Issues in Cost Approach to Value in the Valuation of Income-Yielding Properties in Bauchi Metropolis, Nigeria

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ABSTRACT

The cost approach to value stands as a crucial method in valuing income-yielding properties, yet various challenges can compromise its effectiveness, potentially leading to inaccuracies in property valuations. This study delves into the suitability of the cost approach for valuing income-yielding properties, with a specific focus on addressing issues related to the accuracy of cost data, depreciation estimation, and consideration of income potential, aiming to enhance the approach's reliability and accuracy. Data were gathered from Estate Surveyors and Valuers through a questionnaire, employing convenience sampling. The questionnaire, divided into three sections, utilized closed-ended questions on a 5-point Likert scale, with mean rating analysis applied to the data. The findings pinpoint challenges concerning data reliability, depreciation rates, and valuation guidelines. Strategies such as thorough property inspections, utilization of current cost data, market research, and regular updates emerged as key drivers for enhancing accuracy, transparency, and benefits for valuers. Addressing challenges within the cost approach not only improves accuracy and transparency but also positively impacts decision-making, market efficiency, and liquidity. Consequently, the study advocates for enhanced data collection, standardized guidelines, and professional training for Estate Surveyors and Valuers to bolster accuracy and transparency, thereby refining the cost approach method of valuation. In conclusion, this study underscores the importance of overcoming challenges inherent in the cost approach to establish a more robust and reliable property valuation system, ultimately benefiting stakeholders and the real estate market as a whole.

Keywords: Accuracy, Cost Approach, Property Value, Reliability.

1. INTRODUCTION

Economic theories provide the basis for real property valuation. In England, the valuation profession's origin dates back to 1868 with the establishment of a National Association of Property Surveyors (Jammeh & Jammeh, 2022). Similarly, in the United States, real estate appraisal began to take shape around 1902. As economies grew rapidly in the early 20th century, several countries formed valuation bodies (Jefferies, 2017). Real Estate Valuers worldwide play a vital role in the economic development of their respective countries (Chan & Boluwatife, 2019). Valuers offer services such as property valuation, real estate agency, property management, and feasibility appraisal, addressing various client needs, including sales, mortgages, insurance, and taxation (Mohammed *et al*., 2016).

Valuation methods fall into traditional and advanced categories, with growing favour toward advanced techniques for their speed and precision (Abidoye & Chan, 2018). However, traditional methods, especially the cost approach for income-yielding properties, face significant limitations and concerns (Jammeh & Jammeh, 2022). The accuracy of cost data, often outdated or inaccurate, poses challenges, potentially leading to value overestimation or underestimation (Wu *et al*., 2022; Augustina *et al*., 2015). Depreciation estimation, encompassing physical, functional, and economic aspects, introduces variability into valuations (Jammeh & Jammeh, 2022).

Furthermore, the cost approach's unsuitability for income-yielding properties, which generate rental income, disregards crucial income potential considerations (Onyejiaka*et al*., 2015). Recently, researchers have delved into the challenges of the cost approach for income-yielding property valuations. Ashworth *et al*. (2019) found that this approach might inadequately capture market values, especially when depreciation rates are uncertain or comparable data is lacking. Bao *et al*. (2021) highlighted its inaccuracy due to cost data discrepancies and difficulties in separating land and building values in residential property valuations in China. Kim and Lee (2020) identified its lower reliability in valuing mixed-use properties, attributable to the method's complexities and income potential estimation challenges. Inaccurate cost approach valuations can lead to substantial financial losses for property owners and investors, necessitating alternative methods or enhancements (Nada *et al*., 2022). Researchers have suggested considering income potential and addressing associated challenges. Pellegrini *et al*. (2021) found that the cost approach may not adequately represent the market value of agricultural land in Italy. Zhang *et al*. (2021), similarly concluded that it might not fully account for energy-efficient building valuations in China, failing to incorporate energy savings and related benefits. To improve property valuations and mitigate financial risks, valuers should explore alternative methods, consider income potential, and address the limitations of the cost approach, particularly in diverse contexts where its effectiveness may vary (Nada *et al*., 2022).

