A Study of Causes of Uncompleted / Abandoned Building Projects and Its Effect on Real Property in Uyo Metropolis, Nigeria

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Abstract   This study investigated the causes of abandoned structures in Uyo and their effect on property values from estate surveyors and valuers perspective. It surveyed a cross-section of fifty-eight (58) estate surveyors and valuers out of sixty-five (65) registered estate survyors and valuers in Uyo. Identified causes and effects of uncompleted/abandoned buildings in literature were subjected to a pilot survey of ten (10) estate surveyors and valuer in the study area. From the pilot study 11 and 8 identified factors relevant to the real estate professional were posed in a questionnaire to the respondents. Their opinion were rated on a five point likert scale of most importance as 5, being the highest, and not importance as 1, being the least. Relative importance index was used to analyze these data. Linear regression analysis was used to analyze the effect of uncompleted/abandoned building on rental values of property in the study area. The study found that wrong estimates, inflation, inadequate planning, poor risk management, inadequate finance, etc., are the significant factors causing abandonment of building projects in Uyo. It also found that abandoned building projects adversely affect the property values of buildings nearby. Abandoned buildings also reduce the aesthetics of the neighborhoods, thereby leading to blighted areas. The regression analysis shows that the rental values of properties in the study area, is significantly affected by distance, and numbers of uncompleted/abandoned buildings. The study recommended that promoters of building projects should commission studies to determine the feasibility of their proposals to avoid unnecessary wastages of valuable resources.

Keywords   Property, Abandonment, Estate surveyors and valuers, Value, Planning

1. Introduction

A drive through the streets of Uyo metropolis, the capital city of Akwa Ibom State, Nigeria will reveal a significant number of uncompleted/abandoned building projects littering the landscape. It is not uncommon in Nigeria to find construction projects being abandoned mid-way into the construction and allowed to waste away. Kotangora (1993) cited by Akhanolu, Ikpetan, and Chibuzor (2016) states that there are about 4,000 uncompleted or abandoned projects belonging to the Federal Government of Nigeria with an estimated cost of about ₦300 billion which will take 30 years to complete. This figure relates only to Federal Government projects, aside from other tiers of government, not to mention private sector projects, whose data is not readily available. This experience is not just peculiar to Nigeria. For example, Nagamany (2016) in Malaysia reports a total of 514 abandoned projects in 2000 alone and 544 projects in 2001.

Abandonment of building projects has been variously defined. Akhanolu et al. (2016) define project abandonment as the resultant effect of any development projects that have started at an earlier date but which the construction work for one reason or the other has stopped. Spelman (1993) cited in Ihuah and Benebo (2014) sees the abandonment of development projects as the act of discontinuing any activities or maintenance works on such development project within a time frame of the contract agreement and with no intention of returning to the development. For Olalusi and Otunola (2012) it can mean an owner is ceasing to provide maintenance and operating services to a building or the loss of an owner's legal right to a building, or the demolition of a building. One standard feature in the above definition is the act of stopping or discontinuing. Therefore, building abandonment can be seen as the non-achievement of the project aim. In real estate, this failed aim can manifest in total abandonment of the construction work, the project experiencing an extended void period after its completion or

the inability of the project achieving the developer's profit Margin.

Olusegun and Michael (2011), Olalusi and Otunola (2012), Hoe (2013), Ihuah and Benebo (2014), Nagamany (2016) and Mac-Barango (2017) have discussed the causes of abandonment of the project. This includes but is not limited to poor risk management, incorrect estimation, lack of available skilled personnel, misunderstanding of the work requirement, inadequate planning, corruption and communication gap, inadequate finance, inflation, the death of the client, dispute, natural disaster, faulty design, etc. Research results also suggest that abandoned building does indeed harm the values of houses nearby (Land Policy Institute 2007, and Ihuah and Benebo 2014). Abandoned property can become a hideout for criminals, thereby making the neighborhood unsafe. Other effects could be a waste of resources and loss of property values.

Okon and Nwanekezie (2016) examined the factors responsible for vacant/abandoned properties in Uyo. Their study dealt on completed buildings which were either vacant or abandoned without considering the various uncompleted/abandoned building projects littering the landscape of Uyo. Thus, this present study seeks to investigate the causes and effect of uncompleted/abandoned building projects on real property values in Uyo metropolis. It is the firm belief of the author that the findings and recommendation of this study will help reduce the rate of incessant incompletion and abandonment of property development. It is also expected that by reduction of the abandoned building there will be the availability of accommodation both for the living and other purposes. The next section contains the literature review.

