

## **Incessant Collapse of Building A Big Challenge to the Professional Women Builders**

---

**L.A. Kawu**  
Department of Building  
Abubakar Tafawa Balewa University, Bauchi State

### **ABSTRACT**

This paper examines the causes of building collapse, roles of built environment professionals in the lack of code enforcement saga. The option open or left to the professional women builders to step ahead of male colleagues in a male domain industry by spicing up their professional roles (as dictated by the code) with all their feminine attributes/natural endowments to fight this menace building collapse to a logical conclusion. The paper concluded that, professional women builders could/can fasten the code enforcement process through fostering unity amongst all the women in the sister professions and also help curb building collapse through communication, coordination, collaboration, professional roles specialization and transformation of Nigerian Building Construction Industry as well as sustainability of our built environment.

---

**Keywords:** Incessant, building collapse, environment

### **INTRODUCTION**

The building industry is a very interesting and challenging one. Builders condition the lives of people within a building, which starts from an ordinary site, using sketches from the designer's drawing boards and quantity surveyor's costing sheets to produce an edifice, which could be residential, hospital, school, social or occupational structure, (Akutu 1998 and Akindoyeni 2008). The builder coordinates all the activities of the various professionals, sub-contractors, artisans/craftsmen and suppliers that are managing the production processes in order to achieve a successful project delivery. A building project is said to be successful when there is optimum use of resources, (Abdullahi 2001). Successful project deliveries are sometimes difficult to achieve, because of the various challenges encountered, which result in failure of the building structure, total collapse, loss of precious lives and properties as well as unsustainability of our built environment.

### **CAUSES OF BUILDING COLLAPSE**

Many factors have been said to be responsible for the collapse of buildings in Nigeria, they include:

1. The unsuspecting and naïve client developers
2. Unhealthy/uncoordinated built environment
3. Over design, design details that cannot be economically constructed and easily maintained
4. Inappropriate/inadequate specifications and details

*L.A Kawu*

5. Inadequate human, material and equipment resources development
6. Poor workmanship, over loading during construction, etcetera
7. Use of inappropriate material and unprofessional construction methods
8. Usurping other's professional roles
9. Cost overrun and abandoned projects
10. Incessant collapse of buildings/failure of components and parts thereof
11. Fire inferno, planlessness of towns and cities

Gideon (2011) claimed that for us to be able to address the issue of collapse head on, the above-mentioned problems/crisis could at best just remain an alibi. (Akutu, 1998; Bamisile, 2000; Gideon, 2011; Jambol and Akindoyeni, 2012) argued that collapse of buildings occurs everywhere, but it is what these other nations do with the results of investigations, that make their own construction industries move forward. An example is the U.S, where forensic analyses and examinations are made and approved actions taken.

A critical investigation showed that outside natural disasters and terrorists' actions, failure and collapse of buildings have always been attributed to human factors of actions and inactions. A very good example is that of sub-standard, inadequate or inappropriate materials, one would be tempted to ask, did these materials fix themselves there?. Another example is that of the lay/ignorant/unsuspecting client developer who most times goes for cheapest cost, have the construction professionals embarked on very serious public awareness campaign? All or some combination of these challenges have and are still causing buildings to fail and eventually collapse, resulting in severe pains and undue hardship to affected parties and a big shame and embarrassment to the professionals of the built environment.

Gideon (2011) and Jambol (2012) reported Kaminetzky (1991) positing that; materials do not fail; they follow the law of nature and physics perfectly. All failures are caused by human errors and human errors are deviations from correct and acceptable practice and thus avoidable. Kaminetzky (1991) claimed that collapses are attributable to three (3) types of human errors; errors of knowledge (ignorance), errors of performance (carelessness) and errors of intent (greed). Ignorance is analogous to quackery; it is often times the consequences of insufficient education, training and experience, and usually are exhibited when professionals lacking sufficient knowledge dabbles into the areas not of their own specialization/expertise. Carelessness and negligence includes calculations and detailing errors, production information errors, incorrect readings of drawings and specifications and inaccurate/inappropriate construction methods. Greed is error of intent and usually committed or done with knowledge.

#### **ROLES OF BUILT ENVIRONMENT PROFESSIONALS IN BUILDING COLLAPSE**

According to Akutu (1998), "The Federal Government in its wisdom decreed and inaugurated four (4) councils (we have 7 now) whose objectives and duties are to regulate the design, strength, cost and construction of a building before it matures into an edifice.

The Architects by training and persuasions aesthetically design building from the client's brief. They are not required to go out to set and construct it. They are regulated to practice their own decree, namely the Architects Registration Council of Nigeria (ARCON).

