EVALUATING THE IMPACT OF HOUSING DELIVERY SYSTEM ON PROJECT PERFORMANCE WITHIN THE BUILDING INDUSTRY IN NIGERIA

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ABSTRACT
The study investigates the impact of project performance on housing delivery within the building industry in Nigeria. Project Performance is attained through efficiency and effectiveness of cost, time and quality standards. This study intends to evaluate the influence of project performance on housing delivery within the building industry in Nigeria. This was in view of the fact that housing delivery was seen to be futile in terms of services, poor management of projects, the rush in project implementation, corruption, inadequate planning and budgetary provisions, costly project execution, untimely completion of projects and abandoned or non-functional facilities and collapsed of buildings. In spite of these, no study has shown that this menace has been husk out of the pipeline. The study was conducted through literature and documentary survey. Data was collected in August 2012 using questionnaire and documentary techniques from professionals in the built environment. Purposive sampling was used to sample 210 out of a population of 300 professionals. The data was analyzed using ANOVA and Chi-square to test the Null hypothesis that project performance does not influence housing delivery within the building industry in Nigeria. The study established that project performance enhances housing delivery; but in Nigeria project performance is far from expectation due to the industry's inability to provide services efficiently and effectively, most projects are not delivered on time, within budget and quality standards. The research recommends that capacity building should be mandatory for all professionals within the built environment. This will improve their competencies; so also monitoring and supervision mechanisms should be intensified, as well as law enforcement within the building industry in Nigeria.

Keywords: Building Industry, Cost, Housing Delivery, Project Performance, Quality Standards, Time.

INTRODUCTION
Housing is one of the basic needs of mankind. The influence of health, efficiency, social interaction and satisfaction depends on how well man is being housed (Onibokun, 1998). Housing is a basic need of human being and a medium for economic sustainability in any developing nation. Housing delivery is seen as a tool for measuring performance in the building industry. Performance can be enhanced in project delivery on time, within budget and quality standards (Inuwa *et al*, 2014, Kamau *et al*, 2013, Usman *et al*, 2010, Usman *et al*, 2014).

According to Kabir, Kolo & Bustani (2009), housing inadequacy is a mirage to all carder of the society in Nigeria. Thus, the performance of the building industry in terms of housing delivery is far below expectation (Kamau *et al*, 2013, Usman *et al*, 2014). For instance, the proportion of the Nigerian population living in urban areas is on the increase, For example, 7% of Nigerians lived in urban areas in the 1930s and 10% in 1950s, by 1970, 1980 and 1990, 20%, 27% and 35% lived in the urban areas respectively (Kabir *et al*, 2009; Okupe, 2002).

In Nigeria, the building industry is critical to the Nigerian economy and provides shelter and gainful employment to the citizens (Usman, 2014). Past studies have shown the movement of the administrative capital of Nigeria from Lagos to Abuja brought about an expansion of infrastructural development in the Federal Capital Territory (FCT), Abuja that is driven by public and private sectors. This resulted from the need to cater for the increasing population. However, over 40% of Nigerians now live in urban areas of varying sizes (Kabir *et al*, 2009). The incidences of this population in urban areas has created severe housing problems resulting in overcrowding, inadequate dwellings, futility in terms of services, poor management of projects, the rush in project implementation, corruption, inadequate planning and budgetary provisions, costly project execution, untimely completion of projects and abandoned or non- functional facilities, collapsed buildings and in a situation where 60% of Nigerians can be said to be houseless persons (Kabir *et al*, 2009, FGN, 2004, Idoro, 2014, Ibrahim & Musa-Haddary, 2010, Usman *et al*, 2014).

The building industry (BI) plays an important role in the economy of any nation (Achuenu *et al*, 2000). It is essential because of its product. The level of BI achievement is a measure of the country's success (Usman *et al*, 2012). A high level of building activities indicates a healthy national economy. It also indicates highly developed building forms of civilized and cultural achievement in a country. Achievement is attained when time, cost and quality standard is effective and efficient (project performance); and this ushers a successful housing delivery. Housing delivery is the successful housing provision within cost, time and quality through effective and efficient system.

In spite of these, no study has shown that this menace has been husk out of the pipeline. This study seeks to evaluate the influences on the performance of housing delivery systems in Nigeria and to recommend measures towards alleviating this dreadful menace.

