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# Individual Level Characteristics That Drive Awareness of Sustainability Features in Property Valuation: The Nigerian Experience

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## Abstract

Persistent mispricing by property valuers has contributed to global economic instability. With increasing emphasis on sustainability in property markets, valuers face growing pressure to account for sustainability premiums in their assessments. However, valuers, particularly in developing markets like Nigeria, lack adequate knowledge to incorporate sustainability considerations into valuation practice. Focusing on valuers in Nigeria, called Estate Surveyors and Valuers(ESVs), this study investigates awareness of sustainability features and examines the influence of valuers' individual professional characteristics on this awareness. The target population comprises estate surveyors and valuers working in established real estate firms listed by the Nigerian Institution of Estate Surveyors and Valuers (NIESV). Respondents were drawn from professionals within 198 randomly selected firms, representing 50% of the national register, to ensure broad representation. Data on the respondents' educational and professional qualifications, designations, and genders were collected through structured questionnaires. The data were analysed using percentages and means to summarise valuers' professional characteristics and awareness levels, while a one-sample t-test and a Chi-square test were used to examine the relationships between professional characteristics and sustainability awareness. Findings revealed mean awareness scores above the benchmark of 3.0 on a 5-point Likert scale, with the highest for energy-efficient features (mean = 3.86) and the lowest for water-efficient features (mean = 3.40). Significant relationships ($p = 0.004–0.029$) were observed between awareness and variables such as education, gender, designation, and professional qualification. The study concludes that Nigerian ESVs demonstrate good awareness of sustainability features. However, awareness varies significantly among professionals, given their individual characteristics, highlighting the need for targeted capacity building to deepen the integration of sustainability in valuation practice.

**Keywords:** *Property Valuation, Sustainability features, Awareness, Individual professional characteristics, Estate Surveyors and Valuers*

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## 1. Introduction

Sustainability is defined as development that meets present needs without compromising the ability of future generations to meet theirs (Brundtland, 1987). It has become a central principle in the global real estate sector, which is a major contributor to energy consumption and greenhouse gas emissions. (Newell & Marzuki, 2022). In response, there is growing emphasis on sustainable property development, investment, and valuation (Ghosn, Warren-Myers & Candido, 2024). Within this context, property valuation plays a vital role. The process of estimating value increasingly demands that valuers understand how environmental, social, and governance (ESG) considerations influence property performance and market perception (Bradley, Sayce & Lewis, 2010; Lützkendorf & Lorenz, 2011; Doan et al., 2017; Neri, 2021; Pham, Doan, & Nguyen, 2021). Sustainability features, sometimes referred to as 'green features' or 'green technologies', include attributes such as energy efficiency, natural lighting, water and energy conservation, renewable energy integration, air quality and temperature control, and the use of sustainable materials (Ahmad, Thaheem & Anwar, 2016). Others include building quality, thermal comfort, carbon emissions reduction, recycling of construction materials, accessibility to transport, and social impact (Dell'Anna & Bottero, 2021). These features contribute not only to environmental goals but also to financial performance, as properties with strong sustainability credentials often attract higher rental growth and market premiums, commonly termed sustainability premiums (Adeyemo, 2024; MacAskill et al., 2021; Ibraeva et al., 2020; Facchrudin & Fachrudin, 2017).

In developed markets, professional standards and valuation frameworks now integrate these sustainability aspects through energy ratings, certification levels (e.g., LEED, BREEAM), and life-cycle cost assessments embedded in valuation reports (Royal Institution of Chartered Surveyors [RICS], 2014; Oladeji& Okoro, 2024). This progression reflects broader market recognition of the value implications of sustainability features, supported by expanding datasets and clearer market signals.

Measuring the impact of these features requires valuation approaches that move beyond traditional methods. Conventional valuation techniques such as comparison, cost, and income are designed for tangible and explicit features such as size, number of rooms, building age, and structural condition. (Wong *et al.*, 2020) However, sustainability attributes are often implicit, and their value impact is indirect, harder to quantify, and influenced by market awareness (Warren-Myers, 2016). This situation has prompted the adoption of advanced analytical models such as hedonic pricing, spatial econometric models, and life-cycle cost analysis, particularly in developed economies with extensive datasets and transparent markets (Sanchez-Ollero, 2014; Abidoye & Chan, 2017; Hindagoda & Gunawardhana, 2020). For instance, Sohn et al. (2020) employed spatial models to examine the capitalisation effects of flood mitigation infrastructure, such as detention and retention ponds, which contribute to flood resilience, a

critical dimension of environmental sustainability. While these ponds primarily serve as flood-control measures, they support sustainability by enhancing urban resilience, protecting properties, and promoting sustainable land and water management.