2. Literature Review

Several studies have documented the causes and effects of abandoned projects.

Land Policy Institute (2007) in the United States of America examined the economic impacts of residential property abandonment and the work by the Genesee County Land Bank (GCLR), to alleviate the burden of abandoned and tax-foreclosed properties in the City of Flint, Michigan. The study adopted the hedonic price function to determine the impact of abandoned residences and vacant lots on surrounding property values. The findings of the study showed that an additional abandoned structure within 500 feet will reduce the sale price of the property by 2.27% and that an additional abandoned structure within 501 and 1000 feet will decrease sale price by 1.92%. It further revealed that vacant lot within 500 feet of a home would decrease in housing price by 1.5%, while there was no significant housing value effect from additional vacant lots between 501 and 1000 feet from homes. The above study is entirely relevant, but it only tested the sales value of the affected properties without considering other effects of the abandoned property.

In a study of abandonment of construction projects in Nigeria, Olusegun and Michael (2011) surveyed sixty-two (62) respondents comprising of quantity surveyors, civil engineers, architects, builders and contractors in the six states of South Western Nigeria. The data were analyzed using the relative importance index. The research revealed the causes of project abandonment to include poor project planning, inadequate funding, inflation, the bankruptcy of contractor, the variation of project scope, political factor, the death of a client, incompetent project manager, wrong estimate, poor cost control, faulty design, and delayed payment. The study also indicated the effect of an abandoned project as a disappointment of the populace /users, low living standard, wastage of resources, reduction in employment opportunities, decrease in the tempo of construction activities, decrease in revenue accruing to the government, difficulty in attracting foreign loans, etc. This study did not state the study population; therefore the sample size of sixty-two professionals in six states is entirely inadequate for its findings to be generalized.

In a similar study, Olalusi and Otunola (2012) in Nigeria investigated possible causes of project abandonment, its impact on the immediate community contribution to infrastructure decadence and environmental pollution. The study surveyed two hundred and fifty (250) respondents, and data were analyzed using simple percentages. The findings reveal that non-functional government policies, inadequate procurement procedures, incompetent contractors and poor designs contributed to project abandonment. The study suggested the establishment of National Construction Bank to rejuvenate several abandoned construction projects. This study was without any location, and the study population is unknown. Thus its findings cannot be said to represent any known segment or region of the country.

Hoe (2013) in Malaysia, examined causes of abandoned construction projects. The study surveyed a cross-section of two hundred and twenty-five (225) respondents comprising of architects, developers, property consultants, the honorary secretary-general of the National House Buyers Association, etc. Spearman's ranking correlation was adopted for the data analysis. The findings indicated that the owner was the primary person responsible for the abandonment of the construction project. The ranking factors affecting the owner of the project included cash flow problems, incompetence and siphoning out of money. The study also revealed that government regulations adversely affect or cause project failure in Malaysia. The study proposed a risk management expert system module, a middle ground solution between the sell-then–build and build-then-sell schemes to address the causes of abandonment of construction projects. The findings of this study seem to be at variance with the earlier result from Nigerian researchers. However, the study is entirely relevant to the abandonment of construction project though it may not be applicable in Nigeria.

In another Nigerian study, Ihuah and Benebo (2014) investigated the various causes of abandoning development projects and the effects of such causes on real properties and

their values. The study surveyed a cross-section of two hundred and thirteen (213) respondents, and the data were analyzed using the relative importance index. The result indicated that about 22 factors were responsible for project failure. The most ranked factors included payment remittance delay, lack of adequate fund allocation, leadership instability, the death of the investor, inconsistency in government policies, improper project planning, and design, improper project costing among others. The effects of abandonment of project as shown by the study include real property total value reduction, total income receivable from the real property reduction, increasing effects of environmental issues to the real property and the built environment, etc. The findings of this study collaborate the findings of earlier studies such as Olusegun and Michael (2011) and Olalusi and Otunola (2012). Again this study fails to state the study population and the sample size cannot be said to be the probability representative of the study population to allow for generalization of its findings.

