afford to own houses. According to Agbola and Olatubara (2007), planning authorities specify the types of building materials to be used for housing development (for instance, mud and wood houses are not permitted in certain urban areas). This implies that developers must use conventional building materials which are very expensive such as sandcrete or iron rods as stipulated by the planning authorities which makes housing development unaffordable. It is obvious that, the existing building regulations are archaic and wasteful. In addition, the application of these standards has been a major factor impeding housing provision due to the excessive cost of erecting standard housing units. Therefore, the high, costly and stringent standards, for instance, curtail the rate of production and supply of housing in Nigeria.

Finally, Abosede (2008) emphasized that the success level or performance of any Development Control by the Planning Authority depends on the level of implementation or enforcement. The implementation or enforcement of Planning regulations and standards is therefore imperative to secure orderliness and preservation of the Master Plan. It can be achieved using the enforcement notice which may include Notice of contravention, Notice to stop work, Notice to quit, Notice to seal up and Notice of demolition. The enforcement notices are used by the planning authority to checkmate the activities of developers on site. This implies that developments that do not conform to the stipulated land uses are discouraged with the use of any of the above mentioned enforcement notices.

Ibrahim and Mbamali (2013) in a study carried out in Abuja, revealed that out of all the available sources of housing financing funds, only the mortgage banks were frequently utilized while all other sources of finance had low patronage frequency. However, with the problems fraught in the mortgage banks, one cannot help but imagine what the situation is like when it comes to securing loan finance for housing development. The problem of building materials is identified as one of major constraints impeding adequate housing provisions (Onibokun, 1986; Onibokun and Agbola, 1990; Agbola, 1993 and Agbola, 1998). It arose from colonial exposure, with the introduction of western housing values and the development of modern housing designs. The high cost came from high import dependence, of the sector. Despite the increasing cost of building materials, its importance remains paramount to housing development.

Aluko (2004) added that Nigeria as a country relies heavily on imported building materials as most building materials industries are almost non-existent and poorly developed. Ayeduni and Oluwatobi (2011) identified Building materials and components as one of the major challenges militating against efficient housing development while noting that they are import dependent which makes them very expensive in the face of the value of the country's currency (Naira) and global inflation. Oluwatuyi and Olayemi (2012) noted that the high cost of importation of heavy machines needed for manufacturing is another factor responsible for the hike in the cost of building materials. This problem of inflation also contributes largely to the increasing costs of building materials.

## 3. RESEARCH METHODOLOGY

The population study for this research work comprises of developers and Private developers who are registered members of the Real Estate Developers Association of Nigeria (REDAN) in the Federal Capital City. There are 270 registered private real developers in Abuja and based on the relatively small number of developers, the study utilized census sampling, The study administered 270 questionnaires through simple random sampling across the registered developer and 250 questionnaires while the remaining 20 questionnaires were not returned. The utilized both descriptive and inferential method of analysis. Descriptive analysis includes mean, variance and standard deviation and inferential method which includes regression.

Mean = $\sum$ FW/N

Where f-frequencies, w-weight (VH-Very High(5), H-high(4), Indifferent(3), L-Low(2) and VL-Very low(1) and N-total number of samples.

**Regression equation:**

TOTALDEV = c + β ACBM + β LAND/$m^2$ +β INT RATE

Where the c =intercept, β = coefficient, ACBM = average cost of development, LAND/$M^2$ = cost of land /$m^2$ , INT RATE = interest rate on real estate finance.

## 4. PRESENTATTION AND DISCUSSION OF RESULTS

Figure 1 shows the trend in number private housing development from 2010 to 2020. The trend showed steady and consistent movement over the period, this indicates there was consistency in the level of development not until 2020 when the number of developments fell drastically due to covid-19 restriction of movement.

Table 1 showed the summary of residential property development carried out by developers in Abuja between 2010 and 2020. The study revealed that majority of private housing developments are Bungalow, flat and duplex. The bungalow accounted for 33.39% of residential housing developments; flats accounted for 23.68% of housing development while duplex accounted for 22.45% were duplex.