The structural engineer design the structural components of the architect's aesthetical design to give it bones and flesh (reinforcement, concrete, stall, timber etc) to make the building stand firm when eventually constructed. They are regulated by decree 30 of 1970 and called Council for Registration of Engineering in Nigeria (COREN). The quantity surveyors who are very knowledgeable in determining estimated costs for these designs on paper by both architects and engineers are regulated by their own decree too. Nigerian Institute of Quantity Surveyor (NIQS), these costs too are on paper and in various markets of the builder's merchant shops.

The 4<sup>th</sup> group is the professional builders whose role/function is to get the edifice off the drawing board/paper and costing sheets. Unfortunately, most times the professional builders are not allowed to do their job, building contractors who can be an entrepreneur, registers a trading name at the federal or state in one of the five (5) main categorizations and bids for jobs. These groups of people could be hairdressers, tailors, taxi drivers, politicians or even bureaucrats, etcetera. The President Babangida Federal Military Government due to the unrelenting effort of the then Hon. Minister of Works and Housing passed decree 45 of 1989, (now Act Cap 40 of 1989) to regulate the training and practice of professional builders, named as the Council for Registered Builders of Nigeria (CORBON) and gives recognition to the Nigerian Institute of Building (N.I.O.B). Establishing the facts beyond reasonable doubts, that there is NO COMPARISM AT ALL BETWEEN AN ENTREPRENEUR-CONTRACTOR AND THE PROFESSIONAL BUILDER.

To ensure equity in corporate results, the professional builder could easily discuss and dissect issues with architects and engineers using like terminologies (a very good example is the buildability and maintainability analyses report). Discuss and suggest foundation types, soil test results, to enable him/her get familiar with the terrain, types of equipment to be applied to ensure passage through different soil formations and so on. The builder would definitely recall a bending moment, area of steel in tension, cantilevering action, stress, strain etcetera and note down grey areas for clarification. Depending on what the designers say, the builder will proceed as amended or as designed.

The professional builder being very conversant with quantities and estimation, valuations and variation orders, would relate with the Quantity surveyor to discuss costing and clear pressing problems if any. These four professionals (architects, builders, engineers and quantity surveyors) are birds of the same feather and should or must be seen flocking together to enhance the image of our great industry. When a professional builder is called upon to handle a site or to be in charge of the management of the physical construction of building (production management); he/she would recall all the trainings in building technology; some design, structures, estimating and most

*L.A Kawu*

importantly construction techniques, a specialty for using men/women, materials, equipments and capital spiced with managerial techniques to produce the required result, an edifice that will stand the test of time, but the exact opposite happens, when the service of a builder is blocked. Most unfortunately, these four (4) professionals have refused to work together and the ugly scenario continued until the then Honourable Minister of the Federal Republic of Nigeria in 2006 helped in the enactment of the National Building Code (NBC 2006).

### **NEED FOR NBC 2006**

The need to evolve a National Building Code according to the then Honourable Minister of Works and Urban Development (Federal Republic of Nigeria 2006), arose from the following existing conditions of our cities and environment:

1. The absence of planning of our towns and cities
2. Incessant collapse of buildings, fire inferno, built environment abuse and other disaster
3. Death of reference design standards for professionals
4. Use of non-professionals and quacks
5. Use of untested materials and products
6. Lack of maintenance culture

The code has become necessary in order to put a stop to the ugly trend in the Building Industry, eliminate or reduce to the barest minimum, the incidences of collapse buildings and to promote safety and qualitative housing.

1. All key members of the built environment professions, (architects, builders, engineers, planners, quantity surveyors, land and estate surveyors) have been assigned roles and responsibilities with clear demarcations by the National Building Code (NBC 2006).
2. The project have been made the central issue of the practices of every profession, as stages, levels and extent of involvement of every profession has been defined.
3. Mechanism of checking quackery and promoting professionalism has been adequately put in place, so that value for money at end of project will/is ensured as well as the sustainability of our built environment.

One would have thought that with the coming of (N.B.C 2006), the end of problems such as usurping of professional roles, unprofessional conducts and what have you has come to stay/or/is a foregone conclusion.

### **LACK OF CODE OF ENFORCEMENT**

Windapo *et al.*, (2007) reported that long after the (NBC 2006), buildings have continued to collapse due to lack of enforcement of the National Building Code. Buildings have continue to collapse due to the non-implementation of the National Building Code (NBC 2006), asserted (Jambol *et al.*, 2008).