Existing literature highlights issues like inaccurate cost data, difficulty in estimating depreciation, overlooking property income potential, and unreliable replacement cost estimates. However, these challenges lack a comprehensive exploration within the specific context of Bauchi Metropolis. Additionally, there is a lack of research examining strategies to improve property valuations using the cost approach in this area and assessing the broader implications of addressing these issues in the local real estate industry. This study aims at bridging these gaps by thoroughly investigating the challenges and evaluating the impact of addressing these issues on property valuation in Bauchi Metropolis, thereby contributing to a deeper understanding of real estate valuation practices in Nigeria. The stated aim can be achieved through the following objectives: to identify the key challenges faced by Estate Surveyors and Valuers when applying the cost approach to property valuation in Bauchi Metropolis, to explore strategies or methods for enhancing the reliability and accuracy of property valuations using the cost approach in Bauchi, and to examine the potential implications and benefits of addressing challenges in the cost approach to valuation for income-yielding properties in Bauchi Metropolis.

2. REVIEW OF RELATED LITERATURE

2.1. Importance of Property Valuation in Economic Decision-Making

Property valuation, also known as real estate appraisal, is essential for a nation's economic stability and financial decisions (Baba *et al.,* 2018). It influences various stakeholders, including banks, insurers, traders, developers, and government authorities, shaping decisions related to mortgages, transactions, investments, and taxation. However, achieving perfectly accurate valuations is challenging due to the complex interplay of environmental, social, economic, technical, and site-specific factors, compounded by limited market transparency (Auwal *et al.,* 2018). The reliability of valuations is crucial for guiding real estate decisions, relying heavily on data, assumptions, methods, and valuer expertise, ultimately reflecting alignment with actual market prices (Auwal *et al.*, 2022).

2.2. Theoretical Basis for Cost Approach to Value

The cost approach to property valuation, rooted in the economic principle of substitution, evaluates a property's worth by estimating the cost of constructing an equally desirable substitute (Merriman, 2020; Wu *et al.*, 2022). This approach distinguishes between the Replacement Cost Method and the Reproduction Cost Method, both factoring in depreciation to account for the property's decline over time (Camposinhos & Oliveira, 2019). However, accurate valuation using the cost approach can be challenging when comparable land or materials are not readily available, necessitating continuous improvement in data collection methods and valuation techniques (Camposinhos & Oliveira, 2019).

According to Bishop *et al.* (2020), the cost approach is one of the three primary methods used in property valuation, alongside the income approach and the sales comparison approach. While the cost approach assesses the value of a property by summing the land value and the depreciated value of any improvements, this method is particularly useful when dealing with new or unique properties where comparable sales data may be limited (Fattinnanzi *et al.*, 2020). According to the authors, the underlying principle of the cost approach is the notion of substitution, which posits that a rational buyer would not pay more for a property than the cost to acquire a similar site and construct a similar building, considering depreciation. This approach involves two main steps: estimating the cost to replace or reproduce the improvements and subtracting accrued depreciation from these improvements to derive the depreciated cost. The final step is adding the land value to this depreciated cost to arrive at the property's value (Fattinnanzi *et al.*, 2020).

According to Bartke and Schwarze (2021), literature such as *Real Estate Valuation Theory* supports the practical application of the cost approach in various valuation contexts, emphasizing its reliability in scenarios where properties are new, specialized, or suffer from limited market activity. While the cost approach is also endorsed by valuation standards such as those from the International Valuation Standards Council (IVSC) and the Royal Institution of Chartered Surveyors (RICS), these standards highlight its systematic and logical methodology (Amidu *et al.*, 2021).

Empirical studies have investigated the application and accuracy of the cost approach in various contexts. According to Jia (2019), the cost approach to valuation can provide reliable valuations for new and specialized properties where other methods may fall short, indicating its accuracy and reliability. However, as noted by Gindelsky et al. (2019), while the cost approach is less sensitive to market volatility, it may be less effective in capturing market value for older properties with significant depreciation, highlighting a limitation. Additionally, studies in emerging markets, such as Nigeria, as highlighted by Chiwuzie and Dabara (2021), emphasize the importance of adapting the cost approach to local conditions, including construction cost variations and data availability, underlining its regional applications.

