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AN EXAMINATION ON THE IMPACT OF QUACKERY IN PRIVATE BUILDING PROJECTS EXECUTION IN ANAMBRA STATE NIGERIA

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Abstract

Incessant building collapse in Nigeria is becoming alarming and requires urgent attention. Therefore, to investigate level of quackery in construction works in Anambra State, the study was initiated. The research focused on the impact of the use of quacks to execute private building project in Anambra State. Primary data which include site visitation and design of questionnaire were used. The population of the study includes professionals in the built environment which are: architects, quantity surveyors, land surveyors, builders, engineers, planners, and estate surveyors and valuers. Simple Random Sampling technique was used to select the respondents. Taro Yamame formula was used in the determination of sample size and Stratified sampling technique was used to allocate number of respondents per group. Survey research design was adopted. Mean score analysis was used to analyse the opinion of the respondents. It was found that the rate of quackery in Anambra State is significantly high and the effects of quackery in private building projects execution includes; degradation of the environment, building failure and collapse, deprivation of professionals of legitimate jobs. In conclusion, the patronage of quack in the execution of building projects is harmful not only to the owner but also the workers as well as the people within the neighbourhood. The study recommends that various professional regulatory bodies such as Council of Registered Builders of Nigeria (CORBON) should ensure that only registered and qualified professionals are involved in the construction of future buildings in order to minimize failures.

Keywords: Building, Execution, Private, Project, Quackery

Introduction

A number of different professionals (stakeholders) exist in the building industry, but in most cases their services are not sought for by private building developers due to one reason or the other (Akande 2007). The professionals include: Architects, Quantity Surveyors, Land Surveyors, Builders, Engineers (Structural, Civil, Mechanical, Electrical, and Geotechnical). According to Akande (2000), it has been observed that due to high cost of consultancy fees needed to engage the services of these professionals, most Nigerians prefer to cut cost by engaging the services of non-professionals (quacks) who lack the needed experience in the construction sector. This is reflected in poor workmanship and low standard of construction, which results in building failure, structural defects, collapse of part or the entire building, loss of financial investment; and loss of lives and properties amongst others.

In order to obtain the desired satisfaction, comfort and safety, every building whether temporary, permanent or monumental structures needs to be properly designed, well planned, constructed and maintained. In a simple term, construction, which also is known as infrastructural development, is the bedrock and the ultimate in the realization of both physical and economic development of

any nation. It involves different stages ranging from the formation of client desire and requirements in brief and type of planning, designing, costing and the execution of the project by related professionals in accordance with legal provisions, bye-laws standards and specifications (Calvert, 2007).

Building Construction is an all-encompassing term which covers the erection of buildings for various uses as residential, commercial', industrial, administration and recreation. It involves other engineering activities such as the construction of roads and highways, bridges, jetties, dams, water distribution network, airfields, drainages, refineries, steel complexes and power work (Onyemachi and Uji, 2005).

In a well-designed system, a localized failure should not cause immediate or even progressive collapse of the entire structure (Olagunju, 2002). Investigations have revealed that most construction projects not only fail owing to sub-standard products, use of untrained artisans and erection of structures on non-suitable land or wrong location but because they are handled by uncertified people, who are difficult to trace in case of eventual failure such as collapse (Awojobi, 2005).
The frequency of collapse of building structures in Nigeria in the past few years had become very alarming and worrisome. Many lives and properties have been lost in the collapse of buildings mostly in Onitsha metropolitan, Anambra state.

Some multi-storey buildings, one of them belonging to churches, have collapsed in Onitsha in the past month. Five persons were killed in one of the incidents while many other people working on the buildings were critically injured. Also, a 5-storey Building Collapsed at Mgbuka, Nkpor at No 8 alloy Offia Cresent on 5 July 2014.

An uncompleted four-storey building had a catastrophic structural failure and collapsed at St. Andrews Anglican Church, Odoakpu, Onitsha, Anambra State on 2 June 2014. Four persons, all adult males believed to be workers on the site died while numerous students and parishioners who frequent the building thankfully were not affected. The day before the collapse some 300 students had reportedly used the building for a church event. Hundreds of students were playing in the vicinity of the building when it collapsed.

A five-storey building still under construction at Obanye Street Fegge has also collapsed. A visit to the collapsed scenes were as revealing as they were pathetic and one could not but wonder why such, could have been allowed to stand or to what extent people can go to cut corners at the expenses of respect for safety and respect for lives. Unfortunately, there are still a number of buildings of similar circumstances dotting the skyline of Anambra major cities.

