

THE STATE OF BUILDING CONSTRUCTION INDUSTRY IN NIGERIA

Iroegbu, A. N.; Mbakwe, C.C.; Oscar O.N.; and Onwuka, G.M

Abstract

The building construction industry is such a diverse body that satisfies the analysis of all the firms it embodies. Of course, building construction is indeed a team work. It is no doubt a very important industry. Infact, it is the builder of the nation. Again, research has shown that the building sector of the construction industry of any nation is the highest claimant of savings of her citizens. The construction stage accounts for about 75% of the total cost of building projects - indicating that a career in BUILDING is highly viable. This paper discusses in detail, the concept -building, and went further to classify buildings. It discusses also, the seven professionals involved in building industry and their different roles. Also discussed are the characteristics and the current state of building construction industry in Nigeria. Thereafter, problems associated with building construction industry in Nigeria were discussed, and based on the problems discussed, solutions were proffered. Among the recommendations are, that the professionals involved in building construction industry should hence-forth, "man their beats", and only build, according to building bye-laws and building codes. They must follow, the "Due process"¹, always.

Introduction

Building is a structure designed and erected to stand more or less permanently by utilizing economically, the materials and other forces of nature for improving quality of life and institutions (Iroegbu, 2006¹). Building according to Hornby (1974), is a structure with roof and walls; the construction of houses. In a related development, Onwuka (2005), defines buildings as fixed structures for human occupancy and use. Therefore, the main functions of buildings according to Bokinni (2006), are to provide shelter from weather, a comfortable living and

working environment but have differences in temperate climate but the problem to secure adequate accommodation of the right types, in one-right places and within the financial means of those needing them.

Classification of Buildings

Buildings according to Bokinni (2006), have be divided into the following classes:

- a. Residential - Buildings comprising one, two or more dwellings, dormitories, hostels, inns and other such buildings where persons may lodge.
- b. Institutional - Buildings for use principally by persons whose liberty or activity is restricted by either age or physical limitations.
- c. Buildings used for trade, commerce or professional services.
- d. Assembly buildings, where persons congregate for any religious, educational, social or other communal purpose or for the purpose of entertainment.
- e. Buildings for the purpose of manufacture, fabricating, processing, packaging or repairing operations etc.
- f. Buildings in which are stored or used hazardous materials in respect or which special legislation exists e.g., buildings for use principally by animals and other buildings. To cap it all, Onwuka (2005), maintained that residential (e.g. houses), institutional (e.g. hotels and factories) and pre-fabricated buildings are all buildings.

Building Construction Professionals

Construction is teamwork. It is acknowledged worldwide that process of building an edifice is the collaborative responsibility of various professionals. All over the world, the

trend is that of specialization. This is because better performance, high productivity and cost effectiveness can best be achieved through specialization. All facets of the economy have benefited from specialization and the building construction industry should not be an exception.

The complexity of design, modern construction materials/ components, construction methodology, awareness on the part of clients, etc have called for specialization which is required to respond positively to the needs and aspirations of today's clients. As a result of this, the need for experts in production management of building projects can not be over-emphasized (NIOB, 2002).

Therefore, the professions in the building construction industry are many and diverse in nature. Infact, the industry is made up of seven (7) professional bodies involved in its activities. These professionals according to Bamisile (2004), are expected to have been scientifically, and technologically instructed. Notable among them are:

1. The Architects - When there is land, and master plans or layout plans have been produced, the developer definitely requires the services of a professional who is apt to transform his ideas and vision into physical focus. Bearing this in mind, it should be related with the shape and size of land as demarcated by the Land Surveyor and Town Planner's appointment of same for building purposes. These and other codes and usage must be put in view by the Architect as he interprets the brief of the developer. Therefore, the Architect is the conceiver and beautician of an acceptable building. His ingenuity lying more on perception, visualization and transformation of the developer's thoughts, ideas and vision into pictorial and dimensional representation of such ideals.