2.2.1. Importance of Depreciation in Cost Approach Valuation

Depreciation, comprising physical, functional, and external factors, plays a crucial role in the cost approach, especially for older buildings (Lorenz *et al.*, 2012; Augustina *et al.*, 2015; Shapiro et al., 2016). Accurate depreciation estimation is vital for ensuring property values align with market realities, particularly for income-producing properties where depreciation factors significantly impact valuation accuracy (Soli Deo, 2015; Arcuri *et al.* 2020). Failure to account for depreciation adequately according to Rammala (2022), can result in inflated valuations and inaccurate assessments of property worth. Conversely, overstating depreciation in cost approach to value can undervalue a property, leading to missed investment opportunities or financial losses (Mert, 2022).

2.2.2 Land and Building Cost Considerations in Cost Approach Valuation

Land value and building costs are critical components in cost approach valuation (Abubakar *et al.*, 2022; Amidu, 2016; Wu *et al.,* 2022). Accurate estimation of these factors is essential but challenging, especially for properties lacking recent sales data or possessing unique characteristics. Inaccuracies in land value and building cost estimation can lead to unreliable property valuations, impacting property buyers, sellers, and investors financially and eroding trust in property valuations (Amidu, 2016; Wu *et al.,* 2022).

2.3 Income-Yielding Property

According to Diala *et al.* (2019), income-yielding properties, also referred to as income-producing properties, are real estate assets that generate regular income for their owners through rental or lease payments, encompassing residential rental units, commercial office spaces, retail centers, industrial properties, and mixed-use developments. According to the authors, the primary characteristic defining these properties is their ability to produce consistent cash flow, rendering them attractive investments for individuals and institutions seeking steady income streams. According to Van Dijk *et al.* (2022), income-yielding properties are typically evaluated based on their income-generating potential rather than their intrinsic or replacement cost, with their value closely tied to their capacity to attract tenants, maintain occupancy, and command competitive rental rates, influenced significantly by factors such as location, property condition, tenant mix, lease terms, and market dynamics.

Numerous empirical studies have examined the performance and valuation of income-yielding properties. For instance, Trinh (2022) analyzed the risk-return profiles of various types of income-yielding properties, concluding that commercial real estate often offers competitive returns compared to other asset classes. Additionally, Shimbo and Sanfelici (2023) delved into the impact of macroeconomic factors on the valuation of income-yielding properties, highlighting the sensitivity of property values to changes in interest rates and economic growth. Furthermore, research by Gamage and Perera (2023) emphasized the significance of accurate income projections and the challenges associated with estimating future cash flows, underscoring the necessity for robust data and sophisticated modeling techniques to enhance valuation accuracy.

2.4. Income-Yielding Property and Cost Approach

According to Sanfelici and Magnani (2023), the valuation of income-yielding properties is a critical aspect of real estate investment, involving the estimation of a property's worth based on its ability to generate income through rentals or leases. One of the primary methods used in property valuation is the cost approach, as mentioned by Baum *et al.* (2021). This method according to the authors, assesses the value of a property by considering the cost to construct a similar structure, minus depreciation, and adding the land value. While both methods are integral to the valuation process, they differ significantly in their approach, applicability, and underlying principles. The cost approach focuses on estimating the cost to replace or reproduce a property, making it suitable for new or unique properties with limited income history, as highlighted by Wyatt (2022). In contrast, the income approach values properties based on their ability to generate future income, making it more applicable for income-yielding properties (Sanfelici & Magnani, 2023). Understanding the distinctions between these methods is crucial for accurately valuing different types of properties and making informed investment decisions in the real estate market.

While the cost approach can provide a valuable benchmark for the upper limit of value, its applicability to income-yielding properties is debatable (Camposinhos & Oliveira, 2019). Critics highlight limitations such as challenges in accurately estimating replacement costs and the approach's inability to fully reflect market forces influencing income generation. For income-yielding properties, the income approach, which directly considers income-generating potential, is generally considered the most reliable valuation method (Shimbo & Sanfelici, 2023). Nonetheless, the cost approach can be used as a supplementary tool, particularly when there is limited market data or for estimating land value (Wyatt, 2022).

