



INTEGRATING GREEN/SUSTAINABILITY CONCEPT IN NIGERIA'S PROPERTY MARKET

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Abstract

The study was conducted to explore the need for integrating green sustainability concept into property development and valuation with a view of improving compliance to green sustainability concept and practice into real property market indices. The study was conceived on survey design to appraise the need for integrating green issues/sustainability into the property valuation process. The study used literature analysis approach to review real estate surveyors' practices/approach to value indices perception using questionnaires to scope the importance of a range of sustainability features on the market value for a hypothetical property, based on social, economic and environmental features constituting the triple bottom line of sustainability. Findings revealed that energy waste and water management, preservation of biodiversity and environmental indoor/health quality are breakpoints for the integration of green issues into property valuation practice in developing

country like Nigeria. There are already growing awareness of the need to integrate sustainability into real estate valuation practice. The study, therefore, concludes by

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establishing the
significance of integrating
green
concept/sustainability into
real estate valuation and its
effect on the general
perception of the Nigerian
property market players.

Introduction

The real property market is emerging and dynamic relative to localization in line with acceptable international standards. Although, there exists limited compliance to sustainable building and property designs especially within the built environment; yet, operators in the market are gradually becoming conscious of sustainability issues relating to energy efficiency, water, and sanitation in addition to environmental aesthetics and serenity. Achieving sustainability in the property market may be difficult without referral to acceptable benchmarks professed by organizations as BREEAMS, LEEDS and Australia's Green Star.

BREEAMS concept was first introduced in 1990 in the UK and later some part of Europe before extending to other parts of the world, the concept witnessed updates up to the most recent being that of 2014. The focus of BREEAM centers on health, wellbeing, energy, transport, water, waste, land use, pollution control, ecology, innovation, and management to achieve sustainable building occupation (Tamaraukuro, Jubril & George 2017).

LEED concept was founded in the US eight years after establishing BREEAM with its recent version being that of 2014, recognized as the most widely used system of building assessment and certification on reducing carbon dioxide [CO₂] emission, energy saving, water efficiency, improving indoor environmental quality as well as stewardship of resources and sensitivity to their impacts (Tamaraukuro, Jubril & George 2017 and Chatzimouratidis 2015). LEED is intended to provide owners and operators a workable framework for design, construction, operation, and maintenance solution in a sustainable manner for all manner of buildings use for commercial, residential, industrial, etc throughout their life cycle. Achieving LEED certification signifies healthier productive places, minimal stress on the environment, capable of attracting tenants/higher lease rates and decrease utility cost thus lower operating cost and happier occupants (<http://www.bu.edu/sustainability/what-were-doing/green-buildings/leed/>).

BREEAM and LEEDS are different systems promoting the same principal objective of sustainability using varying interrelated components to achieve sustainable property/building which ultimately contributes to the market value of the property depending on the user requirement and that which the property is able to provide (Tamaraukuro, Jubril & George 2017).

Sustainable development concept seeks to cater for the present, without trading off future capacity while addressing their current desires (Babawale, 2008).

Collective agenda by groups/organizations across the globe is directed towards encouraging sustainable green practices, with proven potential growth in property development and consequently increase in values especially in Europe where studies have shown peoples willingness to pay for the sustainable property than the other (Lorenz, 2006). For example, the Organization for Economic Co-operation and Development (OECD) member nations alone, are responsible for 24 to 40 percent of utilized energy in their respective countries and 30 to 40percent of solid waste generation and management thus willing to cut down their operational cost by embracing energy efficient concept through building modification to integrate sustainable energy practice

In this manner, property development has the biggest single offer worldwide with limited hindrance to human prosperity. Although, Performers in the property development arena, land valuers and examiners, are slow in reacting to challenges paused by sustainability advancement concept. It is contended that achieving advancement in property development to a great extent rely on efforts to incorporating sustainability concepts into property valuation practice (Lorenz, 2006). Unless valuers start to reflect and represent sustainability highlights in the estimation of property values, investors may not be persuaded to use sustainability highlights into property improvement since there exist other externalities with consequential effect on individuals' perception and actions (Pearse, 2005).

The concept of sustainability in property valuation from a specific viewpoint and approach by studying Nigerian property valuers working in three steps/level managerial business model in urban communities of Lagos, highlighting the sustainability elements worthy of consideration by valuers in the valuation of the property. Thus, present an idea of valuers' disposition to embracing the concept into property development and valuation. The continued global drive for sustainability have raised some pertinent needs for Nigerian valuers like their associates in different parts of the world to promote the practice of sustainability in property development/management and to further inculcate the attitude as well as integrate them into valuations and property related transactions (Sayce et al.,2010). Thus, response to the current global call for a better connection between properties values, social duty, and sustainability (Pivo, 2007).

