



Valuing Green Buildings in Nigeria: Issues and Challenges

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Abstract: Valuation of green buildings is fast becoming a reality in real estate market hence the need for its awareness, knowledge and expertise by Estate Surveyors and Valuers. The need to be savvy in this area is due to sensitivity which green buildings may impact on value in the market place. Estate Surveyors and Valuers are professionally equipped to assess the worth of real estate investments, however, they require special knowledge of green buildings to be able to ascribe value as appropriate. This study identified the challenges involved in the valuation of green buildings as absence of buildings with green features culminates to lack of data to help in the valuation of such buildings. In the same vein, absence of rating organisations in the country and non-inclusion of green building valuation in curriculum of estate management programmes may also pose serious problem. The study, which was quantitatively conducted, concluded that urgent attention is required in the value enhancement of green features in the valuation assignments in Nigeria.

Keywords: Estate Surveyors and Valuers, Green Building, Nigeria, Sustainable Building, Valuation Methods

Introduction

In some developed climes green building awareness, knowledge and expertise is quickly becoming an area where appraisers/valuers may need a higher level of sensitivity to their impact on the market. The growing market adoption of sustainability principles and the changing regulatory environment

are creating a new norm against which buildings are to be judged in real estate markets. The transition toward green buildings, green building codes and technologies, and the growing awareness of the relevance of sustainability in real estate market can be viewed as part of the natural evolution of the real

estate industry as it adapts to environmental, societal, and economic changes.

As green building codes continue to proliferate, and as existing (brown) buildings incorporate green technologies, the distinction between what is a green building and what is not will likely become more difficult to pinpoint. This is not to say that a given market may not value a green label, but the overriding concern to the appraiser/valuer should be to accurately identify the specific features and attributes of a given property and properly gauge the effect on market value. Appraisers should also be aware that being green and energy efficient are not synonymous. Energy efficient buildings are not necessarily green. While green buildings are typically expected to be more energy efficient than their conventional counterparts, it is incumbent upon the appraiser/valuer to verify whether or not a green building is in fact more energy efficient than its peers, and appropriately consider the implications.

Concepts of Green Building

There are many definitions of what a green building is or does. Definitions may range from a building that is “not as bad” as the average building in terms of its impact on the environment or one that is “notably better” than the average building, to one that may even represent a regenerative process where there is actually an

improvement and restoration of the site and its surrounding environment. According to Wikipedia (2015) green building entails “The practice of increasing the efficiency of buildings and their use of energy, water, and materials, and reducing building impacts on human health and the environment, through better siting, design, construction, operation, maintenance, and removal of the structure at the end of use, the complete building life cycle”.

Green building (also known as green construction or sustainable building) refers to both a structure and the use of processes that are environmentally responsible and resource-efficient throughout a building’s life-cycle: from siting to design, construction, operation, maintenance, renovation, and demolition (U.S. Environmental Protection Agency 2009). In other words, green building design involves finding the balance between home building and sustainable environment. This requires close cooperation of the design team, the architects, the engineers, and the client at all project stages (Ji and Plainiotis, 2006). The Green Building practice expands and complements the classical building design concerns of economy, utility, durability, and comfort (U.S. Environmental Protection Agency, 2009).

Green building brings together a vast array of practices, techniques, and skills to reduce and ultimately

eliminate the impacts of buildings on the environment and human health.

Linder Alder, Family and Consumer Sciences (2006) in conjunction with UK Cooperative Extension Service of University of Kentucky College of Agriculture came up with ten main concepts (depending on the type of building) for making a home green and these are:

- i. Develop and design plans for the building itself
- ii. Orient and design building to site needs, climate and local conditions
- iii. Maximize the use of natural daylight
- iv. Investigate building materials
- v. Reuse existing materials, use fewer materials, and use building materials that are considered to be environmentally friendly
- vi. Design for healthy indoor air quality
- vii. Set high lighting-efficiency standards
- viii. Select appliances that are energy efficient and save on water use
- ix. Design for ease of maintenance and use of environmentally friendly cleaning products
- x. Maintain structural and building systems for maximum energy and environmental effectiveness

In contrast to conventional buildings, green buildings seek to use land and energy efficiently, conserve water and other resources, improve indoor and outdoor air quality, and increase the use of recycled and renewable materials. The Office of the Federal Environmental Executive offers a useful working definition. This agency defines this term as:

The practice of (1) increasing the efficiency with which buildings and their sites use energy, water, and materials, and (2) reducing building impacts on human health and the environment, through better siting, design, construction, operation, maintenance, and removal—the complete building life cycle.

Approaches to Green Building Valuation

In recent years, there has been greater awareness that sustainable developments can have a significant impact on property values. Studies such as Dermisi, (2009) and Marusiak, (2012) have shown that green buildings can achieve cost-effectiveness, energy efficiency, improve occupant health and productivity, and lower environmental impacts. It is believed that the nature and extent of green building features as well as green buildings may enhance real estate value, and impact current valuation practices.