Global Housing Delivery
According to findings, more than one billion of the world's city residents live in poor standard houses; this is evident in sprawling slums and squatter settlements especially in developing countries (www.urbanobservatory.org). The dire need for housing in urban areas is a serious issue especially in developing countries where the cost for house provision for all is beyond imagination. The housing inadequacy globally is very limited. According to the global housing stock in urban areas, 700-720 million units of all types are needed to cater for the population (www.urbanobservatory.org). However, it is estimated that 20-40 million households are homeless. Thus, a reasonably number of those housed, however, cannot be

regarded as living in adequate shelter. According to Global Urban Shelter, 125 million units (18%) of all urban housing units are rented and 175 million units (25%) do not confirm to building regulations. Research has shown that most housing deficit is most evident in the cities of developing countries, with more than half of all less than –adequate housing units located in Asia and Pacific regions.

A remarkable effort was made during the 1990's whereby some developing countries achieved an improvement in urban housing, though many were unable to cope with the current needs (www.nhi.org). The situation became worse, as household sizes decrease in most countries and the number of urban households grew faster than urban populations (www.nhi.org). In developing countries, housing delivery systems need to cope with annual additional demand on some 18 million units' amount to annual increase in housing by 5% (www.nhi.org). According to Encarta (2007), developing countries have been identified with poor housing delivery, inadequate mechanisms and systems for land allocation, funding, mortgages institution and infrastructure.

Housing Delivery Systems

The various delivery systems in Nigeria from pre - independence to date have shown nonperformance of the building industry. According to Amao and Ilesanmi (2013), pre-1928 before the advent of colonial rule, Nigerians built houses through communal efforts. The community appoints a day for the project and the owner prepares meal for the people. This continued to 1928 though some communities still maintain the practice despite westernization. However, government started intervening in housing delivery 1928 during the bubonic plague of 1928-1929 (FGN, 2004). Government of the defunct Lagos colony paddling into housing delivery through Lagos Executive Development Board (LEDB) charged with responsibility of planning and development of the city (Amao & Ilesanmi, 2013). However, only public servants benefitted. Besides, during the independence preparation, slums were cleared and additional houses were built through direct labour. Nigerian Building Society (NBS) was established after the World War II by the colonial government to provide housing opportunities to both public and private sectors. Nevertheless, not much benefitted from the scheme especially outside Lagos. NBS failed because it was depending on government for financial funding (Kabir *et al*, 2009).

Colonial approaches to African urban housing in fifties were redeployment of decaying areas combined with the renewal of slums areas, as well, the construction of housing estates. This attempt was made in 1951. From 1952-1960, Nigeria carved up to three regions, viz; Eastern, Western and Northern regions respectively. These regions established housing corporations in 1964 to provide mortgages to people to build houses and pay back over a span period of time. This program could not be sustained, so it failed. However, within the two national developments plan (1962-1968 and 1970-1975), housing was considered non-consumption oriented, less preferred and non- income generating sector. In spite of this, insignificant sums of money were pumped into the sector. With wrong perception by the public, investors were misled that they cannot recoup their investment on housing (especially for low-income earners) as fast as possible with any appreciable margin (Amao & Ilesanmi,

2013). However, the loans to prospective house builders were few, poorly organized and ineffective.

In 1976-1985, the government was compelled to act due to shortage of housing, rising house rent and overcrowding. The government reorganized Nigerian Building Society (NBS) to Federal Mortgage Bank of Nigeria (FMBN) in order to serve as lending institution for house loans. From this, employees' Housing Scheme (Special Provision) Decree No. 54 of 1979 was promulgated. The decree stated that every employer should provide and maintain a housing scheme for its employees. The government through the Central Bank of Nigeria directed commercial banks to devote 5-6% of their total income to real estate. Despite steps taken, the housing delivery was getting worse.

The National Housing Policy was established in 1991 with the aim of providing decent and affordable housing to all Nigerians. It was evident at the inception but the implementation was poor and ineffective. However, a Presidential Technical Committee housing and urban development was set up by the government to address the new reforms. The reforms promulgated the restructuring of FMBN and the creation of Real Estate Developers Association of Nigeria (REDAN) as well as the Building Materials Producers Association of Nigeria (BUMPAN). Ebie (2004) opined that the new reforms were mechanisms to finance private developers for mass production of houses and allow buyers to have easy access to borrow money through the mortgage institutions. However, the performance of the FMBN was nothing to write home about. For instance, FMBN gave out loan to 8,874 out of 1,000,000 applications between 1977 -1990 and nothing came out of it (Amao & Ilesanmi, 2013; Kabir *et al*, 2009).

