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The Investment and Valuation Nexus: exploring the perceptions of Nigerian real estate valuation professionals

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Abstract

Purpose- Despite the importance of investment fundamentals in determining commercial property value, there is a knowledge gap in terms of how investment factors are integrated into the valuation process in developing markets, particularly in Africa. This study investigates how property valuers in Nigeria perceive the investment-valuation nexus, and how this influences their valuation processes and output.
Design/Methodology/Approach: Semi-structured interviews were deployed to 14 professional property valuers across Nigeria. The discussion from the interview transcripts was subjected to thematic and content analysis using the K-mean clustering learning algorithm and Latent Dirichlet Allocation topic modelling.
Findings: Key findings indicate that valuers consider a range of investment factors, including market conditions, location, and property features. However, the study highlights a potential gap in the consideration of cash flow analysis and tenant-related factors. The findings suggest that a more comprehensive approach to valuation is necessary to enhance the accuracy and reliability of property valuations in Nigeria.
Practical Implications: The findings have significant implications for Nigeria and other emerging African markets considering the high volume of property investment capital received by the countries. With key investment fundamentals not being sufficiently captured in the valuation process in line with best practices, current valuation output may be omitting important factors thereby undermining their accuracy and reliability.
Originality: This study provides alternative perspectives on the investment-valuation relationship through the unique lenses of key stakeholders (valuers) in the context of developing countries. This context is important, given that these economies are usually perceived to be less sophisticated and often present significant challenges around standardisation and bias. Secondly, the study provides some insights into the heterogeneity associated with the valuation of assets in highly heterogeneous markets such as Nigeria. Thirdly, the study adopts the K-mean clustering learning algorithm and Latent Dirichlet Allocation topic modelling approaches which have previously not been applied to property valuation.

Keywords: Property valuation, investment, k-mean clustering learning algorithm, Latent Dirichlet Allocation topic modelling, Nigeria

Background and Introduction

The global and national economies are underpinned by financial systems that rely on property values. Private and institutional investors such as financial institutions, insurance companies, and pension funds invest in various real estate, and they rely on accurate and reliable property valuation to make important investment decisions. The evolving link between finance capital, investment and valuation processes is well established in the literature. Increased sophistication of investors and regulatory requirements have led to changes in valuation processes and reporting, as evidenced by the need to consider investment values, and more recently, sustainability features (Baum et al, 2021). However, there are gaps in understanding how valuers perceive investment considerations and how these influence the valuation process and reporting, particularly in the context of developing economies such as Nigeria. Enever et al (2014) highlight the importance of a robust understanding of property valuation and its link to the global economy. This paper, therefore, contributes to the knowledge in this area by exploring the question: how do property valuers in Nigeria perceive the investment and valuation nexus and how is this reflected in the valuation processes?

A plethora of literature highlights the influence and impact of various stakeholders in property valuation. Clients and professionals may aim to pursue and protect their personal or professional interests or opportunism in business relationships (see Dawson et al., 2010), and the party with more power in a social relationship is likely to influence the “weaker” party (French and Raven, 1959). The literature on stakeholders’ influence on valuation mainly focuses on clients (Levy and Schuck, 1999, 2005), with insinuations that the clients are the villains, particularly in a developing country context (Cheloti and Mooya, 2021; Gbadegesin et al., 2023). However, the valuer has to determine the appropriate approach, method and model to estimate the value of an asset (Abidoye and Chan, 2016; Vos and Have, 1996); valuers are, therefore, solely responsible and professionally liable for the valuation process and reporting. Further insight into their role in determining property values and their perceptions about this would be a valuable contribution to knowledge.

Scholars have also argued that property valuation processes are inefficient (Oladiran and Dickins, 2024; Poleg, 2020; Saiz, 2020). For instance, valuers’ assumptions, judgments, and analysis can be influenced by their biases, experience, and data availability (Howell and Korver-Glenn, 2018; Perry et al., 2018) and the high level of subjectivity can lead to high variance in values (Klamer et al., 2017; McAllister et al., 2003). These issues have national and global economic implications. There are gaps in understanding how stakeholders perceive the link between property investment and the valuation process, particularly in the context of highly heterogeneous and fragmented geopolitical and socioeconomic nations such as Nigeria. This paper therefore provides alternative insights by exploring the perception of an important stakeholder group in the valuation process (valuers), thereby contributing to the broader debate on factors that influence property valuation.

A huge proportion of real estate investment is concentrated in developed economies: $174.50 tn in Europe, $145.90 tn in the American region, and Asian markets ($266.20 tn); however, a considerable amount of real estate capital is spread around other world regions (Statista, 2024c). Within these regions, some countries have large market shares in capital volume, transactions, market size and investment values. The African real estate market value is approximately $16.60 tn and the Nigerian share is 15%, i.e., $2.42 tn (Statista, 2024b). Therefore, Nigeria is an important real estate investment market in Africa.

The real estate sector in Nigeria is experiencing rapid growth and development with an estimated 7.32% annual growth rate (Statista, 2024a), offering enormous opportunities for local and international investors. The real estate investment growth and positive market sentiments are driven by population growth, rapid urbanisation, improvement in financial services and technological advancement (Statsmetrics, 2024). The market is expected to experience further advancements with the population expected to reach 300 million by 2050 (at a growth rate of 2.59%) with an urbanisation growth rate of 4.23% (UN-Habitat, 2023). There are also enormous investment opportunities to meet growing demand resulting from the increase in business activities, luxury housing, hospitality, infrastructural development and public-private partnerships (Statsmetrics, 2024). However, there are several geopolitical and economic risks. For instance, the country has a track record of high macroeconomic volatility, evidenced by high inflation and currency exchange rate volatility (The World Bank, 2024). There are also security challenges which have led to the country being ranked 8th on the Global Terrorism Index (Institute for Economics and Peace, 2024b). Furthermore, Nigeria is ranked 64 (low category) on the JLL transparency index (JLL and LaSalle, 2024) which demonstrates the lack of market data and information required to support the operations, growth, and development of the market. These issues are further exacerbated by the high heterogeneity and fragmented nature of the geopolitical and socioeconomic landscape.

Valuation is a key element of risk mitigation in property investment, even more so in highly risky investment environments such as Nigeria. However, valuation as a risk mitigation strategy for property investment is only effective to the extent that it produces accurate estimates of value. There is extensive literature on property valuation in the Nigerian context with strands on client influence (Adilieme et al., 2023), the implication of current trends (Aluko, 2007), the role of knowledge and expert perceptions (Amidu et al., 2019), lack of market data (Ashaolu and Olaniran, 2016) and valuation processes (Abidoye and Chan, 2016). Valuers' perspectives on the investment-valuation nexus are unexplored. Abidoye and Chan (2016) provide valuable insights into the knowledge of the general valuation processes in Nigeria; however, they do not capture the perspectives on investment. This, therefore, leaves a knowledge gap regarding valuers' perceptions of the relationship between real estate valuation and property investment, the investment factors that are integrated, and how these are integrated into the valuation processes.