The growing global recognition of sustainability has led professional bodies, including the Royal Institution of Chartered Surveyors (RICS, 2024), to issue valuation guidelines that encourage explicit inclusion of ESG and sustainability indicators in valuation reports. Similar progress has been observed in countries such as the United Kingdom, Australia, and the United States, where valuation frameworks now include sustainability checklists and disclosure requirements (Warren-Myers, 2022). Yet, even in these markets, challenges persist as valuers face data limitations, methodological uncertainty, and client resistance (Thanh Le & Warren-Myers, 2019).

In developing countries, these challenges are more pronounced. In Nigeria, the Estate Surveyors and Valuers Registration Act of 1975 legally recognises Estate Surveyors and Valuers (ESVs) as the only professionals authorised to undertake property valuation. Explicit attributes, such as the number of bedrooms, floors, plot size, or age, are directly measurable using traditional valuation methods (Abidoye& Chan, 2016). In contrast, implicit attributes, including sustainability and environmental performance, require interpretive judgement, advanced modelling, and a clear understanding of market perception (Warren-Myers, 2016). Research across Nigeria and comparable markets indicates that valuation reports continue to emphasise traditional determinants, such as location, structural condition, and comparable sales, while sustainability indicators are seldom documented (Babawale & Oyalowo, 2011; Abidoye & Chan, 2017; Adeyemo, 2024). Factors responsible for this include limited awareness and technical knowledge, weak regulatory frameworks, and market unreadiness for investment in sustainability (Adeyemo & Ajayi, 2025). Among these barriers, awareness stands out as a fundamental determinant. (Essiz, Yurteri, Mandrik, &Senyuz,2023; Warren-Myers, 2023).

Research has shown that awareness among professionals is influenced by several professional characteristics. Marques et al. (2024) found that age, years of experience, and professional training shape valuers' perception of sustainability benefits. Similarly, those with limited education or access to continuing professional development are less likely to incorporate sustainability considerations into their valuation work (Warren-Myers 2023). Empirical research examining valuers' awareness of sustainability and its incorporation into valuation practice in Nigeria remains sparse, highlighting a critical area for further study.

Given these realities, this study examines the individual professional characteristics of Estate Surveyors and Valuers in Nigeria that shape their awareness of sustainability. Enhanced awareness will enable valuers to pursue the requisite knowledge to produce more accurate and globally aligned valuations, promote green investment, and strengthen professional competitiveness.

## 2. Literature review

Sustainability in real estate refers to practices that promote environmental stewardship, economic efficiency, and social well-being across a building's life cycle. It involves integrating features such as renewable energy systems, water conservation technologies, thermal comfort, and material recycling, which collectively enhance building performance and mitigate environmental impact. Sustainability features in buildings have been classified in various ways across the literature. Ahmad et al. (2016) group them broadly as green technologies, including natural lighting, control technologies, energy and water conservation, renewable energy, and air-quality and temperature-control systems. Rating tools such as LEED and Malaysia's GBI offer simplified categories, including energy efficiency, indoor environmental quality, water efficiency, sustainable site planning, resource management, and innovation. Similarly, the IMMOVALUE (2010) framework highlights features such as building and thermal quality, energy efficiency, carbon-emission reduction, material recycling, accessibility, and social impact.

Energy efficiency relates to practices that reduce energy demand through design, insulation, natural lighting, and renewable technologies. Indoor air quality concerns ventilation, lighting, and the reduction of pollutants that affect occupant health. Sustainable site planning emphasises accessibility, erosion control, and integration with essential services. Water efficiency promotes reduced water use through rainwater harvesting, recycling, and low-flow fittings. Economy and resource management involve using durable materials, efficient design layouts, and food gardening. Waste management covers the control and recycling of waste, noise and fumes mitigation, wastewater treatment, and reduces reliance on generators.