2.5 Critical Aspects of Property Valuation Methods in Real Estate Analysis

2.5.1. Accuracy and Reliability of Cost Data in Property Valuation

The accuracy and reliability of cost data in property valuation using the cost approach are paramount, as highlighted by extensive research in the field (Ashworth *et al.,* 2019; Bao *et al.,* 2021). Inaccurate or outdated cost data can lead to significant misjudgments, potentially resulting in overestimation or underestimation of property values, with profound financial implications for stakeholders (Wu *et al.,* 2022). Variations in cost data and depreciation rates underscore the compelling need for an unwavering commitment to data accuracy to maintain trust and confidence in the real estate market.

2.5.2. Depreciation Assessment in Real Estate Valuation

Depreciation assessment stands as a cornerstone of accuracy and reliability in real estate valuation, involving various methods and factors such as property lifespan, economic factors, and technological advancements (Zhang *et al.,* 2021; Lee & Jeong, 2020; Shalaby *et al.,* 2020; Hu & Ma, 2021). Challenges in depreciation assessment, particularly concerning economic obsolescence, highlight the continuous pursuit of precision in this aspect of property valuation.

2.5.3. Relationship Between Income Potential and Applicability of the Cost Approach

The relationship between income potential and the applicability of the cost approach in property valuation has been extensively studied (Tang *et al.,* 2021; Jammeh & Jammeh, 2022). While suitable for properties with low-income potential, the cost approach may undervalue properties with high-income potential, emphasizing the need for alternative valuation methods. This highlights the importance of refining valuation practices to ensure accurate assessments based on property characteristics and income potential.

2.5.4. Accuracy in Estimating Replacement Cost

Precision in estimating replacement costs is crucial for accurate property valuation, considering factors such as construction costs, material availability, and building codes (Onyejiaka *et al.,* 2015; Hachey & Wetherell, 2021). Disregarding inflation or failing to account for industry developments can introduce inaccuracies into the valuation process, underscoring the importance of adopting diverse estimation methods and staying informed about advancements in the field.

2.5.5. Issues in Cost Approach to Value in the Valuation of Income-Yielding Properties

The cost approach poses challenges in valuing income-yielding properties, relying on subjective assumptions and data that may not be readily accessible (Augustina et al., 2015; Camposinhos & Oliveira, 2019). While Estate Surveyors and Valuers have extensively employed the cost approach, concerns regarding its reliability in market value estimations have been raised (Abidoye & Chan, 2018; Camposinhos & Oliveira, 2019). Addressing these issues is crucial for enhancing the transparency and reliability of property valuation in the real estate industry.

In light of these considerations, the motivation to actively contribute to the advancement of replacement cost estimation practices within property valuations evident. By adopting a proactive approach, staying informed about industry developments, and continuously refining estimation techniques, the precision and reliability of property valuations would be enhanced. This commitment aligns with the broader goal of ensuring that stakeholders can confidently rely on property valuations for their decisions, ultimately fostering trust and transparency within the real estate sector.

3. METHODOLOGY

The study employed a survey strategy using questionnaire to collect data from Estate Surveyors and Valuers in Bauchi Metropolis. A convenience sampling technique was used to select participants who were readily accessible and willing to participate. A convenience sampling technique was used because of the exploratory nature of the research, enabling the collection of initial insights efficiently. Out of a total of 38 questionnaires that were distributed to the participants, 30 were retrieved and used for the analysis. The questionnaire focused on the key challenges in applying the cost approach for income-yielding properties in Bauchi Metropolis and how these challenges affected the reliability and accuracy of property valuations. The questionnaire was divided into three sections to address the research questions. Section 1 explored the key challenges in applying the cost approach, aiming to identify the specific difficulties faced by Estate Surveyors and Valuers. Section 2 investigated the strategies or methods that could be employed to enhance the reliability and accuracy of property valuations using the cost approach in Bauchi Metropolis. This section provided insights into potential solutions and best practices. Section 3 delved into the potential implications and benefits of addressing the challenges in the cost approach to valuation for income-yielding properties, exploring the positive outcomes and advantages that could arise from effectively dealing with these challenges. The questionnaire utilized closed-ended questions which employed 5-points Likert scales or multiple-choice options to gather quantitative data, allowing for the measurement of respondents' opinions and perceptions. The 5-point Likert scale used were: SD = Strongly Disagree (1), D = Disagree (2), N = Neutral (3), A = Agree (4), SA = Strongly Agree (5). The data analysis involved the use of descriptive statistics (pls be specific, mention the specific methods that were used) for analyzing closed-ended questions. The Likert scale responses were examined to identify trends and patterns in participants' views. To ensure ethical considerations, participants' confidentiality and anonymity were maintained throughout the study.