This study investigates how property valuers in Nigeria perceive the investment-valuation nexus, and how this influences their valuation processes and output. The focus on Nigeria provides unique insights into the perception of the investment-valuation nexus in a developing economy with highly heterogeneous and fragmented geopolitical and socioeconomic landscapes. We administered semi-structured interviews to property valuers and the data were analysed a k-means unsupervised learning algorithm and Latent Dirichlet Allocation topic modelling. Our findings show that Nigerian property valuers recognise the significance of investment fundamentals such as market conditions, location, and property features. However, a notable gap exists in the consideration of cash flow analysis and tenant-related factors. Failure to consider the underlying financial performance and future income potential may lead to valuations that do not sufficiently reflect the property value, thus raising questions about reliability. Furthermore, limited, and insufficient references to risk assessment and cashflow factors such as the lease terms, and covenant strength can lead to mispricing, suboptimal investment decisions, and increased risk for both property owners and lenders with significant economic and political consequences (Duca et al., 2011; Duca, 2013). These can further lead to job losses, credit squeezing, and a significant decline in the funding of critical infrastructure such as roads and schools.

This study contributes to the broader literature on valuation in developing countries. This context is important, given that these economies are usually perceived to be less sophisticated and often present significant challenges around standardisation and bias. These alternate perspectives also advance the debates on the challenges of property valuation beyond previously researched issues including data availability (Ashaolu and Olaniran, 2016), client influence (Adilieme et al., 2023) and expertise knowledge (Amidu et al., 2019). Furthermore, it highlights the need for the knowledge and skills of valuers to be updated through continuous professional development and training programmes. By emphasising the importance of investment considerations and providing practical tools and techniques, valuers in Nigeria can improve the quality of their valuations and contribute to a more robust and transparent global real estate ecosystem.

Relevant Literature

The Real Estate Investment and Valuation Nexus

The real estate investment and valuation link is being redefined by the evolving nature of regulatory requirements and increased sophistication of investors, evidenced by an increasing desire for investment values and sustainability features to be reflected in the valuation process and output (Baum et al., 2021). Investment in real estate is different from other forms of investment, mainly because of the underlying asset's fixed geographical location. It involves a complex interplay of a wide range of factors that must be carefully considered. The valuation process, therefore, attempts to link the potential risk and return on the property within the context of a relatively unpredictable future (time). The trade-off between risk and returns is, therefore, a key consideration, with properties with higher risk propensities generally requiring higher potential returns to attract investors.

One of the key issues associated with effectively balancing risk and returns considerations in valuation is accounting for the wide range of factors and variables. Macroeconomic factors include urbanisation, population growth, market volatility, economic stability and currency fluctuations (Byrne and Lee, 2001; Cheloti and Mooya, 2021; Fine and Country, 2023; Okorji and Brisibe, 2024). Government policies, zoning regulations, tax incentives, property development laws and the legal framework are also important in real estate investment, and these vary across different geographic territories and jurisdictions with the potential to impact market value when they interfere with market forces (Baum et al., 2017; Lansar Aghaji and Co., 2019; Cheloti and Mooya, 2021). It should be noted that macro factors may not be uniform within countries and failure to account for these intra-country variations can introduce risks that the valuers and investors may be unaware of. At sub-national levels, the clarity and enforcement of property rights (Yinusa, 2023), Environmental factors, including climate risks such as flooding or wildfires (Nagel, 2023) and cultural attitudes towards property ownership, investment, and community (Rakesh, 2023) can also influence demand and, consequently, property values. Another factor that further complicates the valuation process is the fragmented nature of property markets and the prevalence of informal transactions, making it challenging for investors to obtain reliable market data and assess property values accurately (Anim-Odame, 2018).

The highlighted challenges are further exacerbated by the subjectivity that is associated with the valuation process; thus, valuation processes, approaches, methods and models can vary significantly. For instance, the income approach to valuation is core to valuing properties for investment purposes. One of the key variables in valuation is the yield (YP). The YP (Years Purchase) is typically used to reflect the time value of money (i.e. present value of £1/$1) and by extension, the opportunity cost of capital to the investors. This encapsulates the evaluation of the potential risk and returns associated with an asset. Baum et al. (2017) highlight that with the internationalisation of real estate markets, investors have become more cautious, and the services of qualified professional valuers are becoming more important with changes to geopolitical risk, economic forces, social structure, and the advancement of digital technology. Thus, the determination and adjustment of the YP have become an essential aspect of property valuation for investment purposes. Additionally, Harvard (2000) points out that increasing diversity in property investments complicates traditional valuation techniques like the Adjusted Rent Yield (ARY). The ARY approach relies on comparable transactions, which can be scarce in heterogeneous markets. This limitation necessitates the development of more adaptable valuation methods that account for unique property attributes and local market conditions.

Due to the wide range of valuation variables, approaches, methods, and models, and the subjectivity and bias associated with the process, it is not uncommon for valuers to arrive at different outcomes, and in some cases, high variance in values (Klamer et al., 2017; McAllister et al., 2003). Regardless, investors still require a clear understanding of the political landscape to mitigate risks associated with property investments (Okorji and Brisibe, 2024). Thus, Enever et al (2014) highlight the importance of a robust understanding of property valuation and its link to the global economy, suggesting that improving knowledge of this process is important. Our study, therefore, makes a valuable contribution to knowledge, by providing critical insights and reflections on the valuation process, through the lenses of property valuers.

Valuers: the Core Stakeholders in Valuation

Fassin (2008) highlights the importance of careful and strategic stakeholder selection for studies on dynamic phenomena and practices and then introduces a tripartite stakeholder classification: real stakeholders, stakewatchers, and stakekeepers. Real stakeholders are those with a direct stake in a process (i.e. valuers), while stakewatchers are those with some interest but an indirect stake in the process (i.e. clients such as banks and investors) and stakekeepers are the regulators and professional bodies. Stakekeepers are particularly important, considering the importance of valuation to national and global stability. Valuation is regulated by several national and international professional bodies around the world that provide resources, continued professional development (CDP), accreditation of appraisers and the publication of valuation standards (Oladiran and Dickins, 2024). These include the International Valuation Standards Council (IVSC), the Royal Institution of Chartered Surveyors (RICS) and the Appraisal Foundation.

In the context of the investment and valuation nexus, stakewatchers' perspectives are important, and the interplay between stakewatchers and core stakeholders is important. Understanding local dynamics is essential for valuers working with diverse investor groups (Zhang, 2016). Investors and valuers sometimes aim to protect their interests. The literature on stakewatchers' influence on valuation is enormous, sometimes with insinuations that stakewatchers' influence might be negative (Cheloti and Mooya, 2021; Gbadegesin et al., 2023). However, valuers are the core stakeholders because they are solely responsible and professionally liable for the valuation process and reporting based on their training, knowledge, experience, and certification (Shapiro et al., 2012). Due to the imperfect, heterogeneous and complex nature of real estate, clients often commission valuers with the expectation that they will value the property and report an accurate value which the clients typically rely on to make important economic and financial decisions (Taffese, 2007). Therefore, an inaccurate figure can be misleading, causing the client to record losses and possibly leading to bankruptcy in the case of massive discrepancies (Abidoye and Chan, 2016). The multi-sourced and rich valuation knowledge of a property valuer as well as the level of exposure can significantly impact the quality and output of valuation (Amidu et al., 2019; Pagourtzi et al., 2023). This highlights the need to evaluate valuers' practices and establish their alignment with best practices.