Studies across developed markets reveal that embracing sustainability can enhance property performance and market value. Empirical evidence from Europe, North America, and parts of Asia (Dell'Anna & Bottero, 2021; MacAskill et al., 2021) consistently demonstrates that properties with green certifications or sustainability attributes attract rent and price premiums. Consequently, professional valuation standards, including those of the Royal Institution of Chartered Surveyors (RICS) and the International Valuation Standards Council (IVSC), now emphasise the integration of environmental, social, and governance (ESG) considerations into valuation practice (Hossain et al., 2023). Yet, translating these sustainability metrics into measurable value indicators remains challenging, even in mature markets, due to data limitations and methodological inconsistencies (Thanh Le & Warren-Myers, 2019; Jayasiri & Wickramaarachchi, 2022).

In developing economies, the conversation is still emerging. Scholars such as Michl, Lorenz, Lützkendorf, & Sayce (2016) and Babas, Auwal, & Gambo (2024) note that valuers in these contexts often face unique institutional, market, and knowledge constraints that limit the integration of sustainability into valuation practice. Research from countries such as South

Africa, Malaysia, and Indonesia highlights similar issues, including low awareness, limited training, and a lack of market evidence to justify sustainability premiums (Fachrudin & Fachrudin, 2017; Tauringana, 2021). These findings emphasise the need to understand how professional education, policy frameworks, and market dynamics influence valuers' responses to sustainability in emerging markets.

In Nigeria, a few studies have begun to address this knowledge gap. Babawale and Oyalowo (2011) observe that while Nigerian valuers acknowledge the importance of sustainability, most lack the technical capacity to assess its impact on property value. The study reveals that valuation practice continues to rely on traditional methods that overlook sustainability premiums, resulting in potential undervaluation of sustainable buildings. Similarly, Ibiyemi et al. (2019) identify barriers such as inadequate training, poor institutional support, and low awareness as major constraints to integrating sustainability into valuation practice. More recently, Adeyemo and Ajayi (2025) identified the lack of regulatory enforcement and market unreadiness for sustainable investment as major barriers to sustainability valuation in Nigeria. These findings highlight that weak institutional support reduces valuers' motivation to acquire sustainability knowledge, while low market demand limits the relevance of such expertise.

Emerging global evidence further suggests that valuers' awareness of sustainability is not only shaped by institutional and market factors but also by professional characteristics. Variables such as age, education, gender, professional qualification, and years of experience have been shown to influence valuers' knowledge and attitudes toward sustainability (Marques et al., 2024; Warren-Myers, 2023; Hossain et al., 2023; Lejárraga-García et al., 2024; Foroudi et al., 2025). This suggests that valuers with higher levels of education or access to continuous professional development are more likely to understand and apply sustainability concepts in their work.

In the Nigerian context, empirical studies linking valuers' professional characteristics to their sustainability awareness are scarce. Most previous works have emphasised general awareness levels or methodological barriers, overlooking the human and professional dimensions that may drive sustainable valuation practice. This study, therefore, addresses this critical gap by examining how the professional characteristics of Nigerian Estate Surveyors and Valuers (ESVs) influence their awareness of sustainability features in property valuation. Drawing from these established classifications and adapting them to the realities of developing markets, this study operationalises sustainability features under six categories. These are: Energy Efficiency (EE), Indoor Air Quality (IAQ), Innovation/Sustainable Site Planning (IS), Water Efficiency (WE), Economy and Materials Conservation (E), and Waste Management (WM). This Nigerian study, within the global discourse, contributes not only to local policy and professional development but also enriches international understanding of how contextual and individual-level characteristics shape the adoption of sustainable valuation practices in emerging markets.

## 3. Data and methods

This study employed a quantitative research design using primary data obtained through structured questionnaires administered to registered Estate Surveyors and Valuers (ESVs) in Lagos State, Nigeria. This target population comprises professionals who are licensed by the Estate Surveyors and Valuers Registration Board of Nigeria (ESVARBON), the statutory body responsible for regulating valuation and estate management practice in the country. Nigeria has over 1,400 registered valuation firms, with approximately 35% located in Lagos, reflecting the state's economic and real estate dominance (NIESV Directory, 2024).