Concepts of Green Building

There are numerous meanings to what a green building is or does. Definitions may extend from a building that is "not as terrible" as the normal working as far as its effect on nature or one that is "eminently better" than the normal working, to one

that may even speak to a regenerative procedure where there is really a change and reclamation of the site and its encompassing condition. Green building involves "The act of expanding the effectiveness of structures and their utilization of vitality, water, and materials, and diminishing building impacts on human wellbeing and the earth, through better sitting, outline, development, operation, support, and expulsion of the structure toward the finish of utilization, of the total building life cycle.

Green buildings/green development or manageable building alludes to both a structure and the utilization of components that are capable asset and productive throughout a building's life-cycle: from siting to outline, development, operation, upkeep, redesign, and obsolescence. Green building configuration includes finding harmony between home building and economic condition. This requires close collaboration between the draftsmen, the designers, and the customer at all venture stages. Green Building practice grows and substitutes the established building configuration worries of economy, utility, strength, and solace. Green building unites a huge range of practices, procedures, and abilities to lessen and at least wipe out the effects of structures on nature and human wellbeing. Linder Alder, Family, and Consumer Sciences in conjunction with UK Cooperative Extension Service of University of Kentucky thought of ten principal ideas (contingent upon the sort of working) for making a green home and these are:

- i. Create a building configuration
- ii. Situate and configure working to site needs, atmosphere and neighborhood conditions
- iii. Amplify the utilization of common sunshine
- iv. Explore building materials
- v. Reuse existing materials, utilize less material, and utilize earth-friendly building materials
- vi. Outline for indoor air quality
- vii. Set high lighting-productivity norms
- viii. Select apparatus that are vitality proficient and save money on water utilization
- ix. Outline for simplicity of support and utilization of earth inviting cleaning items
- x. Keep up auxiliary and building frameworks for most extreme vitality and ecological viability

Rather than ordinary structures, green structures seek to utilize land and vitality proficiently, monitor water and different assets, enhance indoor and open-air quality, and increase the utilization of reuse and sustainable materials

METHODOLOGY OF STUDY

The study covered the former capital of the country and presently the biggest commercial city of Nigeria. Lagos city has a standout amongst the most dynamic property showcase with the most trending property development and supply venture (Babawale and Koleoso, 2006). Over 90% of the headquarter workplaces of banks and insurance agencies (eminent and clients of valuation firms) are situated in the city (Babawale, 2008).

The most recent catalog of the Nigerian Institution of Estate Surveyors and Valuers reported that 70% of registered firms of Estate Surveyors and Valuers have either their head office or a branch office in one of the three urban areas with Lagos having the highest concentration thus rightfully chosen to be studied on real property development and valuation issues. The study was profiled to comprise Ikeja, Lagos Island, Victoria Island/Lekki and Surulere/Yaba. This comprises a huge extent data capturing both the suppliers, the clients of valuations and occupant in the areas examined.

The study included an overview of trained surveyors/practitioners and valuers operating in Lagos city totaling about 360 firms across the city with a population size of 180 respondents. Respondents were picked randomly through a list of registered firms acquired from the respective state chapter database and records. This was based on cluster and geographic zone within the country as well as the location of firms of Estate Surveyors and Valuers which are to be found in groups/bunches or pockets of settlements around significant business regions of selected urban centers. This study identified four cluster zone of such groupings in Lagos; namely: Ikeja, Lagos Island, Victoria Island/Lekki and Surulere/Yaba. Two hundred and fifty (250) questionnaires were distributed in full scale of which 160 were properly filled and returned, constituting 64 percent return rate. A five-point Likert scale with 1 indicating 'not noteworthy' to 5 signifying "critical" was utilized. This technique is viewed as proper having being utilized in Addae-Dapaah et al., 2009. The 160 responses cut across the studied area with 24% being situated in Ikeja, 19% in Lagos Island, 16% in Victoria Island-Lekki hub, 8% in Surulere, and 13% in Yaba of Lagos city.

DISCUSSION OF STUDY

Information from the study was organized into two areas. Examining information on attributes of the respondents constituted the first segment while which the

second focused on utilizing Principal Component Analysis as an instrument to exhibit weight appended to each bunch of sustainability highlights.