Property valuers adopt different methods when valuing properties, depending on the purpose of the valuation, the information available and the use of the subject property (Abidoye and Chan, 2016; Vos and Have, 1996). Socioeconomic factors and socio-cultural factors in a country influence the level of sophistication in the property industry and practice. Pagourtzi et al. (2023) classifies property valuation methods as traditional and advanced. The traditional methods typically rely on direct comparison of a range of observations through which the valuer arrives at the estimated value of a property. These include comparison, investment/income, profits/accounts, residual/development, and cost/contractors. The comparison, investment and cost methods are deemed to be the most popular approaches (French, 2004; Jenkins, 2000), although the comparison method is more widely adopted globally (Bonissone and Cheetham, 1998; Kauko et al., 2002). These traditional methods however have problems such as subjectivity (Kauko et al., 2002; Paris, 2008), imprecision and inaccuracy (Ogunba, 2004; Shapiro et al., 2012; Zurada et al., 2006) and sometimes do not reflect the thinking process of property market players (Bagnoli and Smith, 1998). More advanced valuation approaches including autoregressive integrated moving averages (ARIMA), fuzzy logic (FL), artificial neural networks (ANN) and hedonic pricing models (HPM) have been used to produce quicker, more reliable and accurate valuation figures (Abidoye and Chan, 2016; Waziri, 2010). These advanced approaches have been adopted in several markets globally; however, due to their complexities, data availability and technological requirements, they are not yet well established in developing real estate markets such as Nigeria. The empirical design in this study is, therefore, framed around the traditional approaches to property valuation, particularly the comparison and investment methods.

Amidu et al (2019) further argue that factors like the valuers' age, gender, experience, and educational and professional qualification are important in the valuation process. It is therefore important to probe valuers' approaches to property valuation and evaluate their perspectives on the valuation-investment nexus. This paper therefore makes a valuable contribution by probing these issues.

Property Valuation and Investment Considerations in the Nigerian Context

The real estate sector in Nigeria is on a growth trajectory and economic and demographic indicators suggest that this trend is likely to continue (Statista, 2024a; Statsmetrics, 2024; UN Habitat, 2023), despite market volatility, insecurity and transparency (Institute for Economics and Peace, 2024a; JLL and LaSalle, 2024; The World Bank, 2024). There are 36 states (with individual legislative apparatus) and 6 geo-political zones with varying political party affiliations and economic capabilities. In addition to this complexity, Nigeria has an administrative capital – Abuja; however, Lagos is perceived as the commercial capital with most multinational companies; and institutions headquartered in Lagos. Data from the Nigerian Bureau of Statistics reveals a wide disparity in the macroeconomic indicators such as inflation rate and income levels across the states. Therefore, beyond the obvious impact of these variations on property values in different parts of the country, there is a chance that the valuation practice might also vary to account for local market requirements and practices. To the best of our knowledge, this perspective has not been studied; our study, therefore, contributes to the literature by investigating the valuation and investment nexus based on a fair geographical spread of respondents across the country. This approach enables us to understand a wider spectrum of valuation process-specific risks that should be spotlighted and investigated further in addition to the macro and micro risks. It will also be valuable to understand the extent to which property-specific risks such as the tenants' covenant strength, lease length, rent-free, break clauses etc integrated into property valuations in Nigeria. A competent valuer should be aware of all the factors that are unique to a market and interpret them to arrive at accurate valuations (Baum et al., 2017), and knowledge is an integral aspect of professional valuation practice (Amidu et al., 2019).

According to Anim-Odame (2018), Lansar Aghaji and Co. (2019), and Cheloti and Mooya, (2021), cultural factors play a significant role in the property valuation process in many developing economies, including Nigeria. These include trust and credibility, informal markets, socioeconomic factors, and data scarcity. There is often distrust towards formal valuation processes due to historical corruption and lack of transparency. This distrust can lead to inaccurate valuation, as stakeholders may not fully trust the valuation outcomes (Anim-Odame, 2018; Cheloti and Mooya, 2021). A significant portion of property transactions in Nigeria occurs in informal markets where traditional valuation methods may not apply. The dependence on informal agreements can distort market perceptions and valuations, complicating the valuation process (Anim-Odame, 2018; Cheloti and Mooya, 2021). Cultural attitudes towards land ownership, inheritance, and communal land use significantly influence property values. In Nigeria, land is often viewed as a communal resource, which can affect individual property rights and valuation practices (Lansar Aghaji and Co., 2019). The lack of reliable data and market information in developing economies hinders accurate property valuation. Valuers often rely on personal networks and unverified evidence, which can introduce biases and inaccuracies in the valuation process (Anim-Odame, 2018).

There is an extensive volume of literature on property valuation in the Nigerian context with strands on client influence (Adilieme et al., 2023), the implication of current trends (Aluko, 2007), the role of knowledge and expert perceptions (Amidu et al., 2019), the lack of market data (Ashaolu and Olaniran, 2016) and valuation processes (Abidoye and Chan, 2016). However, no strand of literature captures the key investment considerations of valuers. For instance, Abidoye and Chan (2016) provide a useful contribution to the knowledge of the general valuation processes in Nigeria; however, they do not capture the investment considerations. This, therefore, leaves a knowledge gap in terms of valuers' perceptions about the relationship between real estate valuation and property investment, investment factors that are accounted for, and how they are integrated into the valuation processes.

This study therefore makes significant theoretical, contextual and practical contributions to the broader and Nigerian-specific literature on property valuation by addressing critical knowledge gaps. It builds on previous studies and provides novel insights into the investment considerations that are integrated into valuation practices. By exploring the perceptions of valuers on investment factors, the variables considered and the knowledge around this topic, the paper highlights the interplay of investment and valuation which is not well established in the literature on valuation in Nigeria. It also provides insight based on a fair spread across the country, responding to the often-overlooked heterogeneity within Nigeria's property valuation landscape.

Research Methodology

Research design

Various methods have been adopted to study property valuers' perceptions and behaviours in previous studies: qualitative methods (Levy and Schuck, 1999, 2005), quantitative methods (Achua et al., 2015; Małkowska et al., 2019) and mixed methods (Nwuba et al., 2015). Although quantitative methods appear to be the most widely used approach (Adilieme et al., 2023), they have been criticised because they limit the depth of understanding of factors that underpin a complex phenomenon like valuation (Levy, 2006). Exploring cognitive processes from experts and professionals is best implemented through deep engagement with the individuals concerned (Amidu et al., 2019; Sparrow, 1998). Exploratory research, therefore, allows the researcher to generate a wide range of categories of themes through which the researcher can establish the significance of the themes to the overall aim of the research (Elman et al., 2020; Sapsford and Jupp, 1996).