For instance, the recent loss of human lives and properties when a three-storey building under construction collapsed at Eziora village, Adazi-Ani in Anaocha Local Council Area of Anambra State, two persons died and about 20 others were seriously injured. According to Daily Post Newsletter, September 27, 2014, the building was at the completion stage when it collapsed. The collapse was as a result of involving non-professionals and poor-quality materials in the construction process.
The use of quacks in building projects execution has results to waste of materials, loss of financial and human resources, and sometimes loss of lives. This affects the economic investment of stakeholders. Building failure affects the confidence of prospective and present clients in the building industry and as well affects the integrity of the professionals in the industry.

Literature Review

Quackery in building investment projects

The formal sector of the building construction industry consists of professionals such as architects, engineers, technicians, technologists, builders, quantity surveyors, estate surveyors and others with

formal education whose professional practices are regulated by their relevant professional bodies (Calvert, 2007). The informal sector on the other hand consists of roadside craftsmen and artisans such as bricklayers, craftsmen, iron benders, welders etc without any formal technical education, training, certification or license, whose activities are barely regulated by their various voluntary associations. Ede (2013) maintained that the exponential population growth and the consequent productive activities needed to sustain mankind forces the demand for housing to be more pressing hence making more and more private individuals to engage in building investment projects. The quest to meet up with this demand has led to use different approaches (professionals and quacks) in meeting housing and infrastructural needs.

Whilst many or all of the necessary professional steps (designs, material specifications, trial mixes, quality assurance tests, etc.) are conducted and the necessary professional supervisions provided by the formal sector in building construction, the reverse is the case with the informal sector and this connotes quackery. Uwakweh (2000) described the informal sector as that segment of firms or individuals that engage in construction or other activities without obtaining the necessary designs, planning and construction documents. In other words, they always evade the formal process of obtaining permits and approvals for their construction and related activities. Ayodele *et al*. (2011) attributed corruption in the construction industry to poverty, excessive love for money (greed), politics in the award of contract and godfatherism, professional indiscipline, profit maximization by contractor, quackery, fall-out of endemic societal corruption and favouritism.

Factors contributing to quackery in building investment projects

There are numerous factors contributing to quackery or use of quacks in building investment projects in Nigeria. These factors are discussed under the following headings:

1. **Socio-economic habits of Nigerians:** Conservatively, at least 70% of buildings in Nigeria are owned by private individuals most of which are contracted to the informal sector whilst the professionals (formal sector) of the construction industry only construct buildings owned by the government, corporate organizations such as banks, insurance companies, industries amongst others and a few educated and very wealthy individuals (Fagbenle and Oluwinmi, 2010). Adenuga (1999) posited that for fear of paying appropriate fees to qualified people (professionals), it is often discovered that non-professionals design buildings and after the design, the local planning authorities approve them. Again, the right professionals are not appointed into the right positions in local authorities responsible for checking building related drawings.
2. **Owner-contractor syndrome:** The owners of buildings in a bid to save cost build by themselves using the direct labour work force. The owners of such properties purchase cheap and inferior building materials without any idea of what type of materials should be bought for a particular part of a job.
3. **Improper supervision of project during construction:** Akeju (1984) reported that involvement of competent professionals to handle the planning and design of a project does not entirely guarantee its stability. There have been situations where projects competently created on paper are not faithfully and accurately reproduced on the site. A structure is said to be as good as its construction and not its design. An appropriate qualified professional must supervise every stage of the work.
4. **Constructional problems:** Subair (2008) averred that the use of poor materials and low standard of workmanship creep into construction as

factor needed to lower the overall cost of construction. Some developers wrongly believe that by compromising slightly on materials quality, the overall effect on the structure will be little and the monetary gain will be large. Good materials in the hands of experienced artisans are the best ways of saving cost.