2. The Builders - The builder is the all - embracing expert, able to freely and unexhibitively relate to, assess, criticize and co ordinate all designs, inputs and ideas of the

developer, consultants, artisan and craftsmen, jobmen, suppliers, sub-contractors, government agencies, and any other factor, individual, organization or statutory institution related or incidental to the proper execution of any building construction project. Bamisile (2004), refers to him as the professional at the center of the physical construction of building. He infers that, "his expertise in Building Production Management (BPM) is the main professional input that he renders on building projects."

3. The Engineers (Geotechnical Structural, Civil, Mechanical, Electrical etc) - For a sustainable construction activity, engineers according to Okoro (2005), are as vital as other ancillary services. Time and space shall limit us to giving in detail the roles of these engineering professions. However:

- i. The Geotechnical Engineer is responsible for the soil investigation and analysis of different classes of soil and its suitability and adequacy for the intended scope of the'-Developer and Architect.
- ii. The Structural Engineer is responsible for interpretation and calculation of an acceptable structural design, capable of carrying the self and imposed loads of a building. However, the foundation design is dependent on the facts and investigations provided by the Land Surveyor, especially topographically and the Geotechnical Engineer, especially for stability and bearing capacity of the soil.
- iii. The Mechanical Engineer is the one and only Engineer whose activities, especially for high-rise buildings, is better not ignored. The functionality and stressless usage of such buildings depend mostly on the capabilities of the mechanical engineering team. They are relevant for the design and installation of lifts, plumbing, conveyors, steam and mechanical heater/turbines for different classes of commercial, industrial and residential buildings.

iv. The Electrical Engineer activities are linked with those of Mechanical Engineers. These Engineers are responsible for the design and installation of all electrical equipment and fittings. Most of us do not know that wires have ratings and life-span. Even illumination to buildings are calculated and designed for. The lifts, conveyors etc, need adequate electrical inputs to function optimally, hence, these professionals are MOST needful.

4. The Estate Surveyors and Values - The role of the Estate Surveyors and Values is that of a marketer of buildings and uses. Their role is unique and for a speculative developer, ignoring such role may be detrimental to his having value for his development. According to Bamisile (2004), the input of the Estate Surveyor and Valuer in the type of design or development that will suit a particular location is necessary to increase sales or ratable value of a building after construction.

5. The Land Surveyors - Land Surveyors provide all informations relating to land. The Land Surveyor provides the land shape and size, influences the shape and size any construction activities on the land. With information so provided, we are able to determine the appropriate and cost effective usage of land.

6. The Quantity Surveyors - Jesus Christ in Luke chapter 14 : 28 - 30 asked a question that underscores the role of Quantity Surveyors. He asked inter-alia:

For which of you, intending to build a tower, sitteth not down first, and counteth the COST, whether he has sufficient to finish it? Lest haply, after he hath laid the foundation, and is not able to finish it, all that behold it begin to mock him, saying, this man began to build, and was not able to finish.

The Quantity Surveyor, who is in charge of building construction economics or project cost control, is there to answer the afore-stated

question. His role starts even before the final drawings are produced. Bamisile (2004), suggests that he should prepare first of all, a cost plan as soon as the brief is settled, and approximate cost from sketch drawings, elemental cost checks during design, so that, should the client's budget be exceeded, the designers (Architects, Mechanical & Electrical Engineers) can consider each element of the building in reasonable isolation enabling him the (Quantity Surveyor) to pair cost as necessary, within the total cost limit of the project. He (Bamisile), concluded by saying that the Quantity Surveyor during actual project execution should have a dual responsibility of ascertaining that the client obtains value for his money and the contractors, an acceptable profit for work done.

7. The Town Planners - The Town Planner is by training responsible for master planning, layout planning etc. They are also responsible for implementation of planning laws.

Characteristics of Building Construction Industry

The building construction industry is no doubt a very important industry. It is the builder of the nation. As a development and service industry, it makes valuable contributions to meeting the economic and social needs of the public. The benefits the public derives from development facilities according to Iroegbu (2006²), are associated with environmental and social problems. The concept that some construction projects pose a threat on the quality of life lead to the search for design - construct responsibility for environmental concerns in order to improve the quality of service and minimize risk (Adindu, 1998).