The FGN proposed a housing reform by establishing Federal Ministry of Housing and Urban Development in 2003, though there was artifice those houses were made available, but very costly and unaffordable by average Nigerians (Mabogunje, 2004). He added that a number of legislation have to be amended for housing to be affordable by average Nigerian. Kabir *et al*, (2009) reiterated that housing policy gained recognition from 2003 to 2004 in that private developers ushered housing delivery systems. The policy hinged the private developers to provide affordable houses on a sustainable basis, while the Government was charged with developing primary infrastructure for new estates, review and amend land use Act to ensure better land and speedier registration (Kabir *et al*, 2009).

METHODOLOGY
The study was carried out using both qualitative and quantitative techniques. The qualitative design provides a descriptive analysis of the influence of housing performance within the building industry in Nigeria. The quantitative analysis provides statistical information and figures with regards to how housing delivery has affected costs, time, and quality standards of housing projects. Questionnaire and interviews were used for data collection.

Table 1 indicates the target population comprising of professionals in the built environment. The data was obtained from records of professional bodies based on 10% sampling margin (Mugenda and Mugenda, 2003; Gay, 1983), FCDA and

Corporate Affairs Commission (Leed and Ormond, 2005; Krejcie and Morgan, 1970 in Usman *et al*, 2014b).

Stratified random sampling was used to sample the 210 responses from the 300 respondents. The population was divided by the sample size to obtain the interval scale for each category of the professionals above. Results used to obtain the required samples in each of the categories of professionals for the purpose of data analysis. However, purposive sampling was used to sample the questionnaires for the purposes of data analysis. Statistical Package for Social Sciences (SPSS) version 17 was used for the analysis of data.

The study is designed as a survey in twofold, namely: the strength of the relationship between independent and dependent variables and the predictive ability of the independent variable on dependent variables. In view of this, ANOVA and Chi-square became relevant statistical tool to apply (Pallant, 2005). ANOVA determines the statistical significance difference of the variables, whereas, chi-square determines their significance difference. However, One-Way ANOVA was used to compare the differences between housing delivery systems and its influence on project performance. Chi-square statistics was used to test the Hypothesis at 95% confidence level; that project performance does not influence housing delivery within the building industry.

Table `1: Target Population and Sample

Professionals	Population Based on Registration	Distribution	Sample Size
Architects	350	50	35
Builders	352	50	35
Engineers	354	50	35
Quantity Surveyors	354	50	35
Town Planners	350	50	35
Contractors	350	50	35
Total	2110	300	210

Source: Registration Offices, 2012

RESULTS AND ANALYSIS

The objective of this study was to investigate the influence of housing delivery system on project performance within the building industry in Abuja, Nigeria. Responses to questionnaires and interviews from the various categories of professionals in the built environment show that housing delivery system affects project performance within the building industry. The study assesses the housing delivery systems for project performance within the building industry in Abuja, Nigeria. This was in the light of its inability to deliver services efficiently and effectively (Ibrahim & Musa- Haddary, 2010, Idoro 2014, Usman *et al.* 2014). The data collected was analyzed using Statistical Package for Social Sciences (SPSS Version 17). ANOVA was used to determine the significance and how much variability in the project performance can be explained by housing delivery system within the building industry in Abuja, Nigeria. Chi-square was used to test for the hypothesis at 95% confidence level.

These findings indicate that housing delivery system is a significant aspect of project performance. It must therefore be taken into account while improving project

performance and service delivery to owners. The findings are in agreement with Idoro (2012), Nwanchukwu (2008), Nwanchukwu & Fedelis (2011), Usman, Inuwa & Iro (2012), Kamau, Mireri & Usman (2013) studies hold the same view.