4. Data Analysis and Discussion

Table 1: *Demographic Information of Respondents*

Variable	Category	Frequency
Occupation	Estate Surveyor and Valuer	30
Age Range	26-35 years	10
	36-45 years	10
	46-55 years	5
	56 years and above	5
Gender	Male	25
	Female	5
Years of Experience	Less than 5 years	5
	5-10 years	10
	11-15 years	5
	16-20 years	5
	More than 20 years	5
Educational Qualifications	Bachelor's degree/HND	20
	Master's degree	5
	Professional certification (e.g., RSV, NIESV)	30
Employment Status	Employed in private sector	8
	Employed in public sector	17
	Self-employed	5
Sector of Work	Real estate consultancy firm	10
	Property development company	5
	Government agency	15
Location of Work	Bauchi Metropolis, Nigeria	30

The dataset in Table 1 above comprises 30 respondents, consisting of Estate Surveyors and Valuers, which offers a comprehensive perspective on the research topic. The age distribution indicates a diverse range of respondents, with the majority falling between 26-45 years old, ensuring a blend of youthful energy and seasoned expertise in the study. In terms of gender, the higher representation of male respondents (25 out of 30) could offer insights into gender dynamics within the profession, while the smaller female representation (5 out of 30) may highlight areas for potential gender-focused research or initiatives to promote diversity. Respondents exhibit varied years of experience, with the most common category being 5-10 years, suggesting a balance between experienced professionals and those relatively new to the field. This mix can provide valuable insights into both established practices and emerging trends or challenges. The predominance of respondents with Bachelor's degrees/HND (25 out of 30) ensures a solid educational foundation for the study, while the inclusion of respondents with Master's degrees (5 out of 30) could offer nuanced perspectives and deeper insights into complex issues. The fact that all respondents possess a professional certification (e.g., RSV or NIESV) (30 out of 30) ensures a high level of expertise and credibility in the data collected. This enhances the reliability and validity of the findings, contributing to the robustness of the research outcomes. The majority of respondents being employed in the public sector (17 out of 30) could provide insights into government policies and regulations affecting property valuation, while the representation from the private sector (8 out of 30) and self-employed individuals (5 out of 30) ensures a comprehensive understanding of industry practices and challenges across different employment contexts. Across various sectors of work, respondents are distributed evenly, with 10 respondents each in real estate consultancy firms and government agencies, and 5 in property development companies. This ensures a holistic view of the real estate industry in Bauchi Metropolis, Nigeria, encompassing different stakeholders and perspectives. All respondents working in Bauchi Metropolis, Nigeria, ensures a focused study area, facilitating in-depth analysis and targeted recommendations specific to the local context. This geographical homogeneity minimizes confounding factors and enhances the applicability of the research findings to the study area.

Generally, these demographic characteristics not only provide insights into the composition of the respondent pool but also offer several advantages, including a diverse range of perspectives, a high level of professional expertise, and a focused study area, all of which contribute to the richness and validity of the research outcomes.

Table 2: *Challenges in applying the cost approach for income-yielding properties*

QUESTIONS	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)	Mean Rating
Construction Cost Data	0 (0%)	6 (20.0%)	9 (30.0%)	9 (30.0%)	6 (20.0%)	3.23
Reliable Income Data	0 (0%)	4 (13.3%)	7 (23.3%)	12 (40.0%)	7 (23.3%)	3.57
Depreciation Rates	0 (0%)	5 (16.7%)	9 (30.0%)	9 (30.0%)	7 (23.3%)	3.48
Standardized Guidelines	0 (0%)	4 (13.3%)	8 (26.7%)	10 (33.3%)	8 (26.7%)	3.51
Limitations of Cost Approach	0 (0%)	6 (20.0%)	9 (30.0%)	8 (26.7%)	7 (23.3%)	3.43

Table 2 presents key challenges in applying the cost approach for income-yielding properties in Bauchi Metropolis. The key challenge identified by respondents is the difficulty in obtaining reliable construction cost data. Thirty percent (30%) of the participants agreed, with an additional 20% strongly agreeing that this is a prominent challenge. This finding is consistent with the research by Camposinho and Oloveira (2019), who emphasized the difficulties in accessing accurate and up-to-date construction cost data. The insufficient availability of data hampers the accuracy of cost-based valuations, as inaccurate cost estimates can lead to overvaluation or undervaluation of properties.

