

Integrating Environmental, Social and Governance (ESG) Criteria into Commercial Property Valuation Evidence From Valuers in Sweden and Sri Lanka

Warnakula Suriyalage Disna Chathurani

Department of Real Estate and Construction Management, KTH Royal Institute of Technology,
Stockholm, Sweden

DOI: <https://doi.org/10.47772/IJRISS.2026.100800902>

Received: 27 August 2026; Accepted: 01 September 2026; Published: 19 September 2026

ABSTRACT

Environmental, Social, and Governance (ESG) factors are becoming increasingly relevant in commercial property markets. This growing focus on ESG is driven by both regulatory requirements and market demand. This study examines how ESG considerations are incorporated into commercial property valuation, drawing on valuation theory, stakeholder theory and institutional theory as its theoretical foundation. The purpose of this study is to examine how commercial property valuers use ESG factors in their valuation practice, the challenges they face during this process, and the strategies that can support the integration of ESG factors into commercial property valuation.

A mixed method approach was used, including document analysis, a questionnaire survey, and semi-structured interviews with RICS qualified valuers. The findings suggest that environmental factors are the most influential ESG dimension in commercial property valuation, while social factors receive moderate attention and governance factors are given the least consideration. The study also finds that ESG is often reflected qualitatively in valuation reports rather than being directly quantified in valuation calculations. The main identified challenges include a lack of reliable ESG data, limited market evidence, difficulties in quantifying ESG impact, and a lack of standardized methods. The results further show that valuers in Sweden exhibit relatively higher ESG awareness, but still encounter challenges in practical integration, whereas ESG usage in Sri Lanka is still at an early stage and is applied less consistently in the market. This study concludes that ESG is becoming an important part of commercial property valuation in both Sweden and Sri Lanka, even though its practical application is still at a learning stage and requires better data availability, clearer methodologies, and stronger professional guidance.

Keywords: Environmental factors, Social factors, Governance factors, Commercial property Valuation, Challenges, Strategies

INTRODUCTION

Background of study

The importance of environmental, social, and governance (ESG) factors in the real estate sector has gained significant attention globally (Khamisu and Paluri, 2024). The integration of ESG factors into valuation practice is not only influenced by market demand but also guided by international valuation standards such as those issued by the Royal Institution of Chartered Surveyors (RICS) and the International Valuation Standards Council (IVSC). The incorporation of sustainability aspects into property valuation became a requirement set by Royal Institute of Chartered Surveyors, International Valuation Standard Council (IVSC, 2025 and RICS, 2025).

Real estate valuation is the process of determining the economic value of a property. Traditionally, real estate valuation has been based on factors such as location, physical attributes, demand, and comparable sales evidence. However, the addition of sustainability metrics in property valuation is a relatively new

concept which has gained momentum in recent years making sustainability features to be considered by real estate appraisers (Adeyemo and Ajayi, 2025).

However, challenges abound, such as measuring and reporting on sustainability performance. (Bukola Titilayo Fagbemi et al., 2025). Kseniia Zakharova points out that the lack of standardized rules and metrics can create uncertainty. In recent times, there have been many challenges related to the implementation of ESG across all life cycle stages of real estate. (Mikulska and Socik, 2025). Warren-Myers (2013) explains that valuers face several challenges when incorporating sustainability into valuation practice. One key difficulty is how to assess and compare sustainability features between buildings. Another challenge is how to reflect these features in valuation inputs such as rents, vacancy levels, operating costs, rental growth, capitalization rates, and yields. This shows that sustainability integration is complex because it can affect many parts of the valuation process Warren-Myers (2013).

Researchers such as Khamisu and Paluri (2024), Riratanaphong and Pewklieng (2024), and Ifediora and Igwenagu (2024) have highlighted the growing attention to ESG in the real estate sector. However, these studies have not addressed the practical experiences of valuers in incorporating ESG factors into commercial property valuation. Palm (2025) concludes that Valuers in Sweden still struggle to incorporate ESG factors into property valuation due to limited market evidence and a lack of observable data. Because few transactions clearly reflect sustainability attributes, it is difficult for valuers to determine how the market prices ESG factors.