Although exploratory research can either be qualitative or quantitative, this research requires the collection of opinions, thoughts, and perspectives, obtained through open-ended questions. The research methodology draws on qualitative data which is better suited for in-depth engagement and, thus typically adopted for exploratory and descriptive studies (Glaser, 1978; Strauss and Corbin, 1998). It entails a systematic approach to developing substantial theories to explain the social phenomenon as experienced by a group of subjects interacting in a particular context. Qualitative opinions involving detailed responses and feedback from human elements will provide in-depth findings that are required to answer the research questions. The empirical exercises involve three key steps as shown in Figure 3.1.

[Insert Figure 3.1 here]

Data collection

The main population in the context of the study are real estate professionals practising property valuation in Nigeria. Purposive sampling techniques were adopted, and semi-structured interviews were deployed to 14 professional property valuers across Nigeria. Interview participants were selected using a non-probabilistic purposive sampling approach, primarily to aid the sample selection of professionals with at least 10 years of property valuation experience. This is important in establishing that the responses provided reflect a reasonable length of experience and sufficient knowledge of the local real estate market. Participants were also restricted to registered members of the Nigeria Institution of Estate Surveyors and Valuers (NIESV) and registration with the Estate Surveyors and Valuers Registration Board of Nigeria (ESVARBON)- ensuring that they were affiliated with the professional and regulatory board for property valuation practice in Nigeria. The interviews were conducted online using Google Meet, with each lasting approximately one hour. This mode of interviews provides the researcher with the benefits of a face-to-face setting with visual access, whilst also having the added benefit of cost-saving and flexibility (Hanna, 2012).

Although the general population size is large, the qualitative research technique adopted requires a smaller sample size to enable an in-depth analysis beyond numerical values (Magnusson and Marecek, 2015). The 14 responses were adequate in terms of depth of responses, providing sufficient insights on the phenomenon (valuation-investment nexus) within a specific context (Nigeria). Creswell and Creswell (2023) suggest that a study such as ours which takes a phenomenology philosophical approach can range from 3 to 10 interview responses, and similar studies (Dauda et al., 2024 and Alalade et al., 2024) have used akin sample sizes to investigate professionals' perspectives.

Each participant in the interviews was labelled Participant 1 abbreviated as P1 (going up to P14 for ease of reference during the coding of responses, analysis and discussion). The data collection strategy was designed primarily to gain a wide range of views and perspectives and to identify potential variations in practices, views, and perspectives based across the country. Based on economic, political, and socio-cultural considerations, we grouped the participants into three geo-locational groups: Group 1- Lagos and Abuja; Group 2- Northern Nigeria; and Group 3- Southern Nigeria (details of participants in Table 3.1). Lagos and Abuja are the commercial and administrative (respectively) capitals of Nigeria, and they are the economic hub of Nigeria with access to technology-enabled processes that often make them different from other parts of the country.

[Insert Table 3.1 here]

Data analysis

As part of the analysis, the socio-demographic profile of the respondents was considered, and some of the findings and infographics were presented with geo-locational details, with the discussion, sometimes highlighting geo-locational patterns. We, however, acknowledge that a sample size of 14 is not sufficient to establish regional variations, particularly as Northern Nigeria only had three responses. We adopted a full thematic analysis using data clustering and topic modelling approaches to identify patterns and themes in the responses. The analyses focused on three core issues: investment factors in the valuation process, the framing of the market report and geo-locational variations that should be considered in property investment. These areas were subjected to a five-step thematic analysis process derived from earlier work of Braun and Clarke (2023) and Dauda et.al (2023) as represented in Figure 3.2.

[Insert Figure 3.2 here]

The analysis begins with the data familiarisation, entailing the apprising of the interview transcripts to assess the relevance of the responses to specific questions. This also provides insight into the areas that will be carried forward to the generation of the themes (Naeem et.al, 2023; Alalade et.al, 2024). The second step is the initial code generation which, involves summarising, reviewing, and coding the submitted factors by the respondents to capture key patterns and meanings in the data, reducing the noises and irrelevant factors in the transcript.

After the first two steps, the data analysis begins with the theme generation. This mainly involves the identification of patterns in the data to cluster them together as groups (Braun and Clark, 2023). In this study, we utilise topic modelling using machine learning algorithms to classify the factors into themes. This approach involves the adoption of K-Means clustering, an unsupervised learning algorithm to uncover hidden patterns, groupings, and relationships within the data, ensuring that some themes emerge from the data itself. The advantage of this approach is that theme numbers can capture specific nuances and complexities that are often overlooked when the number of themes is pre-determined based on an established framework (Dauda et.al, 2024). The K-mean clustering applied Term Frequency Inverse Document Frequency (TF-IDF) for vectorisation using Google Colab as a tool. In this step, k-values ranging from 2 to 16 were chosen so that the outcome of the analysis can reveal the optimal k-values which are then used to perform topic modelling.

The topic modelling was based on Latent Dirichlet Allocation (LDA), a probabilistic model that identifies hidden topics in textual data (Abdelrazek et al., 2023; Dauda et.al, 2024). The LDA model, with K-Means clustering value from previous steps, went through 15 passes for accuracy on each subject in focus to create a model that comprises relevant factors under each topic. These factors were then properly reviewed in step 4-Theme reviewing to identify any outliers and observe the patterns that will guide in step 5- Theme naming. A detailed discussion of the themes that emerged from this empirical exercise is presented in the findings and discussion section.

LDA has some limitations. For instance, it relies on word occurrence patterns rather than deeper semantics which may limit its ability to sufficiently capture the context and nuance of valuers' perceptions. There may also be difficulties in decoding domain-specific terminology and subtle variations in the discourse, potentially leading to topic overlap or missing insights. To address this, we reviewed the transcripts thoroughly, ensuring that further insights are captured beyond the LDA output. Regardless, the LDA technique enabled the identification of thematic structures, patterns, and a broad overview of discourse points, providing a structure for the discussion.

Findings and Discussion

To provide sufficient breadth and depth to the understanding of valuers’ perspectives on the investment and valuation nexus, we analyse the key research findings in four core segments. First, we discuss the nexus between property investment and valuation and thereafter discuss the investment factors that are considered in the valuation process. Next, we discuss the property market and investment factors that are integrated into the valuation report and round off by highlighting geo-locational variations in property investment in the Nigerian context. The segments contain tables highlighting the key themes derived from the topic clustering exercises, the keywords/phrases within these themes and the participants who made those points.

The nexus between property investment and valuation

Participants' responses were clustered into three (3) themes (Table 4.1); Appendix 4.1 also shows the geolocational patterns of the responses.

[Insert Table 4.1 here]

Property investment is predominantly perceived as capital outlay for future returns, aligning with the theoretical and practical conventions. This reflects the classic economic theory of the opportunity cost of capital, which is often attributed to broader investment, underpinned by the principle that funds invested in real estate assets could be invested in other sectors for reasonable returns. The fact that respondents in all three geolocational groups acknowledged these factors suggests that there is generally good theoretical knowledge of property investment, aligning with the findings of Amidu et al. (2019).

The link between location, property features and investment also emerged as the second most important theme. P4 states:

> "*…if you want to invest in a property for a stream of income for a long period, the first thing we consider is we look at the location with higher returns; ….location will determine the rate of returns you have on your investments*".

P13 also states:

> " *…..when we are talking about investment factors …. we have to look at the location because proximity to amenities determines the value of the property and transportation in that area is important too*".