Another significant challenge is the reliability of income data, with 40% of respondents agreeing. The mean rating for this challenge is notably higher at 3.57. This suggests that a substantial portion of respondents had significant concerns regarding the availability and accuracy of income data for income-yielding properties. Accurate income data is essential for estimating property values, especially when income-based approaches are used within the cost approach. This finding emphasizes the importance of ensuring the reliability of income data through improved data collection methodologies and industry collaboration. Inaccurate income data can lead to erroneous property valuations, particularly when income-based approaches are used as a component of the cost approach.

Although no dominant response emerged, 30% of participants agreed that challenges exist in determining depreciation rates. The mean rating for this challenge is 3.48, indicating that considerable proportion of respondents perceived challenges in this aspect. This finding aligns with the research by Wu *et al.* (2022), which highlighted the subjectivity and complexity involved in determining accurate depreciation rates. Challenges related to determining depreciation rates can lead to uncertainties and potential biases in property valuations using the cost approach. The lack of consensus in determining depreciation rates underscores the need for robust methodologies and professional expertise to mitigate potential inaccuracies in cost-based valuations. Further investigation is needed to explore the specific nature of these challenges and their implications for property valuations.

A significant number amounting to 33.3% of respondents agreed that challenges exist in applying standardized guidelines. The mean rating for this challenge is 3.51, indicating that a notable proportion of respondents recognized the inconsistencies in implementing standardized guidelines in the context of Bauchi Metropolis. This finding is consistent with the observations made by Nada *et al.* (2022), who discussed the complexities of adhering to standardized practices due to variations in local market conditions, regulatory frameworks, and professional judgment. Lack of uniformity in valuation practices can hinder the reliability and comparability of property valuations, potentially leading to discrepancies in market assessments and transactions. Striving for greater standardization and promoting professional training can help address these challenges and improve the reliability of cost-based valuations.

Lastly, a significant proportion (30%) of respondents agreed that there are limitations to the cost approach, with a mean rating of 3.43. While there was no dominant response among the respondents, a notable proportion acknowledged certain drawbacks or constraints associated with the cost approach. This aligns with existing literature recognizing the inherent limitations of the cost approach, such as inability to capture market fluctuations and intangible factors affecting property values (Nada *et al.*2022). Further research is needed to delve into the specific limitations identified by the participants. Acknowledging these limitations is crucial to ensure the cost approach is appropriately applied, and its results are interpreted in conjunction with other valuation methods.

Table 3: *Strategies employed to enhance the reliability and accuracy of property valuation*

QUESTIONS	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)	Mean Rating
Property Inspections and Evaluations	0 (0%)	2 (6.7%)	5 (16.7%)	14 (46.7%)	9 (30.0%)	3.92
Using up-to-date and accurate construction cost data	0 (0%)	2 (6.7%)	4 (13.3%)	11 (36.7%)	13 (43.3%)	4.15
Incorporating market research and analysis	0 (0%)	1 (3.3%)	4 (13.3%)	15 (50.0%)	10 (33.3%)	3.55
Updating And Reviewing Valuation Methodologies and Guidelines	0 (0%)	1 (3.3%)	6 (20.0%)	14 (46.7%)	9 (30.0%)	3.92

Strategies employed to enhance the reliability and accuracy of property valuation are presented in Table 3. The results indicates that thorough property inspections and evaluations is a key strategy which was supported by the majority of respondents (76.7%). This finding is consistent with previous studies (Augustina *et al*., 2015), that highlights the importance of thorough inspections in assessing the physical condition, features, and amenities of a property. By conducting comprehensive inspections, valuers can gain valuable insights into the property's unique characteristics and deficiencies that may impact its value. This strategy contributes to more accurate cost estimation and enables valuers to provide reliable valuations.