According to Chandrasekara and Wickramaarachchi (2025), ESG is becoming important in Sri Lanka, especially because Sri Lanka is a developing country and faces climate-related risks. They mention that if proper actions are not taken to address climate change, Sri Lanka could lose around 2% of its GDP by 2050. Therefore, ESG factors are important in property valuation because properties with better ESG performance may have higher value than properties with poor ESG performance. This also shows that valuers have a responsibility to consider ESG criteria when valuing commercial properties.

Aim of the study

Aim

The aim of this study is to examine the integration of environmental, social and governance (ESG) criteria in commercial property valuation from an international perspective with a focus on understanding Valuers' Experiences in Sweden and Sri Lanka

Research questions

The specific research questions are as follows

1. How do valuers in Sweden and Sri Lanka incorporate ESG factors into commercial valuation practices?
2. What challenges regarding the integration of ESG criteria into commercial property valuation are identified in the existing literature and experienced by professional valuers in Sweden and Sri Lanka?
3. What strategies can support valuers in Sweden and Sri Lanka in overcoming the barriers to integrating ESG criteria into commercial property valuation practice?

Significance of the Study

Environmental, Social, and Governance (ESG) factors have become increasingly important in the real estate sector in recent years, particularly for investors, valuers, developers, and policymakers (Newell, Nanda and Moss, 2023).

ESG factors have also become increasingly important in property valuation. According to the RICS Red Book, valuers are expected to identify, consider, document, and report relevant ESG factors when these factors may affect the valuation outcome.

Through this study I expected to study how these ESG factors are considered in commercial property valuation and what the challenges valuers face in this process and what are the strategies they expect to overcome those challenges. To find the answers to these questions I collected valuer's views through a questionnaire and semi structured interviews.

This study makes several important contributions. From an academic perspective this study adds to the limited literature on ESG integration on commercial property valuation by examining the experience of professional valuers. By focusing on valuers' perspectives, this research provides practical insights into how ESG factors are considered and applied in commercial property valuation.

From a professional perspective, the findings of this study are relevant to valuers, valuation firms, and professional bodies such as RICS and IVSC. The study highlights the practical challenges and inconsistencies in the application of ESG factors, which may help inform future updates to valuation standards, guidance notes, and professional training programmes.

From a policy and industry perspective the research contributes to the wider discussion on sustainable real estate and responsible investment by examining that ESG factors are reflected in property valuation results and which helped to investment and lending decisions.

LITERATURE REVIEW

Introduction

The integration of ESG factors into the real estate sector has been a topic of discussion in recent years and ESG integration into property valuation has also received similar attention. RICS has also instructed valuers to consider ESG factors when valuing properties. This chapter discusses existing literature on integration in ESG in commercial property valuation. The review provides the foundation of ESG in real estate, how it is applied in commercial property valuation and discusses the challenges faced by valuers. Additionally in this chapter I examine how it differs across countries from when it comes to ESG integration in commercial property valuation. The chapter concludes by identifying gaps in existing literature and justifying the need for the present study.

The Significance of ESG in Real Estate

Environment, social and governance (ESG) has taken on increased importance in recent years. According to Riratanaphong and Pewklieng (2024), The integration of Environmental, Social, and Governance (ESG) criteria into real estate has gained significant attention in response to increasing concerns about climate change and ethical business practices. The concept of ESG was formally introduced through the United Nations' 2004 report Who Cares Wins, which emphasized the importance of incorporating environmental, social, and corporate governance considerations into financial markets. This perspective was further reinforced by the United Nations Environment Programme Finance Initiative (UNEP-FI) in 2005. These developments have established ESG as an important framework within the real estate sector. (Riratanaphong and Pewklieng 2024)

Environmental Criteria and Commercial Property Valuation

Environmental factors are important because they affect property value, rental income, sustainability, and overall financial performance. Due to growing concerns about climate change and resource depletion, investors are more interested in energy-efficient and environmentally sustainable properties. Green certifications such as LEED and BREEAM are widely used to measure environmental performance, and

studies show that green buildings can attract better tenants, achieve higher rents, and reduce climate related risks. (Ifediora and Igwenagu, 2024)

Chandrasekara and Wickramaarachchi (2025) explained that ESG is still a relatively new concept in Sri Lanka, but some existing environmental laws already support ESG-related valuation considerations. For example, valuers may consider environmental licences, Initial Environmental Examination (IEE) reports, and Environmental Impact Assessment (EIA) reports when assessing commercial properties.