The construction industry covers a wide range of loosely integrated group and organizations involved in the production, renewal, alteration, repair and maintenance of certain capital goods (building and civil engineering projects inclusive). The industry is

such a diverse body that satisfies the analysis of all the companies it embodies. Again, research has shown that the building sector of the construction industry of any nation is the highest claimant of savings of her citizens. The construction stage accounts for about 75% of the total cost of building projects - indicating that a career in BUILDING is highly viable (NIOB, 2006).

Building construction activities according to Adindu (1998) represents a system in the defined environment. It is always in interaction with dynamic sub-systems such as ecological and social systems. Construction industry performs its roles by drawing inputs from components of other subsystems. The output of construction due to interaction is tangible and its impacts on other subsystems. In other for construction systems to be variable, it must interact intensively with environmental parameters.

The building construction industry uses network diagrams as a system that records the graphical work versus time relationship of each phase of the construction activities- It enables the contractor to see the inter-relationships and interdependencies that control the project. It predicts time, provides contracts with future resources requirement, directs and guides his decision by selecting the best way to operate the undertaking.

Building construction industry is unique. Unique in the sense that while casual labourers are liquidated, key personnel, are retained. Unique in the sense that every year a craftman may be employed by several contractors on several job locations. Also, unique when craftsmen are attached to their trade in a particular area than to the employer. It is unique when bids are submitted in secret" but opened in public.

Climate variations make construction industry season (Iroegbu, 2006²). Not only that building construction industry could be seasoned, it is also localized. Construction moves to the job and the product (Building) remains immobile. It

varies its size and composition, in all, it is multi-elemental, multi-disciplinary and interdependence.

The State of Building Construction Industry in Nigeria

It is no longer news, according to Obiegbu (2004), that buildings collapse all over Nigeria. It is among this and other problems that necessitated the following movement within the industry that could be termed today, as, the state of building construction industry in Nigeria. Among them are:

- a. **Due Process** - The Due Process became a popular phrase during this democratic regime of President Olusegun Obasanjo. Due Process from the foregoing, means following laid down principles and regulations for project conception, implementation and control, towards the realization of pre-determined goals. Such goals according to Ogbenna (2005), must be in the overall interest of the masses and not for a selected few. This is very important in the management of public fund. From all ramifications, the Due Process aims at achieving the following:
 - i. To provide a level playing field and uniform basis for vendors or tenders.
 - ii. To enhance transparency and accountability in government,
 - iii. To reduce the incidence of friction arising from nepotism and parochialism,
 - iv. To reduce the rate of project abandonment to a minimum.
 - v. To improve productivity and effectiveness among others.

b. Conditions of Engagement and Builders Services Agreement - The Nigerian Institute of Building (NIOB) in collaboration with the Council of Registered Builders of Nigeria (CORBON) have drawn up a standard condition of engagement to form the basis for the Builders' Services Agreement between the Client/Employer and the Builder. The document

was so approved by the Council of Registered Builders of Nigeria (CRBON) for use both in the public and private sectors of our national economy (NIOB, 2006, July).

c. Builders Documents - Some documents have been provided for use by the Builders. All to check building collapse and to make sure those projects are delivered on time and with expected quality. Some of the documents include:

- i. Construction Budget Document (CBD).
- ii. Building Condition Survey Documents (BCSD).
- iii. Construction Methodology (CM).
- iv. Quality Management Document (QMD).
- v. Project Monitoring and Evaluation Document (PMED) etc.

d. Professional Scale of Fees - A detailed scale of fees for various services rendered in the profession of building has been approved also by CORBON. Of paramount importance is the need for all Builders to be guided hence - forth, by the ethics, ethos and code of conduct for Professional Builders as currently approved by NIOB and CORBON (NIOB, 2006, October).

e. **The National Building Code (NBC) -** On 28th September 2006, the National Council of States ratified and approved for adoption in all the states of the federation, the National Building Code (NBC). The National Building Code is a mandatory and recommendatory document adopted and adapted by development authorities to formulating building bye-laws. It provides guide - lines for regulating building construction activities across the country. It has the basic codes for construction materials, services, systems and processes. The National Buildings Code lays down the minimum provisions buildings need in order to ensure public safety with regard to structural sufficiency, fire hazard and health aspects. It contains, according to Iroegbu (2007), administrative provisions, development control rules and general building

requirements. It also services as a Mode Code (MC) for adoption by any body involved in construction in the public or private domain. These include public works department, other government construction departments, local bodies and construction agencies.