The significance of using up-to-date and accurate construction cost data is recognized by a significant proportion of respondents (80.0%). Access to reliable construction cost databases, industry publications, and professional networks can help valuers obtain accurate data, ensuring that cost estimates align with current market conditions, material prices, and labor costs. This finding aligns with existing literature (Abidoye & Chan, 2018), that emphasizes the importance of reliable cost data for accurate valuations. By utilizing up-to-date construction cost data, valuers can minimize errors and provide more reliable and accurate valuations.

Incorporating market research and analysis, including comparable property analysis, is considered a valuable strategy by the majority of respondents (83.3%). This approach involves examining recent sales data, rental rates, vacancy rates, and market trends to understand the property's position within the market. Comparable property analysis allows valuers to make informed adjustments based on similar properties, improving the accuracy of the cost approach. This finding is supported by existing literature (Tengxiang *et al.*, 2021), that highlights the importance of market research and comparable property analysis in determining accurate property values. By incorporating market research and analysis, valuers can ensure that their valuations reflect current market realities and provide reliable estimates.

Applying appropriate depreciation rates based on property age, condition, and market trends is regarded as essential by a considerable percentage of respondents (70.0%). This strategy involves considering factors such as physical deterioration, functional obsolescence, and external influences that may impact depreciation. By utilizing industry-accepted depreciation schedules, conducting market research, and considering expert opinions, valuers can make accurate adjustments to the property's value. This finding aligns with existing literature (Augustina *et al*., 2015), that emphasizes the significance of accurate depreciation rates in cost-based valuations. By accounting for relevant factors, valuers can provide more accurate valuations that reflect the property's true value.

Regularly updating and reviewing valuation methodologies and guidelines was supported by the majority of respondents (76.7%). This strategy emphasizes the need for valuers to stay informed about changes in valuation standards, regulations, and best practices. By regularly updating their methodologies and guidelines, valuers can ensure that their approaches align with evolving market conditions, enhancing the reliability and consistency of cost-based valuations. This finding is consistent with the literature (Abidoye & Chan, 2018), that emphasizes the importance of staying abreast of changes in valuation standards and best practices. Regular updates enable valuers to provide reliable valuations that meet the current industry requirements.

In general, the findings indicate that employing strategies such as thorough property inspections, using up-to-date and accurate construction cost data, incorporating market research and analysis, applying appropriate depreciation rates, and regularly updating valuation methodologies and guidelines can enhance the reliability and accuracy of property valuations using the cost approach for income-yielding properties in Bauchi Metropolis. These strategies align with existing literature and industry best practices, emphasizing the importance of comprehensive approaches to ensure reliable and accurate valuations.

Table 4: *Potential Implications and Benefits of addressing the challenges in the cost approach for income-yielding properties*

QUESTIONS	**1 (SD)**	**2 (D)**	**3 (N)**	**4 (A)**	**5 (SA)**
Addressing Challenges in the Cost Approach	2 (6.7%)	4 (13.3%)	6 (20.0%)	12 (40.0%)	6 (20.0%)
Potential Implications					
Response	**Frequency**		**Percentage**		
Improved accuracy	25		83.3%		
Increased transparency	20		66.7%		
Enhanced decision-making	18		60.0%		
Reduced disputes	12		40.0%		
Enhanced market efficiency and liquidity	15		50.0%		
Potential Benefits					
Response	**Frequency**		**Percentage**		
Improved professional reputation	23		76.7%		
Increased demand for valuation services	17		56.7%		
Ability to provide more accurate valuations	25		83.3%		
Enhanced career opportunities and growth	14		46.7%		
Improved relationships with clients and stakeholders	21		70.0%		

Potential implications and benefits of addressing the challenges in the cost approach for income-yielding properties were explored and the results is shown on Table 4. The result reveals significant implications and benefits associated with addressing the challenges in the cost approach for income-yielding properties in Bauchi Metropolis. The findings indicate that there is recognition among professionals of the potential for improvement in the reliability and accuracy of property valuations by addressing these challenges. This aligns with previous studies that emphasize the importance of overcoming challenges in property valuation methodologies. These are discussed thus:

4.3.1 Addressing Challenges in Cost Approach:

The majority of respondents (40.0%) agreed that addressing the challenges in the cost approach for income-yielding properties in Bauchi Metropolis can enhance the reliability and accuracy of property valuations. An equal number of respondents (20.0%) strongly agreed and were neutral on the effectiveness of addressing the challenges. A smaller proportion of respondents disagreed (13.3%) while (6.7%) strongly disagree with the idea of addressing the challenges. This indicates that there is recognition among professionals of the potential for improvement in the reliability and accuracy of property valuations. This finding aligns with previous studies that highlight the importance of overcoming challenges in property valuation methodologies (Augustina *et al*., 2015). By addressing these challenges, valuers can improve the robustness and credibility of their valuation models, leading to more accurate assessments of property values.

4.3.2 Potential Implications

The potential implications of addressing the challenges were positively received by the respondents. Majority of respondents (83.3%) believed that addressing the challenges would lead to improved accuracy of property valuations. This finding is consistent with literature that recognizes the direct impact of addressing challenges on the accuracy and precision of valuations (Augustina *et al*., 2015). Overcoming these challenges allows for more reliable estimations of property values, which is essential for making informed investment and financing decisions. Furthermore, respondents acknowledged other potential benefits of addressing the challenges, such as increased transparency (66.7%), enhanced decision-making (60.0%), and improved market efficiency and liquidity (50.0%). These findings align with the existing literature, which emphasizes that addressing challenges in property valuation methodologies can contribute to a more transparent and efficient real estate market (Abidoye & Chan, 2018). By enhancing transparency, decision-making processes can become more informed and efficient, contributing to a more liquid real estate market.

4.3.3 Potential Benefits

For property valuers, addressing the challenges in the cost approach offers several benefits. Table 3 shows that (83.3%) of respondents believed that addressing the challenges would enable property valuers to provide more accurate valuations. This is essential for maintaining professional standards and credibility. Additionally, improved professional reputation (76.7%) and improved relationships with clients and stakeholders (70.0%) were also perceived as significant benefits. These benefits can lead to increased client satisfaction, repeat business, and referrals, enhancing the valuers' professional standing and market competitiveness. This finding is supported by literature that recognizes the importance of accuracy and precision in valuations for valuers' professional reputation and credibility (Abidoye & Chan, 2018). By addressing the challenges, valuers can enhance their expertise and deliver more reliable valuation services, leading to improved professional standing.

5. CONCLUSION

In conclusion, this study delved into the challenges associated with applying the cost approach to value income-yielding properties in Bauchi Metropolis, Nigeria, while also investigating strategies to enhance its reliability and accuracy, along with the potential benefits of overcoming these obstacles. Key challenges identified encompassed difficulties in obtaining reliable data (construction costs and income), determining depreciation rates, applying standardized guidelines, and acknowledging inherent limitations of the cost approach itself, emphasizing the necessity for robust methodologies and professional expertise to ensure precise assessments.

The findings suggest that a comprehensive approach, including thorough property inspections, utilizing up-to-date construction cost data, incorporating market research and analysis, applying appropriate depreciation rates, and regularly updating valuation methodologies, can significantly bolster the effectiveness of the cost approach. These strategies align with established best practices and contribute to more dependable and accurate valuations.

Furthermore, addressing these challenges offers multiple benefits, as professionals recognized the potential for improved valuation accuracy and reliability. Additionally, broader benefits for the real estate market were identified, including increased transparency, enhanced decision-making, and improved market efficiency and liquidity. Valuers can also benefit from enhanced professional reputation, better client relationships, and heightened market competitiveness.

However, it's crucial to acknowledge the limitations posed by the use of a non-probability sampling technique (convenience sampling), which restricts the generalizability of the findings to the entire population of Estate Surveyors and Valuers in Bauchi Metropolis. Future research could delve deeper into these limitations and explore alternative valuation methods suitable for income-yielding properties in Bauchi Metropolis, while also investigating the specific limitations of the cost approach identified by participants.

In summary, this study underscores the imperative of addressing challenges in the cost approach to establish a more robust and reliable property valuation system in Bauchi Metropolis. By implementing the recommendations and fostering collaboration among stakeholders, the real estate market can realize benefits such as increased transparency, efficiency, and informed decision-making.

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