The instrument collected data on respondents' professional characteristics, such as gender, qualification, designation, and years of experience, as well as their awareness of sustainability features in valuation practice. The sustainability features were grouped into six categories: energy efficiency (EE), water efficiency (WE), innovation and site planning (IS), economy and materials conservation (E), waste management (WM), and indoor air quality (IAQ).

A 5-point Likert scale was employed for most items because of its simplicity and reliability in measuring attitudes and perceptions. Respondents rated their level of awareness on a scale from 1 (very low awareness) to 5 (very high awareness)**.** Numerical scores were assigned to each response, and mean values were computed to determine the overall awareness level for each sustainability category. A mean score of **3.0** was adopted as the benchmark, representing a neutral or moderate level of awareness; values above 3.0 indicate high awareness, and those below 3.0 suggest low awareness. This approach aligns with prior valuation studies (Ibiyemi et al., 2019; Warren-Myers, 2022) that applied similar thresholds to interpret sustainability awareness among property professionals.

. Using simple random sampling, 198 ESVs, representing almost 50% of registered practitioners in Lagos, were selected to ensure equal representation and minimise selection bias. A total of 118 valid responses were received, representing a response rate of 60%**,** which is considered satisfactory for survey research.

Data were analysed using descriptive and inferential statistics**.** Descriptive statistics summarised categorical variables through percentages and mean scores to reveal dominant characteristics and awareness levels among estate surveyors and valuers. Inferential analysis included a one-sample t-test comparing valuers' mean awareness ratings of sustainability features against a benchmark of 3.0, representing moderate or baseline awareness; values above 3.0 indicate higher-than-average awareness, while those below 3.0 suggest low awareness. A chi-square test further examined relationships between professional characteristics and awareness levels. These analyses provided empirical insight into how professional characteristics influence sustainability awareness in valuation practice in Lagos State, Nigeria.

## 4. Results and discussions

This section presents the results of the analysis of data collected during the study. In the first place, we present the results of the individual professional characteristics of ESVs, their level of awareness of sustainability features and the relationship between their level of awareness and their individual socio-economic characteristics.

### *4.1 Valuers' professional characteristics*

This section examines the characteristics of the valuers who participated in the study. Understanding these characteristics is crucial, as they provide insight into the professional background, experience, and competencies that may influence the level of awareness and application of sustainability principles in real estate valuation. Essentially, the analysis lays the groundwork for interpreting variations in sustainability awareness in terms of human and professional factors.

Data on respondents' professional characteristics covered key variables such as gender, designation, and academic and professional qualifications. The study focused on these few characteristics to maintain focus on practice-related variables.

The results presented in Table 1 reveal that 47% of the respondents are owners or principals of their valuation firms, indicating that nearly half of the participants possessed informed perspectives derived from both managerial and professional valuation experience within the sample.

**Table 1: Professional Characteristics of Individuals in Selected ESV Firms**

| **Item** | | **Frequency** | **Percentage** |
|---|---|---|---|
| **Designation** | Principal Partner | 54 | 47 |
| | Associate | 41 | 35.7 |
| | Head of Valuation | 5 | 4.3 |
| | Others | 13 | 11.3 |
| | No Response | 2 | 1.7 |
| | Total | 115 | 100 |
| **Gender** | Male | 101 | 87.8 |
| | Female | 14 | 12.2 |
| | Total | 115 | 100 |
| **Professional Qualification** | FNIVS | 18 | 15.7 |
| | ANIVS | 82 | 71.3 |
| | Others | 10 | 8.7 |

| | | | |
|---|---|---|---|
| | No Response | 5 | 4.3 |
| | Total | 115 | 100 |
| **Educational Qualification** | PhD | 7 | 6.1 |
| | Masters | 40 | 34.8 |
| | BSc | 24 | 20.9 |
| | Btech | 4 | 3.5 |
| | HND | 33 | 28.7 |
| | PGD | 6 | 5.2 |
| | No Response | 1 | 0.9 |
| | Total | 115 | 100 |

A 71.3% majority belong to the Membership cadre of the Nigerian Institution of Estate Surveyors and Valuers (NIESV)**,** signifying active membership and professional recognition. Furthermore, 34% of respondents held at least a Master's degree, suggesting that most participants have advanced academic exposure and the requisite intellectual capacity to engage meaningfully with sustainability-related valuation concepts.