Akhanolu et al. (2016) in Lagos surveyed one hundred and forty-five (145) respondents in a study to examine the causes and effects of abandonment of projects in Nigeria. The questionnaire which was the primary instrument of data collection was administered to quantity surveyors, builders, and contractors. The resultant data were analyzed using the relative importance index. The result showed the causes of project abandonment as lack of adequate fund allocation and payment delay, improper project budgeting, land or legal disputes, the death of the owner, improper project estimate, lack of project risk assessment, etc. The study also revealed the effect of abandonment of the project to include de-motivation of investment in real properties, loss of employment opportunities, etc. Again, this study collaborates earlier reported findings, and all of the Nigerian studies are south-western without a similar study in the east.

In Malaysia, Nagamany (2011) studied the causes and effect of abandoned residential projects. A total of fifty-two (52) respondents representing developers, contractors, consultants, abandoned property owners, and banks were surveyed. Mean scores were used to analyze the gathered data. The study revealed that the primary cause of abandoned residential projects in Malaysia was financial, followed by administration/strategy and policy factors. It also showed the effects of abandoned residential projects as social and economical, with some environmental effects. The finding of the study is relevant to real estate perspective.

Mac-Barango (2017) examines the causes and effects of abandonment of construction projects in Nigeria. The study gathered data on the abandoned project in three cites of Port-Harcourt, Owerri, and Enugu. Seventy-two (72) respondents were surveyed in these cites. Mean scores were adopted to analyze the gathered data. Its findings indicated that inadequate planning, inadequate funding, inflation, the bankruptcy of contractors, the variation of project scope, faulty design, delay, and quackery are factors responsible for projects abandonment in Nigeria. The effects of abandoned projects in Nigeria include wastage of resources, reduction in

employment opportunities, a decrease in the tempo of construction activities and a decrease in revenue accruable to the government. This study though in South-West like the earlier studies, it also collaborates their findings. The sample size of seventy-two (72) in three major cities would be inadequate for the generalization of its findings.

The above reviews reveal that the common causes of uncompleted/abandoned property include inadequate planning, inadequate finance, poor risk management, inflation incompetent project manager, variation of project cost among others. While the effect include hideout for criminals, reduction in property values within the neigbourhood, wastage of resources, health challenges, reduction of employment opportunities etc. Also the review show that most of the studies were conducted in South-West Nigeria with only one in the East. More so, all the studies have analyzed general causes and effects of abandonment of building the project without emphasis or being specific on property values. Therefore, it is necessary to examine the effect of the abandonment from a real estate values perspective. The next section of this paper contains the research methodology adopted to actualize the aim of the study.

3. Research Methodology

This study surveyed a cross-section of estate surveyors and valuers in Uyo metropolis. The estate surveyors and valuers were sampled because the study had emphasized the effect of the abandoned project on property values and estate surveyors by training are expected to have a systematic and analytical approach to real property value opinions. The latest directory of the Nigerian Institution of Estate Surveyors and Valuers, Akwa Ibom State branch in 2013 show that there are sixty-five (65) registered estate surveyors and valuers in Uyo. Since the study population was not significant, complete enumeration survey of the sixty-five (65) estate surveyors and valuers was conducted and fifty-eighty (58) representing 89.23% effective response rate was recorded. Questionnaire was the main instrument of data collection. From literature, several factors were identified to be responsible for uncompleted/abandoned building project and its effect. A pilot study was conducted on ten (10) estate surveyors and valuers in the study area to determine factor relevant to the profession. These identified and pre-studied factors were posed to the respondents on a five –point likert scale of Most Importance (MI), Very Importance (VI), Importance (I), Fairly Importance (FI), and Not Importance (NM). Their opinions were the rated as follows: MI – 5; VI – 4; I – 3; FI – 2; NM -1. Relative importance index was then used to analyse these data. The relative importance index helps one to get a measure and reasonably reliable actual position of the respondent(s) on the attitude continuum. It is evaluated using the following expression:

$$RII = wf/N$$

Where, W = Weight given to each factor

N = Total number of respondent

F = Frequency or number of responses.

The respondents were also required to give data on at least one (1) property in their portfolio considered to be affected by uncompleted/abandoned building project. Only forty-one (41) out of the fifty-eight (58) respondents gave one (1) property each considered to be affected by the presence of uncompleted/abandoned building. The respondents provided on the following variables rental value, distance from the uncompleted/abandoned building and number of uncompleted/abandoned building. Linear regression analysis was then adopted to analyse the gathered data. Rental value (Y) was the dependent variable in naira (N), while distance from uncompleted/abandoned building (X1) in metres (m) and number of uncompleted/abandoned building (X2) were the independent variables. Statistical Package for Social Science (SPSS) version 17.0 was used to analyze the data.