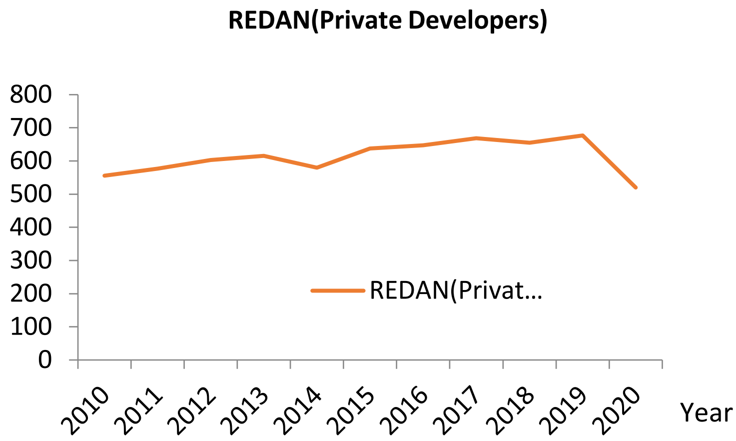


**Figure 1:** Trend in Private Residential Housing Development in Abuja
Source: Field survey, 2021

**Table 1:** Summary of types of private residential housing development (2010-2020)

| Housing Types | Private Sector REDAN | Percent |
|---|---|---|
| **Tenement** | 143 | 1.92 |
| **Bungalow** | 2487 | 33.39 |
| **Flats** | 1764 | 23.68 |
| **Duplex** | 1672 | 22.45 |
| **Terraced** | 721 | 9.68 |
| **Maisonette** | 230 | 3.09 |
| **Condominium** | 431 | 5.79 |
| **Total** | 7448 | 100 |

Source: REDAN, 2021

Table 2 shows the trend in the number of applications made for development and number of approvals given by federal capital territory authority (FCDA) and the total number of developments carried over given period. There is a wider gap between the approval given and number of developments.

Table 3 gave an average number of applications and approval granted, over the period under study, an average of 1,589 of application were submitted with average of 960 of approval were granted. The degree of variation in the number of applications submitted was 312 with 244 approvals.

The analysis of challenges was based on five-point likert scale (VH-Very High, H-high, Indifferent, L-Low and VL-Very low) as presented in Table 4. From table 4 shows the average mean and relative mean of the opinion on challenges of residential property development in the FCC, inadequate finance is the most challenge associated with majority of the developers in FCC, followed by high cost of building materials. These two challenges have been hindering the effective development of residential property in the study areas.

**Table 2:** Analysis of Residential Applications Received and Approvals Granted

| Years | No. of Application | No. of approval (permit) | Total residential development |
|---|---|---|---|
| 2010 | 1049 | 624 | 600 |
| 2011 | 1255 | 712 | 623 |
| 2012 | 1291 | 756 | 632 |
| 2013 | 1424 | 823 | 671 |
| 2014 | 1586 | 915 | 716 |
| 2015 | 1659 | 927 | 675 |
| 2016 | 1447 | 879 | 724 |
| 2017 | 1570 | 901 | 765 |
| 2018 | 1934 | 1181 | 758 |
| 2019 | 1860 | 1045 | 755 |
| 2020 | 1975 | 1336 | 780 |

Source: FCDA, Abuja.

**Table 3:** Descriptive Analysis Of Number of Application and Approval Granted

| | **Residential Applications received** | **Residential Approvals granted** |
|---|---|---|
| **Mean** | 1589 | 959.7 |
| **Median** | 1578 | 908 |
| **Standard Deviation** | 311.90 | 243.90 |
| **Minimum** | 1049 | 624 |
| **Maximum** | 2018 | 1417 |
| **Quartile 1(Q1)** | 1324.30 | 772.80 |
| **Quartile 3(Q3)** | 1915.50 | 1147 |

Table 5 shows the trend in residential development and it market determinant factors over a given period. The table showed average cost of building material sourced directly quantity surveying firms in Abuja and the cost of land per meter square that is sourced directly from registered estate firm and interest on real estate finance is sourced from central bank of Nigeria.

The analysis of regression result shows that independent variables explained change in residential development by 89.1% as presented in Table 6. This means that independent variables considered have explanatory power in forecasting the dependent variable. Average cost of building material (ACBM) predicted 2% increase as a unit residential development is developed, this means any successful unit increase in number of resident properties in the market, increases the average cost of building/$m^2$ by approximately 2%.Cost of Land per sqm ($CL/M^2$) is predicted 44% increase as the unit increase in residential property is developed, this means that a unit increase in residential development increases cost of land per square meter by approximately 44%. Finally interest rate is negatively related because any successful increase in interest rate decreases rate of residential development, in other words, number of residential developments in FCC is decreased by approximately 6 units as unit of interest rate increase. The f-statistic at 21.77 is significant p-value less 0.05 level, this means that the model is fit for purpose of prediction.