5. **Foundation related deficiencies:** Foundational related deficiencies may be attributed to any or combination of the following as indicated by Olateju (1991):
   - Absence of a proper investigation of the site or wrong interpretation of the results of such investigation
   - Faulty design of the foundation
   - Bad workmanship in the construction of the foundation
   - Poor construction materials during the construction of the foundation due to financial constraints.
   - Insufficient provision in the design construction for exceptional natural phenomena such as thermal and biological conditions, rainfall and floods, greater than those hitherto recorded at the site.
6. **Non or insufficient geotechnical and site investigation studies:** This is often the case when construction is carried out with insufficient or non-existent geotechnical studies. Inadequate soil investigation before embarking on a new building work may result in structural failure and eventual collapsed. Studies have shown that steep slopes may be subjected to creep under heavy super imposed pressure. Sulphate in clay soil is deleterious to buried concrete, iron and steel. High water table, which is seasonal, produces a lower soil bearing capacity than when the soil is dry, hence rendering construction inundated soils very expensive (Adenuga, 2012).
7. **Design errors:** These include errors in concept, assessment of loading, calculation errors, improper elemental assembles, inter-relationship errors, connection details errors, inability to visualize the mode of construction, maintainability, misuse of computer software and detailing errors. When designers do not take into consideration the mode of construction, practicable designs cannot be arrived at (Adenuga, 2012).
8. **Operational errors:** These occur when alterations made to the structure are not taken into consideration during design. This usually occurs when there is an upward economic change in the value of the building location. A building, which might have been designed and constructed as residential, might be converted to a school or a supermarket requiring large free space or sometimes, more floors may be added.
9. **Alteration of approved drawings:** During construction, many contractors either on the directive of the client or in a bid to cut corners and maximize profit, alter approved building plans without corresponding amendment to structural drawings to the detriment of the structure.
10. **Illegal alteration to existing buildings:** Client at time, on their own, alter existing structures (buildings) beyond and above the original design without any drawings, and relevant Town Planning approval. In some instances, existing bungalows have been converted to either a storey building or two to three-storey structures without any drawings and supervision by qualified personnel (Dimuna, 2010).
11. **Clients' penchant to cut corners:** Nigerian client (mostly individuals) have a penchant for cutting corners by not employing qualified personnel to produce the contract documents and supervise the building while under construction, as they want to spend minimum (not optimum) amount of money on the construction (Madu, 2005 in Dimuna, 2010). Even where qualified professionals are employed for design and supervision, most clients insist on having the final say on what goes on in the site to the detriment of proper execution of contract. Unfortunately, if there is any mishap on site, the client

blames the consultants and the contractor. It is therefore obvious that clients' penchant to cut corners is one of the problems in the building production process.

Effects of collapsed private building projects on real estate investment

According to Olajumoke (2006), housing is more than mere shelter; it encompasses all ancillary service and community facilities, which are necessary for human well-being. It has been generally agreed that building related problems (chief of which is failure) in the world today are in the so-called third world countries including Nigeria. Failure definitely affects the building and the occupants. Generally, the effects of building failure and ultimately collapse are summarized below:

1. Loss of money invested: The money invested on any building that collapses cannot be recovered.
2. Material wastage: Virtually all the materials used except the reinforcement cannot be recovered.
3. Prestige of the owner: The landowner's prestige is lost in the society and in any association, he belongs to as people see him as an accomplice in the injury sustained by people and those who lose their lives.
4. Reputation of investment owner: It tarnishes the reputation of the owner of an investment.
5. Loss of the buildings aesthetic values: The disintegration of a building results in the loss of its aesthetics and may even constitute an eye sore in a place when such situations is the order of the day.
6. Increase in the cost of maintenance: Maintenance cost on buildings with cracking and foundation failure is often enormous.
7. Leads to shortage of manpower: The occupants of such buildings are exposed to various diseases such as cholera, diarrhoea, malaria fever etc. These may constitute to a shortage of able bodies and minds, which may reflect in their jobs or businesses.
8. A great loss to the economy: The incessant building collapse is a threat to sustainable physical development. It is imperative to State that sustainable physical development implies that development activities in physical environment take into consideration crucial issues of continuity and sustenance. Tang (2008) Stated that any development process that ignores sustainability would hardly make any positive enduring impact that could stand the test of time. When a building disintegrates gradually, it loses its strength and stability amongst other things and this leads to collapse, which will amount to the loss of huge sums of money invested in its construction. This would cause a great loss to the private owner and the Federal Government because; it will affect the economy indirectly. Due to the collapse of the buildings, occupants of such building are rendered homeless suddenly or run the risk of being injured or killed if buildings are not vacated on time. Others effects of building failure and collapse are: loss of investment, loss of strength of the building, degrading environment, increment of sick citizens (Adenuga, 2012).

The quantification of the complete effects of any collapse is extremely difficult as there are so many factors involved, and these including emotional and subjective factors. Apart from the number of deaths that can often be truly identified, the rest of the effects are surrounded by so many uncertainties which make the analysis only approximate. Leaving aside the grossly quantifiable economic sums, the stress, trauma and shocks may have some far-reaching effects upon the building owner and or employees, occupants, and others involved in one way or the other with the structure (Dimuna, 2010).