Pitts and Jackson (2008) are of the view that as the design and

development of buildings with “green” features becomes more prevalent, Appraisers (Valuers) will increasingly be called upon to consider green or sustainable elements in their valuations. Such valuations must be based on market evidence of the enhanced value due to these elements. They further opine that from anecdotal evidence, and some case study research, it is becoming likely that green and sustainable features can and do influence market values, which of course, depends on the type of property, location, and local market conditions.

Singapore Institute of Surveyors and Valuers (SISV, 2012) came up with new valuation guideline on green buildings. The valuation guideline on green buildings is meant to assist Valuers in valuing green or sustainable buildings and to determine the areas where an enhancement in value may occur when buildings are certified green. The SISV stated that the methods of valuation for green buildings will still remain the same as the ones currently being used. The difference however, is in the application of the various methods of valuation, where the Valuer will be made more aware and account for the green factors within each development (where applicable). Three of the five approaches were then explained in relation to valuing green buildings as discussed below:

Direct Comparison Method

This is an approach to valuation where the value of similar building are analysed with a view to deriving the value of another property, taking into consideration the differences between the similar property and the one being assessed. Using this method requires that the Valuer compare the green building being assessed with similar green buildings which have been sold, and making relevant adjustments for differences between comparable properties. The direct comparison method can also be applied when assessing the rental value of green buildings. This method would become more relevant where more green buildings and developments are being built. According to Pitts and Jackson (2008) the sales comparison approach is appropriate for valuing a green building, but comparable properties may be difficult to find, especially in markets without municipally-sponsored certification programmes. Adding to the challenge is the fact that a building may have many green design features, or it may incorporate only a few. Moreover, a structure that has not been officially certified as green may still have many green features. Adjustments will have to be made to account for the differences between the subject and other green properties, just as adjustments are made for other property characteristics.

Cost Method

The cost method is also known as contractor's approach. It estimates the value of a property by adopting the cost of constructing a similar property with the same utility and making provision for depreciation to take account of the age, use and material components of the building. This method will give the Valuer an indication of the value enhancement of green features to property value. Valuers can determine the reproduction or replacement cost of a green building, and then estimate depreciation. However, certain forms of accrued depreciation may be lower for green improvements than for conventional ones. Green buildings are built with more durable, low-maintenance materials, and therefore may have longer economic lives. In using cost method the Valuer should also consider the possibility of the super-adequacy of green construction. Buyers in some markets may not be willing to pay the full cost of green amenities that already exist in a building. Hence, the Valuer has to make adjustment that would incorporate buyers' perception. A major drawback to using the cost approach in valuing green buildings is that this approach may ignore the benefits of green building features and the effects these benefits have on asset value.

Income Capitalisation Method

This is also referred to as investment method of valuation.

The approach presupposes the ability of the property to generate continuous flow of income. The income capitalisation approach provides a logical framework for valuing a green commercial building. Green design features may reduce operating costs such as energy costs, maintenance and repairs, water costs, and legal and insurance costs. These cost reductions increase net operating income. Under the method, the correct net income should be estimated taking into account the enhancement it may achieve as a result of the incorporation or installation of green features and design which could be in the form of increased rental as well as reduction in operating expenses. The income method may be in the form of a direct capitalisation method using the prevailing rental multiplied by the appropriate years' purchase or a discounted cash flow over an appropriate period taking into account the expected useful life of the green features. A major challenge in utilizing this approach is that rent comparables and market data may be difficult to find, due to the low number of green investment properties and the reluctance of owners/developers to share financial data.

There are other schools of thoughts that green buildings are different enough to be considered as semi-specialized properties, like hotels or golf courses etc (which are valued using such method as

Profit/Account). Where the availability of green comparables is limited, to make it practically impossible to use any of the above three approaches, it may be appropriate for Valuers to employ the methods they use for other specialty property types.

Challenges of Valuing Green Buildings

Adomatis (2015) identify the challenges involved in valuing green buildings to include:

- i. Impossibility of comparing ratings from numerous rating organisations, since different organisation adopts different rating systems
- ii. Since Valuers depend on market data in valuing properties, a lack of data means a lack of support for the value contributions of green attributes. In other words, Valuers are faced with market data problems in valuing green buildings especially in a market where there no green building that has been transacted
- iii. Using existing databases in green valuation assignments presents many difficulties. The appraiser might incorrectly assume that he is making a comparison when comparing a subject property that he has confirmed is green at the site visit to comparable properties that are supposedly green based on

the multiple listing services (MLS) data. Until green data in MLS databases is more reliable, appraisers will need more than just a couple of days to appropriately collect data for a green valuation.

- iv. Residential properties constitute different set of problems due to relatively new occurrence of such properties with green features in the market
- v. Private databases pose problems in valuing green buildings. Many of the green certifying organizations have databases of all the properties they have rated, but most of those organizations consider this information to be private and not for public use.