According to Iniobong, building collapse disasters in recent years is because "Everyone claimed to be an Engineer when it comes to construction, the presence of

unprofessional engineers against actual engineers coupled with compromises of standards, play roles in causing many disasters of collapsed buildings across the country". Arilesere (2008) blamed the client/developer for continued collapse of buildings, emphasizing that their refusal to employ the services of professionals has made them the greatest culprits; he also opined that the (NBC 2006) would checkmate building collapse.

COREN president claimed that the unfortunate incidence of collapse buildings, which has lead to loss of lives, has been traced to the activities of quacks and developers refusing to use qualified engineers in design and supervision of constructions. According to Obiegbu *et al.*, (2008), the (NBC 2006) has set a minimum standard for pre-design; design, construction/production processes and post construction stages, yet the professionals of the built environment have refused to avail themselves of this privilege.

### **CHALLENGES**

According to Jambol (2008), "The built environment provides the clearest evidence for any national development standing, while the building production process is the acid test". This challenge is more to the professional women builders, because the time to demonstrate God's gift of intuitive judgment, thinking/action is now, we must remain very focused and determined, make our presence felt, reassure and assert ourselves by participating fully in projects deliveries, as well as always being part of teams visiting collapsed building sites.

The Building profession is a field oriented one that operates within set standards and values, hence requires intuitive applications, innovation and reformed judgment, Mshelbwala (2000). Professional women have the capacity, as these qualities are already part of God's gift to them. The world over, buildings have been known to sometimes collapse and has been universally accepted, unfortunately they are sometimes irreversible and requires urgent attention, and investigation follows immediately, the results obtained are immediately implemented, but here in Nigeria, it's the contrary. The Onus rests with the key stakeholders, to curb it or at least reduce it to the bearest minimum. It is revolving around the people who design, build and use the buildings, not materials, machines, money or methods, but MEN, WOMEN AND MANAGEMENT.

### **COOPERATION**

Professional women builders must all come on board bring their feminine God given talents (intuitiveness, honesty, sense of fair judgment, truthfulness, accuracy of judgment and so on) to bear on their professional roles as builders, unite and cooperate with all other sister professions of the built environment to rid our beloved nation of the menace of incessant collapse of buildings, loss of properties, very tragic loss of precious lives as well as unsustainability of our built environment by boldly stepping ahead of our male colleagues in a male dominated industry. Mshelbwala (2000) accurately sums it up when she posited that the building profession is field oriented, operate within set

*L.A Kawu*

standards and values, and so requires intuitive application, innovative and reform judgment.

The professional woman builder being a natural homemaker and greatest teacher must be very ready to face all sorts of challenges, by always proving ourselves as capable partners in progress to our male counterparts whether in the academics, public or private sector. Sometimes even support from family members could be lacking, simply because our noble profession has been a male domain one for too long. Professional male colleagues often times refuse to encourage us and the predominantly male client/developers too, tend to lack confidence in the woman builder.

Jagun (2009) emphasized that the average woman builder faces many challenges and the key to success is to be smart, work twice (2ce) harder than the male counterpart, seek knowledge constantly and respect everyone. Being the managers of the home front, women builders make very good managers, especially in project and facility management and should be able to become very good managers of men, materials, capital (machine and money) once they are able to do away with feminine shyness and assert themselves well, whenever they find themselves in positions of authority demanded by the profession.

Omiefe (2012) is in agreement with the last position and opined that "Today the role of women professionals cannot be over emphasized. The plus element of the participation of women in professional circles has become increasingly recognized due to their impact. Despite the cultural and primitive hindrances of the past, women in the course of exposure to education and other social involvements has come to appreciate the inherent inborn potentials they possess". The inculcation of best construction practice in terms of methodology, safety, health and quality is what is required of us builders, being expert in the building production management; this should be a mission-accomplished task for us professional women builders, if we abide by the dictates of the code.

### **SPECIALIZATION**

The professional woman builder must always bear in mind that to excel in her responsibilities of building production management and maintenance, she must know how to prepare these documents:

1. Construction Methodology Programme
2. Project Management Programme
3. Project Health and Safety
4. Building Survey Document
5. Construction Budget Plan
6. Project Monitoring and Evaluation Documents
7. Construction Documents

According to Nduka (2012), attaining successful building projects would require that from conception, project tasks should be divided into specialized professional roles and assigned to the built environment professionals. The (NBC 2006) has already done so for all built environment professionals, except for a few grey areas, like the buildability and

maintainability analyses report of designs, which professional women builders intend to pursue through collaboration with sister professionals of the built environment.

### **COMMUNICATION**

The explosion in communication technology facilitates collaboration across borders, time zones and participation in the collaborative teams is the key, to how well, knowledge is shared. Collaboration requires that people deliver goals through staff and resources outside their control. People who are successful in leading and managing collaboratively have a high degree of emotional intelligence and communication skills. They are seen as transformational. Professional women builders must always communicate with sister professionals, as this will not only unit but also help us in achieving our desired goals.