Characteristics of Respondent Estate Surveyors and Valuers

Generally, there are more male practicing estate surveyors and valuers than female as justified in the response analysis made having 68% male respondents, this in some cases made harmonious and unbiased practice difficult among female practitioners. Majority of the respondents up to 84% are graduates of a university or polytechnic out of which 80% are partners to a principal consultant heading the firm, the practice of partnership in the firms of professional practice signals a departure from hitherto individual practices to a more progressive system of partnership among practitioners registered with the Nigerian Institution of Estate Surveyors and Valuers (NIESV). Most of the respondents fall within the new in practice as only 12% had more than 6 years experience in the market and therefore suggest that greater part of the respondents are of younger age in practice.

Principal Component Analysis

The favored strategy for factual examination is the Principal Component Analysis (PCA) with varimax turn. Concentrates with comparable green sustainability components considered important into value addition of properties when compared with the have-not. The component and responses are hereby presented and discussed.

Figure 1: Showing green sustainability concepts components as value added elements to be considered in valuation assessment

S/N	Description	SA	A	UD	DA	SD
1	Biodiversity protection Enhancing site Ecology Ecological impact	72	53	15	08	12
2	Energy performance Lighting (internal) Lighting (external) Ventilation Heat transmission Energy monitoring Optimizing energy	82	29	11	43	07

	CO2 reduction strategy					
3	Water management	58	66	26	06	04
	Water consumption					
	Indoor water reduction					
	Outdoor water reduction					
	Irrigation system					
	Rainwater harvesting					
	Water conservation/metering					
	Grey water recycling					
	Wastewater technology					
4	Waste Management	102	32	16	02	08
	waste management					
	Waste treatment					
	Low environmental impact materials					
	Renewable natural materials					
	Source of raw material					
	Reuse of structural material					
	Use of non- structural frame material					
	Efficient use of material over its life cycle					
5	Economic Aspect	123	27	08	02	00
	Operation and maintenance cost					
	Management cost					
6	Indoor Environment & Health	114	27	12	00	07
	Ventilation					
	CO2 monitoring					
	Provision of natural ventilation					
	Fresh air supply					
	Co2 emission					
	Night light					
	Noise pollution					
	Watercourse pollution					
	Natural disasters prevention strategy					

Source: Field Survey 2018

The figure above has reported general acceptance of green concept components among practitioners in the study area. Responses have shown agreement to

biodiversity protection, energy performance monitoring, water, and waste management as well as the indoor environment and quality health maintenance, in addition to economic consideration about management and ease of maintenance or otherwise of the building. Acceptance to those concepts was however not without descending opinion with the highest descend seen on energy performance monitoring having 43 of the 160 respondents disagreeing to the concept even though defeated by a simple majority response, it is worthy of further investigation to ascertain respondents understanding of energy generation, utilization and costing. This in addition to gauging their knowledge level about renewable energy contribution towards achieving sustainable green building and consequently environment as a whole.

CONCLUSION

Property has been generally perceived as a particular resource class (Lorenz, 2006) with the potential of mainstreaming economic improvement into land venture choices. In general, property market operations guarantees that property estimations and money related instruments are acclimated to mirror the genuine market estimation of maintainable structures. Regardless of whether in the valuation of single maintainable property or valuation of properties in practical markets, property valuation has a key part to play in achieving sustainability in property development. Lorenz (2006) opined that most valuations conducted in recent times contain ecological disclaimers as valuers guarantee no information of natural conditions by expressing that the valuation of the property is made 'as spotless'. This needs to change.

RECOMMENDATION

Integrating sustainability/green concept into property valuation processes in Nigeria presents multiple challenges to Nigerian valuer as Paucity of comparative data, limited application of commonly accepted standards, and limited exposure of practitioners, coupled with the weak regulatory framework, as well as the paucity of research which assists in determining/adjusting valuation variables to reflect sustainability. A drive towards the establishment of sustainability standards in the construction and management of properties would help to alleviate the problem and inadequacy of suitable data considerably.

The test of making, keeping up and overseeing supportable human settlements must be met by upholding certain parameters as necessary choices to influence

the shape, plan and operational conditions in the built environment. Appraisers have a distinguished role to play in addressing this difficulty by harnessing the market through the invention of new strategies or adjusting old ones to meet contemporary needs of stakeholders/end users as government, proprietors, occupiers, designers and lenders. It is perceived that appraisers should not lead esteem client to disarray (Sayce et al., 2010), their role in property investment choices through counseling is irrefutable. Consolidating sustainability/maintainability issues into valuations encourages the public to see certain advantages of sustainability reflected in the value gauges assembled by valuers. The immediate connection between monetary advantages and maintainability prompt them to accomplish higher value gauges for the properties they possess or mean to offer. Valuers consequently need to know and record sustainability components in properties, their capacity to ascend to this test will decide the place of valuation in a world that is getting progressively mindful of the social and natural effects of the property offered in the market.

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