These reflect the spatial dimension of property values (Ahlfeldt et al., 2015), typically accounting for desirability and proximity to amenities and infrastructure (Ajayi et al., 2014). It strengthens the argument by Fine and Country (2023) and Yinusa (2023) that property location influences value and, therefore, is important for investment. These findings also broadly align with the established concepts that location and property features are important (Oladiran et al., 2022; Oladiran and Dickins, 2024).

The third theme i.e., institutional, and environmental factors, highlights the importance of government policy and environmental factors on property investment, aligning with the findings of Baum et al. (2017), Cheloti and Mooya (2021) and Okorji and Brisibe (2024).

The geo-locational patterns of the themes also provide useful insight (Appendix 4.1). Theme 1 is represented across the three geolocation groups, however, themes 2 and 3 are only mentioned by respondents in Abuja/Lagos and the South. This reflects a consensus that capital outlay in return for future returns is one of the core ways that valuers in Nigeria perceive investment.

Participants discussed the relationship between property investment and valuation within two core themes: a decision-making tool and an assessment of returns and income (Table 4.2); the geo-locational patterns of the themes' emergence are also presented in Appendix 4.2.

[Insert Table 4.2 here]

These themes align with the definition of Blackledge (2016) that valuation assesses the right to receive income and capital return in the future, and the proposition that valuations are used to arrive at investment decisions (Duca et al., 2011; Duca, 2013). The distribution of participants' responses to this question also provides some interesting insights. The perception of valuation as a decision-making tool appears to be primarily advanced by the participants in group 1 (Abuja and Lagos), although one participant from Northern Nigeria also makes this assertion. This generally aligns with the expectations that valuers in Abuja and Lagos have a higher level of exposure to global practices and thus have a better understanding and appreciation of the link between the two phenomena. It can also be observed that the perception of valuation as a guide to assess return and income appears to be more widely spread across the geo-locational groups, suggesting that this might be a more general perception. Furthermore, five respondents were unable to provide suitable definitions within this context; thus, their responses were dropped from the topic modelling. This might indicate a knowledge gap in terms of how valuers perceive valuation through investment lenses. Thus, although Amidu et al. (2019) reveal that there is a relatively sound theoretical knowledge of valuers in Nigeria, the knowledge of investment concepts may be somewhat limited.

Investment factors in the valuation process

The investment factors included in the valuation process and the rationale for inclusion are discussed in this section. Table 4.3 presents the categories of factors considered and Appendix 4.3 shows the geo-locational patterns of the responses.

[Insert Table 4.3 here]

A core theme that emerged is the market conditions clustered around a wide range of demand and supply factors. P3 states:

> "*….we look at inflation, …..we look at economic stability….. These are things we consider and they are critical to the opinion we give our clients on the property value."*

P10 also states that:

> "*You must look at the risk ….. some risks are out of your control; there are risks that you can control…. the volatility of currency these days is a general risk…*"

The cluster of factors relating to market conditions aligns with theoretical constructs and previous empirical findings. Economic conditions such as GDP growth are well established as key investment factors in property valuation (Lansar Aghaji and Co., 2019; Cheloti and Mooya, 2021), and factors such as market volatility, fluctuations and economic downturns have been shown to negatively affect property values (Fine and Country, 2023; Okorji and Brisibe, 2024). It is, therefore, no surprise that these factors are well highlighted because of Nigeria's track record of high macroeconomic volatility, evidenced by a high inflation rate and currency exchange rate volatility (The World Bank, 2024).

Another important theme from the analysis is the location and property features. P1 provides an overview of various dimensions of the property's location and its impact on investment which should be accounted for in the valuation. P1 states:

> *"….the general economic situation of the location of the property be it local government, state, federal or anywhere is important. You check the general economic factor of the outlook of the place which also affects the property value and guides your analysis in arriving at your opinion of value. These are the key things we look at from the macro aspect to the micro, then specific to the property."*

These perspectives highlight the importance of considering location in property valuation. P9 highlights another important issue in the Nigerian property investment market:

> *"…. there's a trend going on in this city and you discover that people build commercial complexes anywhere and without considering whether there is going to be the demand in that location…"* (P9)

This shows a potential knowledge deficit for investors and developers in some of these markets.

The importance of location as an investment factor that should be considered in valuation is consistent with theoretical constructs established in the previous subsection. It further highlights the spatial dimension of property values (Ahlfeldt et al., 2015), strengthening the argument property location influences the value and, therefore, is important for investment (Fine and Country, 2023; Yinusa, 2023); thus, an important investment factor to consider. The importance of the physical features of the property is further highlighted:

> *"… you narrow it down from the macro, micro then specific to the property; that's when you start looking at the comfort the quality of finishing the conduciveness of everything in the property all these are in your investment analysis and the factors you look at in your opinion of value*". (P1)

These findings broadly align with the established concepts that location and property features as key elements of investment (Oladiran et al., 2022; Oladiran and Dickins, 2024).

A third theme is risks and this is highlighted by several respondents:

> "*Some of the factors that need to be considered is the risk level… There are various interests, and you check if it will be encumbered. If the property you want to invest in is not restricted by law, you look at the legal aspect too. You look at the possibility of executing the transaction without any hitches either by the owners of the land. You also factor in the economic situation and government policy. These are some of the variables or factors to be*

considered when you are going into real property investment so that it will not be a fruitless investment." P14

"… we take risks very seriously because you want to secure the income and the capital sum. For instance, if is list is released of titles that are likely to be revoked in a city, and a person is violating the law, there is the likelihood of the risk of the income not being sustained." P3

These are profound statements that highlight the importance of risks in a highly volatile and complex environment such as Nigeria. With investment risks such as macroeconomic volatility (The World Bank, 2024), high levels of insecurity (Institute for Economics and Peace, 2024), and lack of market transparency (JLL and LaSalle, 2024), property valuation becomes even more important as a risk assessment and decision-support tool for property investment.

The fourth theme that emerged is income and returns on investment. The response highlights the link between risk and return. It suggests that cash flow is an important indicator of risks and return potential and should thus be accounted for in the valuation. Furthermore, issues such as taxation, and liquidity are highlighted. This generally aligns with Blackledge's (2016) definition of value as the present price for the right to receive income and capital in the future. It further reinforces the risk-return relationship and its impact on investment as highlighted by Okorji and Brisibe (2024). The fifth theme on maintenance and other externalities such as government policies is also important as it highlights potential outgoings that an asset may require during the investment holding period as highlighted by (Baum et al., 2017).

Generally, themes that emerged from the participants cover core property investment factors that should be accounted for in a valuation which demonstrates good knowledge. However, the role of cashflow and factors relating to the tenants of the subject property do not appear to be prominent. The cashflow of an asset is important in property investment, and it hinges on factors such as tenants' lease terms, covenant strength, break period, and the quality of the tenants. Furthermore, factors such as vacancy rates and take-up rates are not mentioned. Although cashflow comes up in theme four, the fact that these factors are not explicitly spotlighted suggests that it may be underplayed and impact not sufficiently appreciated. It is therefore essential that a property valuer is aware of these factors and accounts for them in their valuation reports to arrive at accurate valuations (Baum et al., 2017).