**Table 4:** Opinions on Challenges of Residential Property Development in the FCC

| Challenges of Residential Development | VH | H | ID | L | VL | Sum | Average Score | Relative Index | Rank |
|---|---|---|---|---|---|---|---|---|---|
| **Inadequate development finance** | 500 | 324 | 177 | 20 | 0 | 1021 | 4.09 | 0.82 | 1 |
| **High Cost of Building Materials** | 505 | 288 | 159 | 38 | 5 | 995 | 3.98 | 0.80 | 2 |
| **Inadequate Access to developable Land** | 495 | 280 | 150 | 42 | 10 | 977 | 3.91 | 0.79 | 3 |
| **Restriction by Development Control** | 430 | 372 | 123 | 40 | 10 | 975 | 3.90 | 0.78 | 4 |
| **Poor State of Infrastructure** | 480 | 312 | 120 | 54 | 9 | 975 | 3.90 | 0.78 | 4 |
| **Lack of developed housing market in Nigeria** | 345 | 280 | 174 | 80 | 13 | 892 | 3.57 | 0.714 | 5 |
| **Inadequate housing statistics** | 335 | 236 | 183 | 94 | 16 | 864 | 3.46 | 0.692 | 6 |
| **Poor economy condition** | 305 | 200 | 252 | 90 | 10 | 857 | 3.43 | 0.686 | 7 |
| **Poor state of Public – private partnership arrangements.** | 285 | 240 | 210 | 104 | 11 | 850 | 3.40 | 0.68 | 8 |
| **Inadequate effective mortgage system** | 300 | 196 | 165 | 100 | 36 | 797 | 3.19 | 0.638 | 9 |
| **Poor capital market system** | 245 | 252 | 150 | 120 | 28 | 795 | 3.18 | 0.636 | 10 |
| **Construction methods** | 280 | 180 | 150 | 68 | 31 | 709 | 2.84 | 0.51 | 11 |

Source: field Survey, 2021

**Table 5:** Trend in Total Residential Development and Its Market Determinant Factors.

| YEARS | Total development (TOTAL DEVE) | Average Cost of building/m (ACB) | Cost of land/$^{m2}$ (LAND/M) | Interest rate on real estate finance (INT RATE) |
|---|---|---|---|---|
| 2010 | 600 | 4120 | 2500 | 18.02 |
| 2011 | 623 | 4432 | 2650 | 24.5 |
| 2012 | 632 | 4554 | 2690 | 19.71 |
| 2013 | 671 | 5000 | 2685 | 20.72 |
| 2014 | 716 | 5600 | 2696 | 17.43 |
| 2015 | 675 | 6300 | 2725 | 17.12 |
| 2016 | 724 | 6510 | 2765 | 15.97 |
| 2017 | 765 | 7120 | 2790 | 17.34 |
| 2018 | 758 | 8651 | 2813 | 19.23 |
| 2019 | 755 | 8945 | 2855 | 17.23 |
| 2020 | 780 | 9534 | 2895 | 16.25 |

SOURCE: Total development-FCDA, ACB-Quantity surveyors' firms, LAND/M-Estate surveyor'firm and INT RATE-CBN

**Table 6:** Regression Results …..

| Predictor | Coef | St. Dev | T | P | VIF | F | P |
|---|---|---|---|---|---|---|---|
| Constant | -433.5 | 228.0 | -1.90 | 0.094 | | 21.77 | 0.000 |
| ACBM | 0.02067 | 0.03418 | 0.60 | 0.562 | 1.2 | | |
| CL/M$^2$ | 0.44852 | 0.07245 | 6.19 | 0.000 | 1.3 | | |
| INT RATE | -5.687 | 3.604 | -1.58 | 0.153 | 1.3 | | |

S = 24.98 R-Sq = 89.1% R-Sq(adj) = 85.0%

Computed from Table 4.15

The equation: TOTALDEV = - 434 + 0.00207 ACBM + 0.449 LAND/M - 5.69 INT RATE

## 5. CONCLUSION

The study therefore understood that there was wider gap in between the approval for private housing development and total development, in other total development significantly fall short approval granted. The study thereby investigate factors affecting private development, it was understood that inadequate finance is the most challenge associated with majority of the developers in FCC, followed by high cost of building materials. These two challenges have been hindering the effective development of residential property in the study areas. Further analysis of market determinant factors sourced from professionals and government agency proofed that 85 variation in total private development is attributed changes in cost of building material, land cost and interest on real estate finance. Thereby, the research concludes inadequate finance, cost of building materials and cost of land per meter square predict residential development, and buck of residential development in FCC is developed by private sector, the most emphasised constrain is inadequate finance followed by cost of building material. The study recommends that private developers need government intervention to address the general inflation associated with development cost.

## 6. Limitation of the Study

The study is limited to two analytical techniques mean and regression analysis and three important market factors that affect the private housing development were identified for this study. These factors provided information on time series and were adopted. This study could also be improved upon by identifying more time series factors that affect private housing development.

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