### *4.2. Level of awareness of the Estate Surveyors and Valuers (ESVs) of sustainability features*

This section evaluates the level of awareness of Estate Surveyors and Valuers (ESVs) regarding key sustainability features (SFs) relevant to real estate valuation practice. Assessing this awareness is central to the study's aim, as valuers' understanding of sustainability directly influences their ability to incorporate such features into market assessments and value judgements. The responses were analysed using mean ratings to determine relative levels of awareness across feature categories, and a one-sample t-test was conducted to assess whether the observed mean values significantly differed from the neutral benchmark of 3.0. Statistical significance at $p < 0.05$ indicates that respondents' awareness levels are meaningfully higher than average, rather than due to random variation.

The analysis in Table 2 reveals valuers' awareness levels across individual sustainability variables before aggregation into the six major categories. For Energy Efficiency, valuers show high awareness of features such as LED lighting (mean = 4.24), natural lighting (4.09), and solar panels (4.10), all significantly above the benchmark value of 3.0. Awareness of motion-sensitive switches is lower (3.29) but remains statistically significant. These item scores collectively produced a high aggregate mean of 3.86, indicating strong awareness of energy-related sustainability practices. For Water Efficiency, awareness varies considerably. While valuers are highly aware of water-saving bathroom fittings (3.83), awareness of rainwater harvesting (3.05) and drainage systems for gardening (3.17) is comparatively low and

statistically insignificant. The aggregate mean of 3.34, therefore, reflects moderate awareness driven largely by familiarity with conventional water-saving devices.

Under Innovation and Site Planning, valuers demonstrate strong awareness of space efficiency (4.11) and access to public transportation (4.15) but low awareness of green certification (2.68), which falls significantly below the benchmark. The aggregate mean of 3.65 captures this mixed pattern: high awareness of practical planning features but limited exposure to certification-based metrics. For Economy and Materials Conservation, valuers are familiar with durable materials (4.12) and open-plan designs (3.48), whereas awareness of food gardening (2.86) is low and not statistically significant. These variations produce a moderate aggregate mean of 3.53. Awareness of Waste Management features is generally high, with strong recognition of reduced-generator use (3.92) and non-burning waste-disposal methods (3.99). Moderate awareness is observed for wastewater treatment (3.30) and recycling bins (3.27), resulting in an aggregate mean of 3.56. For Indoor Air Quality, all variables, including cross-ventilation (3.86), effective exhaust vents (3.74), and fire extinguishers (3.98), show high and statistically significant awareness, yielding an aggregate mean of 3.75.

Overall, the aggregate means were computed as the average of the individual item scores within each sustainability category, enabling clearer interpretation of valuers' general awareness patterns. The results show that valuers are most aware of tangible, performance-based sustainability features, such as energy use, ventilation, and waste control.

Conversely, green certification and food gardening record lower mean ratings (2.86), indicating limited awareness among valuers. This may be because such features are relatively new and uncommon in the Nigerian property market, where sustainable development is still emerging. Most valuers are more familiar with conventional building elements than with advanced green standards or landscape-based sustainability measures. The low awareness also reflects the limited availability of certified green buildings and the absence of formal training or regulatory emphasis on these sustainability metrics in local valuation practice.

These findings suggest that valuers in Lagos focus more on practical sustainability elements, such as energy efficiency and indoor air quality, because they are visible and directly influence property performance. In contrast, certification-based features are less recognised, likely due to their limited application and the absence of regulatory enforcement in Nigeria. This pattern indicates that sustainable valuation practice is still evolving, as valuers prioritise tangible building attributes over formal green standards. Similar trends have been observed in earlier studies, where valuation reports in developing markets continue to rely mainly on conventional determinants (Babawale & Oyalowo, 2011; Abidoye & Chan, 2017). The result also provides a benchmark for professional development initiatives aimed at deepening valuers' knowledge and improving the integration of sustainability criteria into valuation reports.