The geo-location analysis (Appendix 4.3) shows that most of the factors were covered by valuers in the different groups. However, factors relating to the location are more prominent for the Abuja/Lagos group which may be because these cities have the most prominent high-brow areas in Nigeria and as such, there will be wide disparities in values within these markets reflecting the high inequality in the cities. The northern participants highlighted risks more than other factors which may be due to the higher level of insecurity that the Northern region has experienced in the last decade.

We further examine the rationale for the integration of investment factors in property valuation (themes presented in Table 4.4 and geo-location data shown in Appendix 4.4).

[Insert Table 4.4 here]

Themes 1 (accuracy and reliability) and 4 (service quality) demonstrate that the valuers are committed to providing high-quality professional services to their clients and are aware of the implications of failure to achieve this. Some of the responses also suggest that the valuers are further motivated by the desire for their service quality to be recognised and commended.

> "*…. we present the valuation report to our clients and although they may not understand the process, they clap for us that we have done a good job. But behind these is the backroom work that brings about the good report outside."* P1

Thus, in addition to valuers having sufficient knowledge and expertise (Adilieme et al., 2023; Amidu et al., 2019), our findings indicate that they are also driven by the desire to maintain professionalism and clients' commendation. The desire for clients' commendation may, however, lead to heightened clients' influence on the valuation as cautioned by (Adilieme et al., 2023; Nwuba et al., 2015).

The other three themes: are market conditions, sensitivity analysis and investment viability also demonstrating a high level of competence and knowledge on the key factors driving property investment and the role of valuation in assessing these factors.. A key aspect missing in the analysis is the process through which the YP is adjusted to account for the subject property's peculiarities, relative to the YP from comparables. This is important, considering that tenants' details do not appear to be fully accounted for in the current approach.

Property market and investment factors included in the valuation report

The valuation report is an important aspect of the valuation process. Valuers who are commissioned to carry out a valuation are usually expected to deliver a report, and the report is expected to be an accurate representation of the assessment of the property and the estimated value that clients rely on to make important economic and financial decisions (Taffese, 2007). The thematic analysis reveals that market analysis is a key element of the report and key market trends are highlighted to provide the clients with the market context. This further highlights the fundamental importance of key market factors. Property features are also analysed within the report, further strengthening the argument that property features as key elements of investment considerations (Oladiran et al., 2022; Oladiran and Dickins, 2024). Risk and return also emerge as a core theme incorporated in the report, and a sensitivity analysis is often integrated to assess the risk based on different scenarios. Furthermore, the income-producing potential of the asset is analysed; the cash flow is also evaluated; and alternative use and site analysis are included in the report. These factors generally provided a good coverage of investment factors.

Geo-locational variations in property investment

Property markets are heterogeneous and investment factors may also vary in heterogenous systems such as Nigeria. This is one of the reasons that professional valuers' services are required (Taffese, 2007). The emerging themes from the data suggest that the variations can occur through market forces interplay which may be driven by the existence of government parastatals, diplomatic missions and multinationals (P1) and population explosion, concentration of financial institutions (P6). This causes outbidding and market competition (P4) due to the disproportional increase of demand relative to supply, thus leading to higher property values (P4, P6). The respondents also reported variations in the predominant property use types, with some areas in Lagos indicating that prime residential neighbourhoods are seeing a heightened increase in conversation to residential use. A third variation is in the quality of the properties, with areas in Abuja reflecting positive sentiments relating the asset quality. Finally, areas in the south have institutional and property rights challenges relating to land title and standardisation. These variations could be probed further in future research.

Conclusion, Recommendations and Limitations

Valuation is an essential risk mitigation strategy in property investment in a high-risk environment such as Nigeria. However, risk mitigation in property investment is only effective to the extent that it produces accurate estimates of value; however, it is not clear how valuers in Nigeria perceive the relationship between real estate valuation and investment and how this influences the valuation process. In this study, we explored valuers' perceptions of the nexus between property investment and valuation and how this is reflected in the valuation process. We also investigated potential variations in investment and valuation processes in different contexts across the country. Semi-structured interviews were deployed to 14 professional property valuers across Nigeria and the transcripts were subjected to thematic and content analysis using the K-mean clustering learning algorithm and Latent Dirichlet Allocation topic modelling.

Our findings revealed that Nigerian property valuers recognise the significance of market conditions, location, risks, and property features. However, a notable gap exists in terms of considerations for cash flow and tenant-related factors. We also observed notable variations in some of the investment factors highlighted and the integration processes. The cashflow security of an asset is important in property investment, and it hinges on factors such as tenants' lease terms, covenant strength, break period, and the quality of the tenants. Failure to account for these factors can lead to inaccurate valuations (Baum et al., 2017), with severe national and global consequences. It is, therefore, recommended that property valuers in Nigeria should critically analyse tenants' status including factors such as their business performance, covenant strength and lease terms. This will provide a holistic view of the risks associated with the investment. By adopting a more comprehensive approach, valuers can enhance the accuracy and reliability of their valuations, mitigating risks for investors. There is also the need for professional bodies, educational institutions and corporate real estate firms to organise training and CPDs to equip valuers with the necessary skills and knowledge to apply advanced valuation techniques and incorporate international best practices.

This study contributes to the literature by providing novel insights into the application of investment factors in a valuation. However, it is important to acknowledge the limitations. The qualitative research methodology, although in-depth, is subject to potential researcher bias of the researcher. Furthermore, the sample size, while adequate for exploratory research, may not fully capture the diversity of practices across the entire country. To address these limitations and further advance the understanding of property valuation practices in Nigeria, several recommendations for future research are proposed. A quantitative study, such as a survey, could be conducted to gather data from a larger sample of property valuers. This would enable statistical analysis to identify patterns and trends more rigorously. An observational study could also provide valuable insights into the actual valuation processes, including the specific factors considered and the weight assigned to each factor. Furthermore, a comparative analysis of valuation practices in different regions of Nigeria could highlight regional variations and identify best practices. Future research could also explore the perspectives of other stakeholders, such as investors, clients, and professional bodies. This would provide a more comprehensive understanding of the factors influencing property valuation decisions and the impact of these decisions on the market. Finally, the role of technology, such as artificial intelligence and machine learning, in property valuation could be investigated to identify potential opportunities for innovation and efficiency.