### **COLLABORATION**

Collaboration has always been important in designing building projects. The world has become much more complex and interdependent as professionals deal with demographic shifts, climate change, sustainability, new work paradigms and innovation in materials and security, Kolawole (2012). Collaborating with our sister professions should not pose any/much problems, because once we are able to communicate and share useful knowledge, innovative ideas will spring up and these will enhance overall project delivery.

### **CONCLUSIONS**

When knowledgeable women set out to achieve a goal/goals and are able to do away with fear of failure; being the law abiding citizens that we are, embracing the dictates of the code, that is, practicing our profession to the best of our ability, by spicing it with the positive gender attributes possessed by us, we will be able to stop quackery and unprofessional conduct by communicating, collaborating, cooperating, coordinating with female members of all sister professions and specializing in our various professional roles to transform our building construction industry and the unsustainable built environment in order to put a stop to the loss of properties and very tragic loss of precious lives.

In a male domain building construction industry it would definitely not be an easy task, but being home makers, even the sky should not be the limit, when knowledgeable women set out to achieve goals. Once professional women are able to face the challenge head on, being law-abiding citizens that we are, embracing the dictates of the code/ practicing our profession to the letter and spicing it with all positive gender attributes that we possess, would enable us stop quackery and all other unprofessional conducts being practiced in the industry. Our male counterparts wouldn't have any choice than to follow suit and practice the profession properly as being done in other civilized nations of the world.

### **RECOMMENDATIONS**

1. A hundred percent enforcement of (N.B.C 2006) by federal, state and local governments and all built environment professionals

*L.A Kawu*

2. Professional roles specialization as dictated by the (NBC 2006)
3. Making buildability and maintainability report compulsory for all building projects
4. Integrated approach to design and construction will enhance sustainability of built environment, free of defects, failure and collapses, women professionals must always insist on it.
5. Collaboration by all women professionals in the built environment to fight the incessant collapse of buildings
6. Training and retraining for all built environment women professionals
7. An association of ALL PROFESSIONAL WOMEN IN THE NIGERIAN BUILDING CONSTRUCTION INDUSTRY

## REFERENCES

- Akindoyeni, A and Jambol, D.D. (2012) *40<sup>th</sup> Annual General Meeting*. Enugu – Nig.
- Akindoyeni, A. 2008 *THE INNOVATIVE BUILDER, a Publication of the National Association of Building Students (NAOBS), Jos Chapter*.
- Akutu, G.O. 1998 - *The Professional Builder, Journal of the Nigerian Institute of Building* ISSN 0795-8854.
- An Appraisal of Quality Control Practices in the Nigerian Building Construction Industry.*  
By Abdullahi, A.L. December 2000 Unpublished M.Sc Thesis.
- Arilesere (2008) *Inovative Builder*
- COREN President (2010) *COREN Seeks Police Support in Enforcing Engineering Regulation (Daily Trust- Property Page 59)*.
- Gideon, G.N. (2011), Unpublished B-Tech Project (*An Investigation into the Causes of Building Failure in Gombe Metropolis*).
- Iniobong, L. *Lack of Professionalism Causes Building Collapse –President Women Engineers (Daily Trust- property page 59)*.
- Jambol, D.D. (2012) *National Building Code 2006 Proceedings of 2<sup>nd</sup> National Conference Organized by The Federal Ministry of Housing and Urban Development For Directors and Co*.
- Kolawole, M.A. (2012), *The Future of Women Professionals in the Nigerian Construction Industry*.
- Mshelbwala, T. (2000), *The Professional Builder, Journal of The Nigerian Institute of Building*
- National Building Code (2006), (1<sup>st</sup> edition), London Butterworths.



Nduka, K.N. (2009), *The Professional Builders' Digest*. An official Magazine of the National Association of Building Students (NAOBS) Yaba College of Technology. Maiden Edition.

Obiegbo, M. E. *et al.*, (2008), *The National Building Code and Nation Building Proceeding of the 38<sup>th</sup> Annual General Meeting/Conference*. Oshogbo –Nig.

Omeife, A.C. (2012), *The Role of Women Professionals in Our Society. A Keynote Address at the Inaugural General Meeting of the Association of Professional Women Builders in Nigeria (APWBN)*. Abuja Nigeria

---

**Reference** to this paper should be made as follows: L.A. Kawu (2013), Incessant Collapse of Building a Big Challenge to the Professional Women Builders, *J. of Environmental Sciences and Resource Management*, Vol.5, No.1, Pp. 88-96.

---