In a report on Green Building in North America submitted to Commission for Environmental Cooperation (CEC) Green Building Advisory Group (2006) identify among others the following barriers to valuing green buildings in Canada, Mexico, and United States.

Split Incentives

Shades of incentives/interests occur in valuing green buildings. Often the one that bears the burden of paying the bill for greening is completely different from the one capturing/enjoying the benefits. A developer may not be interested in paying for green features when the

benefits will be passed on to the new owners or tenants—unless, of course, he is able to recoup the additional cost of green features in the sale price or project income realised. The split incentive/interest problem is particularly evident for new homes and condominiums and for nonowner-occupied/tenanted existing commercial buildings where, due to high turnover rates, owners may want short payback periods on energy – saving investments.

Higher Perceived—or Actual— First Costs

Higher perceived or actual initial costs of many green building strategies and technologies are a significant disincentive. In a survey result released by the World Business Council on Sustainable Development (2007) it was found that key players in the real estate industry over estimated the cost of green building by an average of 300 percent, estimating the cost to be 17 percent above conventional construction, more than triple the cost estimated by the study's authors of 5 percent. Another key cost barrier is the uncertainty that developers, real estate professionals, and some capital providers feel about green building. Developers and other decision – makers may have contractors, subcontractors, materials, and service providers lined up for traditional building or retrofitting; moving to green building may require new service providers,

materials vendors, and the implementation of an integrated design process in order to build green at a comparable cost.

Risk and Uncertainty

Although investments and interest in green building are growing rapidly, for a number of complex and varied reasons, the financial case for green building has not yet firmly taken hold in the real estate and development community. The risks that exist in the real estate community regarding green buildings include uncertainty over reliability of green building technologies; uncertainty over costs of developing green real estate; uncertainty about the economic benefits of green real estate and uncertainty about green building performance over time.

Nigeria Situation

In Nigeria, different shades of challenges pervade the field of green building valuation. The legal system in the country is yet to recognise the existence of green buildings hence the issue of valuing such property is not codified in our legal systems. The Land Use Act (1978) only made provision for buildings which may not be enough definition to include green buildings. As seen from the report submitted to Commission for Environmental Cooperation (CEC), government regulations and programmes are helping to drive the market. These programmes are generally driven in large part by a desire to save energy and water

costs and to improve living and working conditions. Government in CEC is responding by instituting a number of efforts to promote the uptake of green principles and practices in the residential sector, particularly in housing developments with government involvement.

Near absence of green building in Nigeria real estate market creates huge problems. Valuation rests on availability and accessibility to reliable market data. According to Ajibola and Ogungbemi (2011), accurate, reliable and timely information is vital to effective decision-making in almost every aspect of human endeavour, whether it be by individuals, community, organisations, businesses or governments. They state further, that transactions (sales, letting and valuation) in relation to property investment require the availability of an up-to-date data and the lack of data would greatly impair the performance of surveyors in turning out reports that could stand the test of time. The available data in the market for traditional buildings are near unreliable left alone of getting reliable data for sustainable buildings. Research had it that there is only one (uncompleted) green building in Nigeria, evidence that cannot be relied upon for valuing green buildings.

As available in countries like USA, Singapore and other developed countries where green building

valuation is thriving, rating organisation is yet to be set up in Nigeria. This may have stem from lack of legislation in favour of green building valuation and non-existence of such buildings in the real estate market all over the country. The role of the rating organisations is to help Valuers in grading green buildings into appropriate class and then ascribe values as appropriate.

A cursory look at the curriculum of institutions offering estate management in the country revealed that valuation of green buildings is completely absent. The National Universities Commission's Benchmark Minimum Academic Standards (NUC's BMAS) did not include anything on green buildings. The professional regulatory bodies in the country – the Nigerian Institution of Estate Surveyors and Valuers (NIESV) and Estate Surveyors and Valuers Registration Board of Nigeria (ESVARBON) are yet to include valuation of green buildings in the professional syllabus or advise institutions offering estate management to include it in their curriculum. In addition, the NIESV is yet to include valuation of green building in the Valuation Standards.

Conclusion and Recommendation

The study has established that attention is not yet paid to the value enhancement of green features in the valuation assignments in Nigeria and this has resulted from a lot of factors such as lack of legal

backing either by government or professional bodies for the valuation of green buildings, absence of buildings with green features culminating to lack of data to help in the valuation of such buildings, absence of rating organisations in the country and non-inclusion of green building valuation in curriculum of estate management programmes. In the light of these myriads of challenges, the study hereby recommends amongst others, a review of

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curriculum of estate management programmes at higher institutions and professional levels. NIESV should also revise the Valuation Standards to incorporate green building valuation. Now that it has been established that a green building is upcoming in the country, to start with, the Federal Government should establish a rating organisation to certify buildings with green features – whether new or retrofitted.

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