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Tables

Table 3.1: Profile of Participants (interviewees)

Groups	Participant	Location	Years of experience	Key educational qualifications
1	P1	Abuja	20 years	Masters
	P2	Abuja	17 years	Masters
	P3	Abuja	19 years	Masters
	P4	Lagos	18 years	HND
	P5	Lagos	23 years	Bachelors
	P6	Lagos	30 years	Masters
2	P7	Northern Nigeria	10 years	PhD
	P8	Northern Nigeria	12 years	HND
	P9	Northern Nigeria	16 years	MTech
3	P10	Southern Nigeria	16 years	PhD
	P11	Southern Nigeria	20 years	Masters
	P12	Southern Nigeria	14 years	Masters
	P13	Southern Nigeria	20 years	Bachelors
	P14	Southern Nigeria	25 years	PhD

Source: Authors

Table 4.1 Perception of Property Investment

Themes	Key points	Participants
Theme 1: Capital outlay and future returns	Capital expenditure for future income	P3, P5, P7, P8, P10,
	Generating Income and value appreciation	P6, P14,
	Buying but also managing a real estate asset for future income	P12
Theme 2: Location and property features	Location is important for maximising returns in property investment	P2, P14
	Location will determine the rate of return on investment.	P4
	Local economy and transportation infrastructure associated with a location can influence rental income and capital values.	P13
	They physical characteristics (eg size, condition) of a property affects its income and future value.	P13
	The type of assets (eg commercial) affects the investment potential	P13
	High-risk properties may lower returns and value.	P13
Theme 3: Institutional and environmental	Government policies and environmental factors influence investment value.	P11
	Environmental features (e.g., energy efficiency) can increase property value.	P13

Source: Authors

Table 4.2 Valuers' Perception of the Relationship between Property Investment and Valuation

Themes	Key points	Participants
Theme 1: Decision-making tool	Valuation is vital tool for property investment decisions.	P1, P3, P9
	Valuation is essential before investing and when selling property.	P6
Theme 2: Return and income	Valuation provides guidance on the deployment of property investment capital	P3
	Valuation provides guidance on the potential return on a property investment.	P5, P4
	Valuation estimates the worth and capital value of the property.	P8, P10
	Valuation is the income analysis of an investment property to estimate its value	P11

Source: Authors

Table 4.3 Investment factors in valuation

Themes	Key points	Participants
Theme 1: Market conditions	Demand and supply factors	P9, P11, P12, P13
	Economic factors like interest rates, inflation and currency exchange volatility	P1, P2, P3, P10, 12, P13, P14
	Data on sales, rental income, and market indicators	P9
Theme 2: Location and property features	Location	P1, P9
	Property- specific features such as type and, size quality of finishing	P1
	Security and neighbourhood conditions affect value	P1
	Cost of transportation and traffic	P10
	Income-generating trends (rents) in the area	P6
Theme 3: Risks	Economic risks including inflation, profitability and return on investment	P3, P7, P9, P10,
	Legal and institutional risk and mitigation concerns such as land title laws, titles and restrictions	P3, P5, P8, P13, P14
	Security of property	P3
	Security of income and alternative asset use	P6
Theme 4: Income and returns	Return on investment	P5, P13
	Access to finance	P9
	Cash flow and liquidity	P5, P13
	Risk premium	P14
	Income security and sustainability (utility, scarcity and taxation)	P5, P8,
	Asset transferability and liquidity	P8, P14
	Time factor	P3, P9
Theme 5: Maintenance & externalities	Property management and maintenance	P8
	Externalities such as changing government policies.	P10

Source: Authors

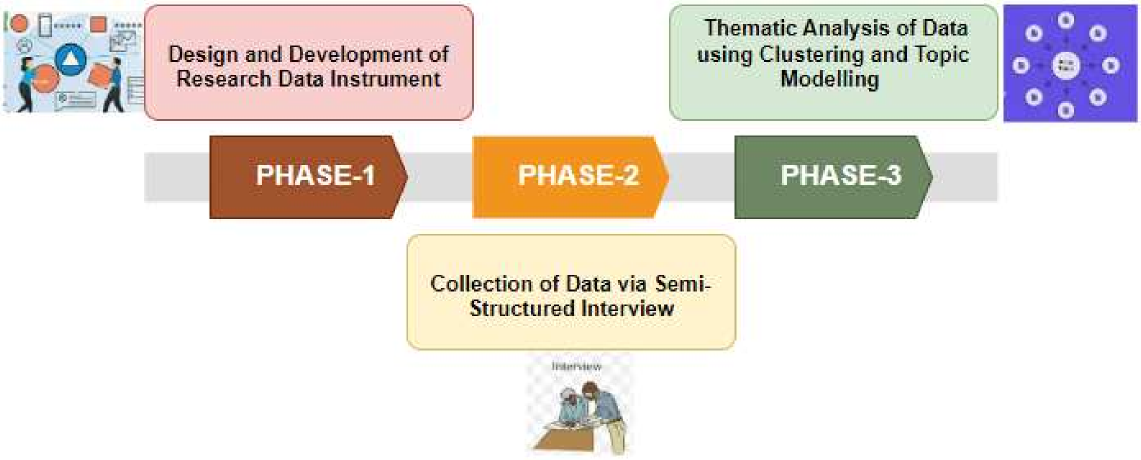
Table 4.4 Rationale for Integrating Investment factors

Themes	Key points	Participants
Theme 1: Accuracy and reliability	For accurate and validity output	P1
	For defendable and justifiable output	P1
	To ensure transparency	P7
	To guide investors and clients to make correct decisions that protect their investment	P12, P14
Theme 2: Market conditions	To account for economic factors that affect returns and future values	P3, P4, P8, P11
	To account for the influence of government policies	P14
Theme 3: Sensitivity analysis	Ensures that various scenarios are analysed and considered	P13
	Ensures that potentially negative issues are noted, and the investment reconsidered in light of potential challenges	P5
Theme 4: Service quality	Providing clients with actionable insights about an investment for more effective decisions	P6, P9
Theme 5: Investment viability	Evaluating viability of a real estate investment	P8, P12