4. Results and Discussion

This section presents the data gathered from the field survey. Series of possible causes and effect of the abandoned property identified in the literature and subjected to a pilot study of estate surveyors and valuers in Uyo were posed to the respondents. They were required to rank their opinion with most importance rated as 5 being the highest and not importance as 1, the least. Their responses and analysis are presented in tables 1 and 2.

First, the respondents were required to rank the causes of abandoned building projects, and their responses are shown in table 1 below:

Table 1. Causes of uncompleted/abandoned property in Uyo Metropolis

S/No	Factors	1	2	3	4	5	RII	Rank
1.	Inadequate Planning	1	15	20	22	0	3.09	5th
2.	Poor Risk Management	5	10	22	19	2	3.09	6th
3.	Inadequate Finance	1	12	20	16	9	3.34	3nd
4.	Inflation	0	4	26	20	8	3.55	2nd
5.	Incompetent project manager	0	17	26	10	5	3.05	6th
6.	Variation of Project Scope	1	11	30	14	2	3.03	5th
7.	Death of Project Owner	2	15	25	11	5	3.03	7th
8.	Political Factor	4	2	20	24	5	3.00	9th
9.	Wrong Estimate	0	8	13	28	9	3.66	1st
10.	Dispute	2	16	19	15	6	3.12	4th
11.	Natural Disaster	3	15	22	14	4	3.02	8th

Source: Author's field Survey

Data from table 1 above indicates that all the factors are significant. However, a thorough examination will reveal that some factors are ranked more than others. The wrong estimate was ranked the first with a relative importance index of 3.66 followed by inflation with an index of 3.55. This means that wrong estimate or inaccurate prediction of development variables such as construction cost, interest rate, and yield adversely affect the rate of abandonment of property in Uyo metropolis. Inflation is one factor that makes most estimates inaccurate in terms of cash and the respondents ranked it second with index of 3.55. Inadequate finance and dispute are third and fourth respectively with indices of 3.34 and 3.12 respectively, while inadequate planning and variation of project scope are tied in the fifth position with an index of 3.09. This shows that inadequate finance can stall development project and crises such as dispute over title, which is common the study area will impede the project. Also in tied position, sixth are poor risk management and incompetent project manager with an index of 3.05. It follows that ill-equipped project manager and poor risk assessment of the project are likely causes of building failures in the area. The respondents ranked the death of project owner seventh with an index of 3.03 and natural disaster eighth with an index of 3.02. With lack of continuity, once the project owner is dead, the project is dead. Though natural is not common feature in the study area, the respondents considered it a significant factor to uncompleted/abandoned building. The political factor is ranked the last with an index of 3.00 as the political climate in the state is reasonably calmed. The above analysis shows that all the factors are critical as they can result in project failure and abandonment of construction work in Uyo metropolis. These findings collaborate earlier findings and result from the research of Olusegun and Michael (2011), Olalusi and Otunola (2012), Ihuah and Benebo (2014), Akhanolu et al. (2016), Nagamany (2016) and Mac-Barango (2017).

Next, the respondents were asked to rank the possible effect of abandonment of project identified in the Literature. Their opinion were rated as most importance 5 and not importance as 1. Table 2 below presents their responses and analysis.

Table 2. Effect of Uncompleted/Abandoned Property in Uyo Metropolis

S/No	Effect	1	2	3	4	5	RII	Rank
1.	Hideout for criminals	5	3	28	18	4	3.22	4th
2.	Reduction in property values within the vicinity or neighborhood	0	10	16	25	7	3.50	1st
3.	Reduces the aesthetics of the neighborhood	6	9	23	18	2	3.02	5nd
4.	It can lead to a blighted neighborhood	3	9	17	22	7	3.36	2nd
5.	Increases environmental problems	2	15	21	20	0	3.01	6th
6.	It poses health challenges	6	16	24	10	2	2.76	7th
7.	Wastage/underutilization of Resources	1	4	34	15	4	3.29	3rd
8.	Reduction of employment opportunities	4	10	25	19	0	3.02	5th