Research Methodology

The design used for this research work is Survey Research Design. Survey research also known as descriptive research is based on population characteristics and a representative of the population (Asika, 1991). It is usually used to find out facts by collecting the data directly from population or sample. The population for this study is professionals in the building environment amongst which are: Architects, Quantity Surveyors, Builders, Engineers, Planners, Estate Surveyors and Valuers and Civil Engineer. The total population is 511, the sample size is 224, this was determined with the use of Taro Yamane formula.

Questionnaires were structured in line with the study and was distributed to the respondents to obtain their opinion. The data collected were analysed using the statistical package for social science (SPSS) version 20 to obtain analysis in both the descriptive statistics and inferential forms. Descriptive Statistical procedures were used for data collection, coding and the analysis, percentage was used on the summary of demographic factors of the respondents. The frequencies were supported using figures. Charts such as bar chart, line chart, and pie chart were used to aid visual impression.

Results and Discussion

Analysis of demographic factors of respondents

A total number of 224 respondents were used for the research, which were selected from different professions in line with the study, among the professions; Architect, Quantity Surveyor, Builder, Engineer (Civil and Electrical), Estate Surveyor and Valuer, and Planner). The level of usage of quackery on building execution is presented in Table 1.

Table 1: Level of usage of quackery on building execution

S/N	Significant	Insignificant
1	4.24	2.23
2	4.54	1.43
3	3.44	2.14
4	4.54	2.42
5	3.44	2.43
6	3.44	1.43
7	4.12	2.43
8	3.54	1.54
9	4.32	2.15
10	4.12	1.54
11	4.32	2.92
12	4.21	2.54

Table 2: Test of significant variation between the two groups;

	N	**Mean**	**St Dev.**	**SE Mean**
Significant	12	4.023	0.433	0.13
Insignificant	12	2.100	0.498	0.14
Difference = mu (Significant) - mu (Insignificant)				
Estimate for difference			1.923	
95% CI for difference			(1.526, 2.319)	
T-Test of difference = 0 (vs not =)				
T-Value			10.08	
P-Value			0.000	
DF			21	

Interpretation

The significance test in Table 2 shows that the P-value of the test is less than 0.05 which shows wide variation exists between the classes. This can be interpreted as level of patronage of quacks in building execution is significantly high.

From the Table 3, most of the effects listed in the research tool are significant which implies quackery has significant effect on private building projects. From the sentences in the research tool, it can be observed that the effect is negative.

A number of different professionals (stakeholders) exist in the building industry, but in most cases their services are not sought for by private building developers due to one reason or the other. The professionals include: Architects, Quantity Surveyors, Land Surveyors, Builders, Engineers (Structural, Civil, Mechanical, Electrical, and Geotechnical).

The study found out that most of the private project owners patronized quacks in order to save cost and duration of the project. It was discovered that most of the project within the territory of the research were constructed by quacks. The study equally discovered that

degradation of the environment, building failure and collapse and deprivation of professionals of legitimate job among etc. are the effects of quackery in private building projects execution in Anambra State.

Table 3: Effects of quackery on private building projects delivery

S/N	Effect of Quackery on Private Building Projects Delivery	Mean	**Remark**
1	Demarkets the values and integrity of industry professionals in real estate investment market	4.3066	Significant
2	Portrays Nigerian building industry as corrupt	3.133	Fairly significant
3	Devalues the marketability of industry professionals to foreign firms and clients	4.4623	Significant
4	Loss reputation	3.2547	Fairly significant
5	Redundancy of construction professionals	4.6321	Very significant
6	Loss of trust	4.1745	Significant
7	Loss of strength of buildings	4.5236	Very significant
8	Degradation of the environment	2.2877	Insignificant
9	Loss dignity	3.6887	Significant
10	Building failure and collapse	4.4292	Significant
11	Exasperation of crises attributed to construction professionals	3.2311	Fairly significant
12	Deprivation of professionals of legitimate jobs	4.2877	Significant

Conclusion

The patronage of quack in the execution of building projects is harmful not only to the owner but also the workers as well as the people within the neighbourhood. It can be concluded that the patronage of quack increases cost of project and also lead to poor building projects delivery. Although, the owners of projects always think they save cost by the patronage of quacks because the cost of labour is usually low but repeating a process more than once increases cost indirectly.

Recommendations

Based on the available data and the outcome of the analysis, the following recommendations are made:

1. Various regulatory bodies such as Council of Registered Engineers (COREN), Council of Nigerian Mining Engineers and Geoscientist (COMEG), Architects Registration Council of Nigeria ARCON and Council of Registered Builders of Nigeria (CORBON), should ensure that only registered and qualified professionals are involved in the construction of future buildings in order to minimize failures.
2. All the professionals in the building industries should work as a team and in harmony as these will go a long way in restoring sanity in the construction sector.

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