Source: Authors

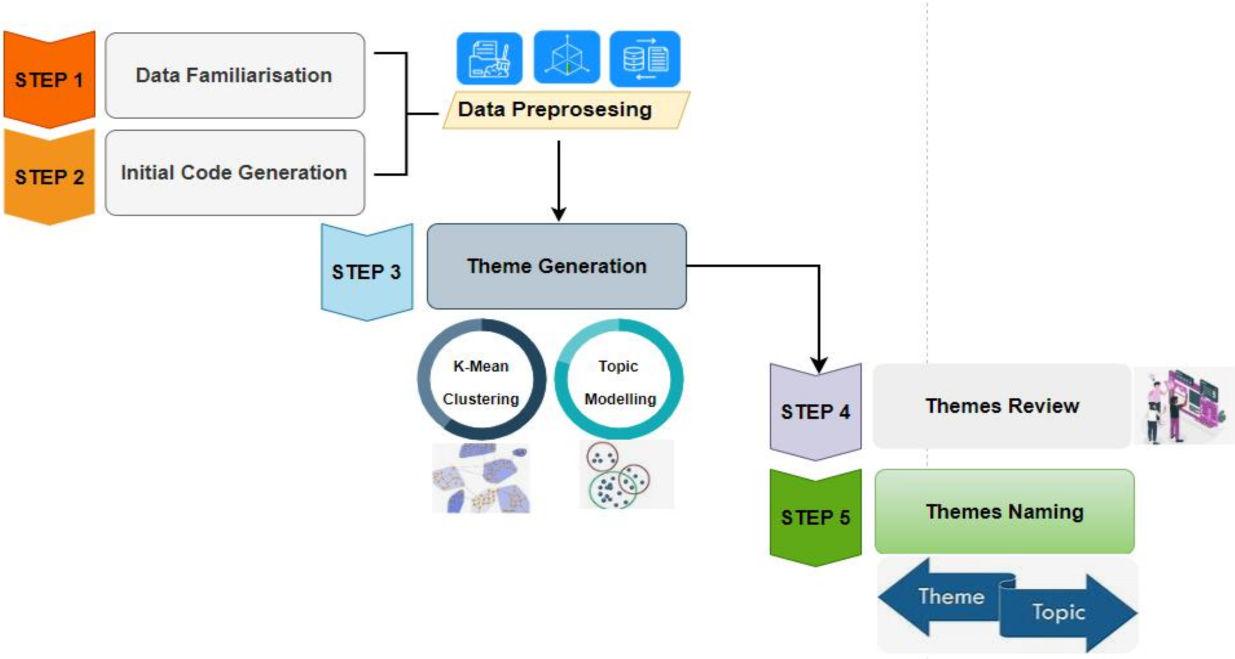
Figures

Figure 3.1 Overview of Research Methodology



Source: Authors

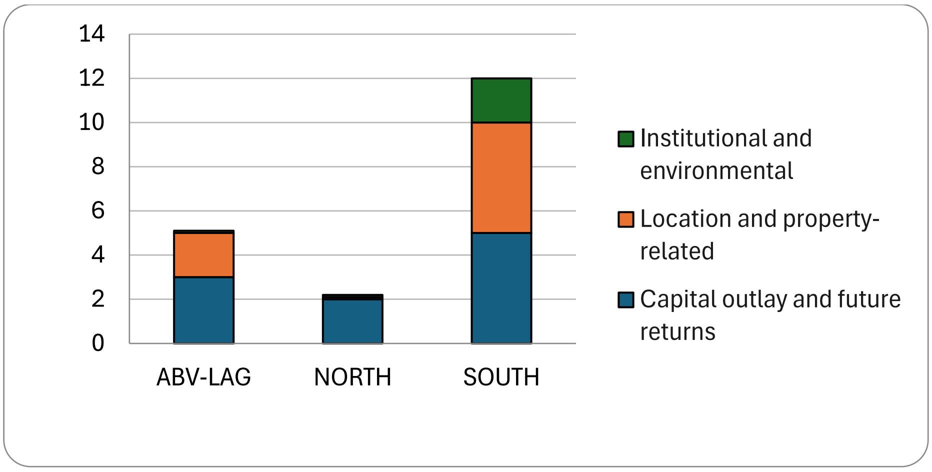
Figure 3.2 Overview of Thematic Analysis



Source: Authors

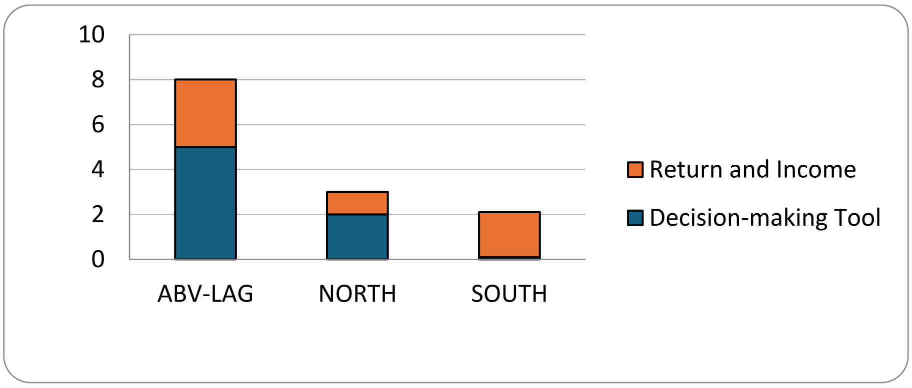
Appendices

Appendix 4.1 Perception of Property Investment: by geo-locational groups



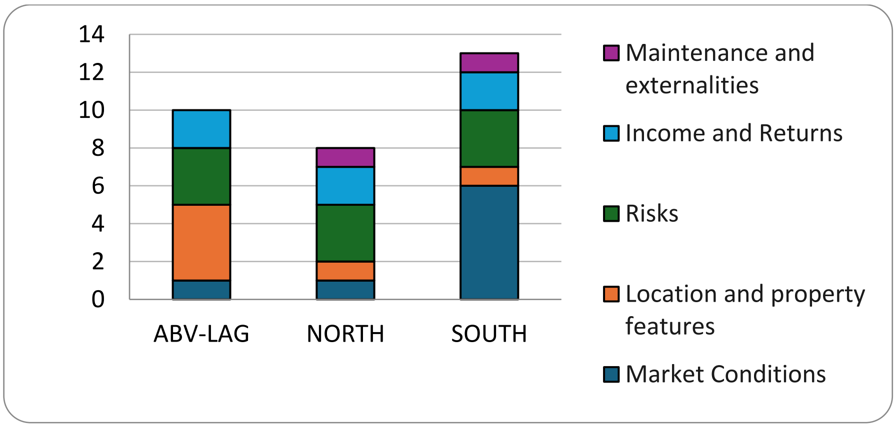
Source: Authors

Appendix 4.2 Valuers' Perception of the Relationship between Property Investment and Valuation: by geo-locational groups



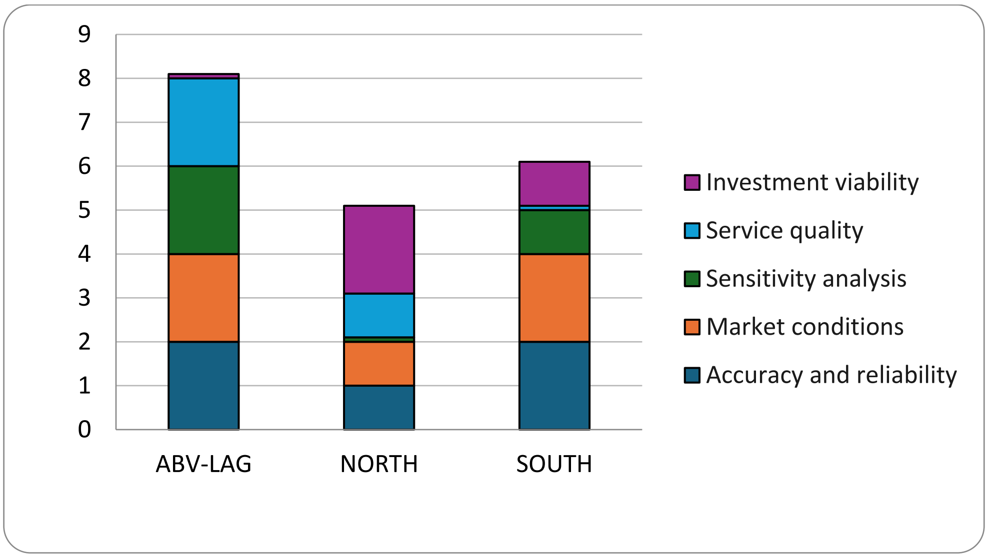
Source: Authors

Appendix 4.3 Investment factors in valuation: by geo-locational groups



Source: Authors

Appendix 4.4 Rationale for Investment Factors Integration: by geo-locational groups



Source: Authors