Further analysis of the mean ratings in Table 2 reveals that water-efficiency features have the lowest awareness level among all sustainability categories assessed. This finding is particularly striking given that water scarcity and management are critical issues in developing economies like Nigeria. The low awareness of water-efficiency features among valuers may be linked to the way water is supplied and managed in many urban areas in Nigeria. Because most properties rely on privately drilled boreholes or wells rather than regulated municipal systems, building owners tend to prioritise access to water rather than conservation. Consequently, features such as water recycling, rainwater harvesting, or low-flow fixtures are seldom installed, publicised, or considered essential. The widespread practice of each building sinking its own borehole, often with minimal regulatory oversight, reinforces the perception that water is abundant once a borehole is in place, reducing the incentive to adopt efficiency technologies. Such practice probably limits valuers' exposure to water-efficiency innovations and contributes to the low awareness recorded.

**Table 2: One-sample t-test indicating level of awareness of ESVs**

| | Descriptives | | One-Sample Test (Test Value = 3.00) | |
|---|---|---|---|---|
| | Mean | | | *p*-value |
| **Energy Efficiency** | | | | |
| Solar Panel | 4.1 | | 11.857 | 0 |
| Motion Sensitive Switches | 3.29 | | 2.246 | 0.027 |
| Led Light Bulbs and other low energy lighting | 4.24 | | 12.431 | 0 |
| Energy Star Appliances | 3.48 | | 4.175 | 0 |
| Natural lighting | 4.09 | | 9.912 | 0 |
| *Aggregate* | 3.86 | | 11.347 | 0 |
| **Water Efficiency** | | | | |
| Rain water harvesting | 3.05 | | 0.377 | 0.707 |
| Water saving facilities in toilet and bathroom | 3.83 | | 7.979 | 0 |
| Drains to channel water for gardening | 3.17 | | 1.395 | 0.166 |
| *Aggregate* | 3.34 | | 3.912 | 0 |
| **Innovation/Site Planning** | | | | |
| Easy access to public transportation | 4.15 | | 10.686 | 0 |
| Space efficiency | 4.11 | | 12.754 | 0 |
| Green areas | 3.6 | | 5.102 | 0 |
| Adaptability of building for mixed uses | 3.74 | | 7.405 | 0 |
| Green Certification | 2.68 | | -2.584 | 0.011 |
| *Aggregate* | 3.65 | | 8.012 | 0 |

| | | | |
|---|---|---|---|
| **Economy and Material Conservation** | | | |
| Use of durable materials | 4.12 | 11.987 | 0 |
| Food gardening (subsistence farming) | 2.86 | -1.268 | 0.207 |
| Storey house | 3.72 | 6.675 | 0 |
| Reduction of walls and doors through open plans | 3.48 | 4.25 | 0 |
| *Aggregate* | 3.53 | 6.487 | 0 |
| **Waste Management** | | | |
| Control of pollution (noise , fumes, wastes etc) | 3.74 | 6.761 | 0 |
| Treatment of waste water | 3.3 | 2.556 | 0.012 |
| Waste recycle bin for plastics | 3.27 | 2.122 | 0.036 |
| Waste disposal not burning | 3.99 | 9.373 | 0 |
| Reduced use of generators | 3.92 | 9.441 | 0 |
| *Aggregate* | 3.56 | 6.741 | 0 |
| **Indoor Air Quality** | | | |
| Low Fence | 3.56 | 5.056 | 0 |
| Cross Ventilation for reduced air conditioning | 3.86 | 8.457 | 0 |
| Effective exhaust and air vent | 3.74 | 6.713 | 0 |
| Availability of fire extinguishers | 3.98 | 8.271 | 0 |
| *Aggregate* | 3.75 | 8.151 | 0 |

*Items with p-values less than 0.05 are significant.*

This pattern corroborates the findings of an earlier study by Adeyemo (2024)**,** who observed that water efficiency exerted the least influence on property valuation decisions in Lagos, Nigeria. The implication is that the depth of valuers' awareness of specific sustainability features directly affects the extent to which those features are reflected in their valuation assessments. Hence, improving professional knowledge and exposure to water conservation measures could enhance the integration of sustainability criteria in future valuation practice.