Palm (2025) explained that energy performance is the most important environmental factor in valuation. This is because energy use can be measured and compared with other properties. It also affects energy costs, which can influence the property's net operating income and market value. This suggests that environmental factors currently dominate ESG integration because they are easier to assess compared with social and governance dimensions. Syeda Marjia Hossain et al., (2023), mentioned that environmental aspects are often easier to identify and incorporate because they have measurable physical characteristics.

Social Criteria and Commercial Property Valuation

The social dimension of ESG has become increasingly important in the real estate sector, extending sustainability considerations beyond environmental performance. Social criteria in commercial real estate typically encompass issues such as gender equality, cultural diversity, employee wellbeing, community engagement, and responsible supply chain management. These factors are increasingly embedded within corporate ESG and sustainability strategies of leading real estate firms. (Newell, 2023).

Governance Criteria and Commercial Property Valuation

Governance factors in real estate focus on the management practices of property-owning organizations, including transparency, ethical conduct, board diversity, executive compensation, and risk management. Strong governance practices help reduce risks such as fraud and misconduct while protecting investors' interests. Properties managed by firms with effective governance structures tend to achieve better long-term value creation and financial performance (Ifediora and Igwenagu, 2024).

International Differences in ESG Integration into Property Valuation

According to Newell (2023), major real estate players, particularly in developed markets such as Australia, have begun to explicitly report on social performance as part of their ESG disclosures, signaling a shift toward broader accountability beyond financial returns.

Warren-Myers (2023), show that in Australia the integration of sustainability into property valuation has evolved gradually, with valuers demonstrating increased awareness of sustainability ratings such as NABERS and Green Star following the introduction of mandatory disclosure policies. Although only a minority of valuers explicitly include sustainability in valuation reports, greater qualitative consideration of sustainability-related building attributes reflects how national regulatory frameworks influence ESG integration in valuation practice.

Syeda Marjia Hossain et al., (2023) examine the extent to which sustainability considerations are incorporated into UK commercial property valuation practice, focusing on valuers' use of RICS professional standards and sustainability related data. The findings indicate improved reference to RICS guidance compared to earlier studies.

However, sustainability data collection remains limited and explicit value impacts are rarely identified. UK valuers perceive sustainability attributes to be more important to owner occupiers than to investors or lenders, with building certification emerging as the only sustainability factor consistently influencing market and investment values.

In a European context, Hossain et al. (2023) also found that environmental certification was one of the few sustainability attributes explicitly considered by valuers in commercial property valuation reports.

According to Palm (2025), Swedish valuers remain at an early stage of integrating ESG factors into property valuation, viewing the process as a gradual learning journey (Warren-Myers, 2022; 2023). Due to limited transaction evidence, ESG attributes are difficult to observe in the market, leading valuers to focus instead on measurable factors.

Chandrasekara and Wickramaarachchi (2025) examined the influence of ESG components on the market value of commercial properties in Sri Lanka. The study found a positive relationship between ESG factors and market value changes, with the environmental component showing the strongest influence. The results indicate that valuers increasingly consider ESG aspects when estimating property values. However, the study also identified several challenges in applying ESG in valuation practice, including difficulty in quantifying ESG factors, limited comparable data, inadequate disclosure in valuation reports, and low awareness of ESG among small and medium-scale commercial property owners.

ESG Factors Based on the RICS Red Book Global Standards (2025)

In line with the RICS Red Book Global Standards (2025), ESG factors were structured under three main dimensions: environmental, social, and governance. The Red Book states that valuers should identify, consider, document, and report ESG factors whenever they are relevant to the valuation outcome, especially under VPS 1 (Terms of Engagement), VPS 4 (Inspection and Investigation), and VPS 6 (Valuation Reporting).