Primarily, when National Building Code is mentioned, the focus is always on urban areas and formally engineered structures. With about 75% of built structure in the country being non-engineered, the National Building Code has been designed to include the non-engineered mud, stone and bamboo construction in its purview. For urban areas, it has included the provisions to deal with slum housing, periodic renewal of certificates of occupied buildings from a structural, fire and electrical safety point of view and also, the provisions for buildings and-facilities for the physically challenged persons (Iroegbu, 2007).

Created as a direct response to the scale: and magnitude of natural disaster that have struck the country in recent years, its main thrust is on safety. A key element is the inclusion of a; complete philosophy and direction for-successfully executing building projects through an integrated, multi-disciplinary approach from the conceptual stage to planning, designing, construction, operation and maintenance.

In chapter three (3) of the said Code, the roles of the professionals in building construction industry are specifically stated without conflicts. In fact, the Code is one that allows each of the affected professionals to sanction building plans for smaller plots and less complicated structures. It also made it mandatory for the affected professionals to take responsibility for the safety of any structure in case of a natural disaster. This national nagging issue is also in view of the cases and causes of building collapses that have been ravaging the country for some time now. Hence, another point in the current state of building construction industry in Nigeria is the adoption of the National Building Code, so that all professionals in building industry will hence forth, "man their beats."

Problems Associated with Building Construction Industry in Nigeria

The following are among the major problems associated with building construction industry in Nigeria. They include:

1. Job security is not always guaranteed in construction industry.
2. There is lack of accurate data of construction industries in Nigeria.
3. There is lack of management skill.
4. In Nigeria, most craftsmen enter the industry through the backdoor – informal training and learn by practicing.
5. There is no restriction to entry into the industry in Nigeria because people get themselves trained and when qualified, enter into the industry. In developed nations, there are restrictions to entry.
6. In Nigeria, building construction industry lacks communication method in equipment and management.
7. There exist lack of trust and not much competition among the contractors- although, there may be a hidden competition.
8. The technology of repair and maintenance of plants and equipment are always measured because they are all imported.
9. A total lack of research in methods, equipment and management exists.
10. There exists, the weak base of coming together to examine problems and prospects of the industry.
11. We have not progressed in the development and use of equipment.
12. In Nigeria, the building construction industry has much witnessed years of change in government (army - take - over), than the democratically elected government which adversely encouraged building project abandonment and has affected the industry especially, on the issue of project abandonment (Adindu, 1998; Iroegbu, 1999).

Recommendations

The following recommendations are made to alleviate and improve the state of building construction in Nigeria. They are:

1. The individual roles of the building construction professionals must not be swept under the carpet.
2. Lack of adequate planning and implementation of existing laws have impacted negatively on sustaining national development, therefore authorities that he should make efforts in implementing planning laws.
3. Builders must always, use the building documents as approved by NIOB and CORBON.
4. The Due Process must be followed, and the Building Code respected.
5. The Scale of fees must be used and not making quotations off- hand.

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Conclusion

Building construction industry- through-, man as an agent of social change, has developed tools and equipment that enhanced the development of general housing construction^ and building in particular. Efforts should be geared towards reducing problems associated with the present state of building construction in Nigeria. To achieve this therefore, the afore-listed recommendations must be adopted.

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- Iroegbu, A.N.; Mbakwe, C.C.; Oscar O.N.;**
Department of Building, Abia State University, Uтуру.
- Onwuka, G.M**
Department of Civil Engineering,
Federal Polytechnic, Nekede.