### *4.3 The nexus between individual valuers' professional characteristics and awareness of sustainability features*

This section examines the relationship between individual valuers' professional characteristics, including educational qualification, gender, professional qualification, and designation, and their level of awareness of sustainability features (SFs) in property valuation. Establishing this relationship is central to the study's aim of identifying the valuers' professional characteristics that shape their awareness and consequent integration of sustainability principles in valuation practice. The analysis was conducted using the Chi-square **test** to assess how these characteristics influence awareness across sustainability dimensions, including energy efficiency (EE)**,** water efficiency (WE)**,** indoor air quality (IAQ)**,** and innovation and site planning (IS)**.**

The results in Table 3 revealed education as the most influential characteristic driving awareness across multiple sustainability dimensions. Educational qualification shows a strong positive association with awareness of energy efficiency ($p < 0.01$) and water efficiency ($p < 0.05$) (Table 3). This indicates that valuers with higher academic qualifications, particularly those with postgraduate degrees, are more conversant with sustainability concepts, likely due to exposure through academic research, professional training, and continuing education. Their deeper understanding of building performance and environmental management translates into higher sensitivity to sustainability features that affect property value and operational efficiency. These findings align with evidence from more developed markets, where valuers' education and professional qualifications consistently influence their awareness of sustainability. Studies such as Marques et al. (2024), Warren-Myers (2023), Hossain et al. (2023), Lejárraga-García et al. (2024), and Foroudi et al. (2025) show that valuers with greater academic training or ongoing professional development are more likely to understand and apply sustainability concepts. This global trend reinforces the present study's result that education is a key driver of sustainability awareness.

The analysis also indicates that gender influences awareness levels, with male valuers showing higher awareness of energy efficiency features than female valuers. This difference may partly reflect the male-dominated composition of the sample and broader professional trends. However, it is also possible, though speculative, that cultural and organisational practices in Nigeria assign more technically demanding tasks, such as large-scale commercial valuations and energy audits, to male valuers, which could increase their exposure to sustainability-related knowledge. This discussion reinforces the importance of providing equitable access to professional development and sustainability training to ensure awareness gaps are not reinforced by cultural or institutional norms.

**Table 3: Nexus between Profile of the Respondents/Firms and the Level of Awareness of SF**

| Profile | EE | | WE | | IS | | E | | WM | | IAQ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Df | Asymp. Sig. (2-sided) | Df | Asymp. Sig. (2-sided) | Df | Asymp. Sig. (2-sided) | df | Asymp. Sig. (2-sided) | df | Asymp. Sig. (2-sided) | df | Asymp. Sig. (2-sided) |
| Designation | 72 | 0.295 | 36 | 0.401 | 60 | 0.025 | 45 | 0.175 | 69 | 0.424 | 69 | 0.219 |
| Professional Qualification | 46 | 0.768 | 24 | 0.1 | 38 | 0.805 | 28 | 0.556 | 44 | 0.706 | 46 | 0.029 |
| Educational Qualification | 120 | 0.004 | 60 | 0.049 | 100 | 0.28 | 75 | 0.277 | 115 | 0.678 | 110 | 0.092 |
| Gender | 24 | 0.005 | 12 | 0.473 | 20 | 0.658 | 15 | 0.379 | 23 | 0.427 | 23 | 0.488 |
| Year of registration with ESVARBON | 69 | 0.654 | 33 | 0.792 | 54 | 0.66 | 42 | 0.677 | 69 | 0.133 | 66 | 0.436 |
| Location | 24 | 0.772 | 12 | 0.197 | 20 | 0.375 | 15 | 0.555 | 23 | 0.475 | 23 | 0.525 |
| Year of Establishment | 69 | 0.87 | 33 | 0.818 | 57 | 0.827 | 42 | 0.774 | 66 | 0.297 | 69 | 0.403 |

Furthermore, the professional qualification of valuers was found to be significantly associated with awareness of indoor air quality (IAQ)**.** IAQ is a technical sustainability feature requiring specialised knowledge of ventilation systems, thermal comfort, and their impact on property performance and market value. The result suggests that valuers with higher professional qualifications possess the technical competence to understand how IAQ influences both the functional and economic performance of buildings.