Table 2: Summary of ANOVA Based on Responses on Housing Delivery

Respondents	Sum of Squares	Mean Square	df	F	Alpha Level	Sig.
Architects	66.186	16.546	4,30	110.310	0.05	0.000
Builders	67.977	16.994	4,30	108.283	0.05	0.000
Contractors	59.600	14.900	4,30	159.643	0.05	0.000
Engineers	67.307	16.827	4,30	93.851	0.05	0.000
Quantity Surveyors	67.805	16.951	4,30	110.666	0.05	0.000
Urban and Regional Planners	64.468	16.117	4,30	79.217	0.05	0.000

Source: Author, 2012

Table 3: Summary of ANOVA Based on Combined Professionals Responses on Housing Delivery within the Building Industry

Respondents	Sum of Squares	Mean Square	df	F	Alpha Level	Sig.
Combined Professionals	383.670	95.917	4, 206	517.026	0.05	0.000

Source: Author, 2012

The results are summarized in Table 2. The results in Table 3 suggest that there is a significant difference between project performance and housing delivery. This means that projects will be delivered within quality, cost and time overruns when necessary machineries are put in place. The results of Table 3 indicate that there is significant difference between housing delivery and project performance within the building industry (F= 517.206; P<0.05; df =4, 206).

This finding confirms to the suggestions in Table 2. The study therefore established that project performance depends on proper housing delivery. The null hypothesis is therefore rejected. Housing delivery influences project performance within the building industry in Nigeria. Projects fail or collapsed and abandoned for lack of proper delivery systems. Perhaps that is why project are rarely completed within quality standards, cost and time overrun. Besides, the Nigerian Building Industry has adopted the traditional project management system which makes it difficult for housing delivery to be successful. The TMS is a system whereby the client appoints the project coordinator (usually the Architect or the Engineer) but it's been controlled by the client.

The researcher further performed chi-square test to determine whether there is a significant difference between housing delivery and project performance within the building industry in Nigeria. From the chi-square analysis, a value of 0.985 was obtained. This suggest that a value of 98.5% of the variability of project performance is been accounted for by proper housing delivery. It means that project performance can be enhanced by good delivery system.

Past studies show that the application of modern techniques, project management techniques, planning, scheduling and controlling are a bedrock to successful project delivery (Aniekwu & Audu, 2010; Kedzner, 2000; Gollenbeck, 2008). Krishnamurthy and Ravindra (2010) added that in housing delivery, adequate planning must

precede the execution of all other managerial functions. These are factors that influence project performance which is absent in the Nigerian building industry (Usman *et al*, 2014). Planning facilitates project performance in housing delivery; and when complexity of project is high, project planning is inevitable (Bailey *et al,* 2008; Bamisile, 2008; Inuwa *et al,* 2013).

In Nigeria, poor housing delivery was traced to the inability to plan and implement projects adequately (Achuenu *et al*, 2000; Usman *et al*, 2012). Saleh (2004) revealed that this prevents the building industry from successful housing delivery. Thus, to improve the efficiency of the Building Industry (BI), Oladimeji & Ojo (2012) asserted that the Building Industry contributes to the national economy and therefore its planning should not be ignored.

CONCLUSION

Despite successful housing delivery in the building industry worldwide, its use in Nigeria is yet to be adequately exploited. The study concludes that right from the initiation to completion phases, housing delivery system have been faulty and so project cannot be delivered on time, within the budget and quality standards. Clients usually demand for a better value from their investments. As such, they want projects to be completed on time, within cost and with the right quality (Rashid *et al*, 2006).

The study has established that the building industry in Nigeria is unable to provide housing delivery efficiently and effectively; and there are several reports of poor management of projects, the unnecessary rush in project implementation, inadequate planning and budgetary provisions, time and costly project execution, inefficient service delivery and abandoned or non- functional facilities and collapsed buildings.

These are serious issues that affect housing delivery of projects on quality, cost and time overruns; however, these can be mitigated by proper planning, implementation of policies and monitoring as well as supervision in the building industry in Nigeria.

RECOMMENDATION

Based on the findings, the following recommendations were made:
1. Government should be consistence on policy implementation
2. Government should ensure sustainably of its policies by releasing funds on time and according to schedule.
3. Capacity building should be mandatory to all professionals in order to improve their competencies within the building industry.
4. To enhance service delivery, monitoring/supervision mechanisms should be intensified at all levels for both private and public sectors.
5. Erring professionals should be punished for unethical practices.

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