Source: Author's field Survey

An examination of the above table 2 reveals that all the items are significant except item 6 "it poses health challenges" with an index of 2.76. This means that the respondents do not consider health challenge as an effect of abandoned property. Reduction in property values in proximity to the abandoned property was ranked first with an index of 3.50. This position is collaborated by the findings of the Land Policy Institute in 2007 where the sale price of a residence was found to reduce by 2.27% within 500 feet of the abandoned structure. Also significantly ranked in the second position with an index of 3.36 is that abandoned structures can lead to the blighted neighbourhood. Abandoned property result in wastage and underutilization of resources, this was ranked third with an index of 3.29, while the abandoned property can serve as a hideout for criminals was ranked fourth with an index of 3.22. In a tied fifth position with indices of 3.02 each are "reduces the aesthetic of the neighborhood" and "reduction of

employment opportunities." Ranked sixth with an index of 3.01 is that abandoned property increases environmental problems. The above results support the fact that abandoned structure has several effects on real estate and this finding is supported by earlier works of Land Policy Institute (2007), Nagamany (2016) and Mac-Barango (2017).

Next the respondents were required to provide information on any property on their portfolio considered to affected by uncompleted/abandoned building. Their responses are recorded in Appendix 'A'. This data was analysed using linear regression to determine the effect uncompleted/abandoned building as measured in terms of distance from the subject property (X1) and number of uncompleted/abandoned building within the vicinity of the property (X2) on the rental value (Y) being the dependent variable. The analysis was done with SPSS version 17.0 and the following result was obtained.

Table 3. Model Summary

Model	R	R square	Adjusted R square	Std Error of Estimate	R square change	F change	df1	df2	Sig. F change
1	.791	.626	.606	38318.58305	.626	31.810	2	38	.000

a Predictors: (Constant), No. of UAB, DIST TO UAB

The following regression equation was obtained

$$Y = 260842.114 + 2841.807X1 - 21876.097X2 + e$$

The regression coefficient of 0.791 shows a strong positive relationship between the independent variables and the dependent variable of rent. This means that 79.1% variation or fluctuation in rental values of the examined property can be explained by distance of the property from uncompleted/abandoned building and number of uncompleted/abandoned building. Also the correlation between the individual variables with rental value shows distance from the uncompleted/abandoned building has a positive relationship of 0.702 and number of uncompleted/abandoned building has negative correlation of 0.659. The above result reveals that rental value of the property in Uyo metropolis are significantly affected by uncompleted/abandoned buildings.

5. Conclusions and Recommendations

This study has investigated the causes and effects of abandoned structure on real property in Uyo Metropolis. The study concludes that wrong estimate by the promoters of the project, inflation, inadequate finance, dispute/legal tussle over ownership of the plot and inadequate funding are some of the significant causes of abandoned structures in Uyo. Others are an incompetent project manager, death of the project owner, natural disaster and political factor. The study also concluded that abandoned structure adversely affects the sales price or property value of properties nearby. Clusters of abandoned structures will lead to a blighted neighborhood, also reducing the aesthetics of the neighborhood.

The leading causes of abandonment of project were a wrong estimate, inadequate planning, inflation, etc. which means that promoters of building project did not commission

a study into the feasibility and viability of such projects. Therefore, project promoters should commission feasibility and viability studies to be conducted as it reduces the wastages of more significant resources, in the long term. Also, the government can establish a National Construction Bank to help revive abandoned structures.

Appendix 'A'

Responses on the property considered to be affected by uncompleted/abandoned building in Uyo metropolis

S/No.	Rent (Y)	Dist from UAB (X1)	No. of UAB (X2)
1.	250,000	25	2
2.	300,000	22	2
3.	400,000	50	1
4.	400,000	50	1
5.	150,000	5	3
6.	200,000	10	3
7.	300,000	15	2
8.	250,000	10	2
9.	400,000	20	1
10.	250,000	10	4
11.	220,000	15	5
12.	300,000	20	2
13.	250,000	12	2
14.	150,000	10	2
15.	270,000	15	3
16.	200,000	20	3
17.	250,000	15	4
18.	250,000	12	3
19.	270,000	10	2
20.	300,000	40	2
21.	150,000	5	5
22.	180,000	5	3
23.	250,000	10	2
24.	220,000	10	2
25.	300,000	40	1
26.	250,000	10	2
27.	250,000	10	2
28.	270,000	15	3
29.	250,000	20	3
30.	220,000	10	3
31.	180,000	10	4
32.	200,000	15	3
33.	220,000	20	4
34.	200,000	15	5
35.	250,000	10	3
36.	200,000	10	5
37.	250,000	15	4
38.	200,000	20	3
39.	150,000	15	5
40.	250,000	10	4
41.	220,000	10	3

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