Similarly, designation within the firm was significantly related to awareness of innovation and site planning (IS) features. This pattern indicates that decision-making authority, within a firm, influences how sustainability innovations are recognised and adopted. Senior partners and firm

owners, who represent nearly half of the study's respondents, tend to have greater exposure to emerging market trends, client demands, and regulatory expectations, positioning them as key gatekeepers in determining whether new sustainability practices are integrated into valuation assignments. This hierarchical influence also highlights the role of leadership in shaping firm-level commitment to sustainable valuation practices in Lagos, Nigeria. This finding is novel in the Nigerian valuation context, as prior studies have rarely examined how firm leadership influences sustainability awareness. Its plausibility is supported by global evidence indicating that professional roles and leadership positions shape engagement with ESG and sustainability frameworks (Marques et al., 2024; Warren-Myers, 2023; Hossain et al., 2023). Thus, leadership within firms may serve as a key gatekeeper for integrating sustainability innovations into valuation practice. The result also emphasises the need for equitable access to sustainability-related capacity building across all professional levels to enhance firm-wide adoption of sustainable valuation practices in Lagos, Nigeria.

Taken together, the results confirm that individual valuers' characteristics significantly shape awareness of sustainability features. Education, professional qualification, designation, and gender all contribute to awareness, with education emerging as the strongest predictor. Valuers with advanced training and professional standing exhibit higher awareness of technical and operational sustainability features, while a leadership position determines the extent to which such awareness translates into firm-level action.

## 5. Conclusion

This study investigates valuers' awareness of sustainability features and explores how their individual professional characteristics influence that awareness. The study reveals that Estate Surveyors and Valuers (ESVs) in Lagos demonstrate a moderate to high level of awareness of sustainability features, particularly those related to operational efficiency and building performance, such as energy use and indoor air quality. However, awareness of certification-based or formally standardised aspects of sustainability remains limited. This pattern reflects the evolving nature of sustainable valuation practice in Nigeria, where functional features are more readily understood and applied than formal sustainability standards. Furthermore, the study establishes that the individual characteristics of ESVs, specifically their education, gender, professional qualification, and designation, significantly influence their level of sustainability awareness. These findings collectively highlight that both professional exposure and personal attributes shape valuers' understanding of sustainability in property valuation, underscoring the need for targeted professional development to deepen competence in formal sustainability assessment and reporting.

Valuers with higher educational qualifications exhibit greater awareness of energy- and water-efficient features, while male ESVs demonstrate higher awareness of energy efficiency than female ESVs. Similarly**,** professional qualification and designation are linked to greater understanding of indoor air quality (IAQ)**,** suggesting that advanced technical competence and

senior professional status promote recognition of complex sustainability attributes in valuation practice.

Overall, the findings show that ESVs in Nigeria have a moderate to high level of awareness of sustainability features, though awareness remains low for green certification and food gardening. This highlights the need for targeted professional training and curriculum review to strengthen valuers' capacity. In addition, government policies and incentives should encourage the recognition and integration of certified sustainable features in property valuation practice across Nigeria. The link between education and awareness of energy and water efficiency highlights the need for academic institutions and professional bodies to revise curricula and strengthen continuing professional development (CPD) programmes that emphasise practical sustainability assessment skills.

Observed gender differences in awareness should be interpreted cautiously, as the sample includes a higher proportion of male valuers. Nonetheless, the pattern suggests the potential value of inclusive professional development and mentorship programmes to enhance female participation and leadership in sustainability-focused valuation, ensuring equitable access to knowledge and capacity-building opportunities across genders. Since professional qualification and designation correlate with awareness of indoor air quality (IAQ), institutions such as the Nigerian Institution of Estate Surveyors and Valuers (NIESV) should incorporate sustainability metrics into professional examinations and licensure frameworks, ensuring consistent consideration of sustainability in valuation practice. Such measures would align Nigerian valuation standards with global ESG benchmarks and support progress toward Sustainable Development Goal 11 (Sustainable Cities and Communities)**.**

A key limitation of this study is its focus on a few selected professional characteristics that drive this awareness. Future research could also examine other socio-economic characteristics, such as age, religion, or cultural background, to determine whether these factors influence valuers' awareness and integration of sustainability features in valuation practice. Understanding these influences would help design more targeted professional development programmes and policies to strengthen sustainable valuation practices. This is not only relevant in Nigeria but also in other developing and emerging markets that face similar challenges in integrating sustainability into valuation practice.

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