Environmental Factors

- Energy efficiency and energy performance ratings
- Carbon emissions and transition risk
- Climate related physical risks (e.g. flooding, heat stress)
- Environmental certifications (e.g., BREEAM, LEED, NABERS).
- Materials used in construction or renovation
- Biodiversity and green areas

Social Factors

- Building features that support employee wellbeing and productivity.
- Location characteristics, including connectivity and infrastructure
- Accessibility to amenities such as transport, services and green spaces.
- Community related factors (e.g., noise, congestion, neighbourhood quality).
- Flexibility or adaptability of buildings for future uses.

Governance Factors

- Safety regulations and market expectations of safety.
- Ownership and occupation risks
- Planning, zoning, registration, licensing, heritage, and other legal matters

Lease agreements and contracts with ESG or sustainability provisions

According to RICS Red Book (2025, Section 3.7.4), the above ESG factors may be relevant in property inspection, investigation, valuation reporting, and documentation.

According to RICS Red Book (2025, Section 3.7.4), the above ESG factors may be relevant in property inspection, investigation, valuation reporting, and documentation.

THEORETICAL FRAMEWORK

Introduction

This chapter discusses the theoretical foundation of the study, focusing on how Environmental, Social, and

Governance (ESG) criteria are integrated into commercial property valuation from the perspective of valuers. It presents the main theories used to understand ESG integration in valuation practice and explains how these theories help interpret the influence of ESG factors on valuation outcomes. The chapter draws on valuation approaches, stakeholder theory, and institutional theory to show why ESG considerations are relevant in commercial property valuation. Together, these theories provide a framework for understanding how valuers interpret and apply ESG considerations in practice.

Commercial Property Valuation and Market Value

Commercial property valuation plays a critical role in real estate markets, providing an informed basis for investment decisions, lending, financial reporting, and asset management. The Royal Institution of Chartered Surveyors defines valuation as an opinion of value provided by a valuer on a specified basis and at a specified date, following appropriate investigations and the application of professional judgement (RICS, 2025).

According to the Royal Institution of Chartered Surveyors (RICS), Market Value is defined as, The estimated amount for which an asset or liability should exchange on the valuation date between a willing buyer and a willing seller in an arm's length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion (RICS, 2025).

Valuation approaches

Valuation approaches give the core theoretical foundation of this study, as the research focuses on commercial property valuation practice. According to Royal Institution of Chartered Surveyors (RICS, 2025), in Valuation Practice Statement 3(VPS), It mentioned the importance of Valuation approaches and methods. The valuers are responsible for selecting and, where necessary, justifying the valuation approach(es) and method(s) applied in each individual valuation assignment, these must always have regard to,

1. The nature of the asset (or liability)
2. The purpose, intended use and context of the particular assignment
3. Any statutory or other mandatory requirements applicable in the jurisdiction concerned

Market approach

The market approach estimates value by reference to prices arising from market transactions involving comparable assets. It is founded on the analysis of recent sales and other relevant market evidence for properties with similar characteristics, located in the same or comparable markets. Rather than assessing individual purchaser motivations directly, the approach reflects value as revealed through the interaction of willing buyers and sellers in an open and competitive market (Gabrielli and French, 2020). Similarly, Tajani et al., 2019 highlights that the market approach is the most systematic valuation method because it allows direct comparison between the subject property and comparable transactions within the same market area.

Cost approach

The cost approach estimates value by reference to the cost of replacing or reproducing the property, adjusted for depreciation and obsolescence. This approach is particularly relevant where the subject property is of a specialised nature and comparable market transactions are scarce or unavailable (Gabrielli and French, 2020).

Income approach

The income approach is a valuation approach used to estimate the value of an asset based on the income it generates, and the risks associated with that income (Gabrielli and French, 2020)

Park et al., 2012 note that valuation practitioners most frequently rely on the income approach, as it allows the potential economic value generated from asset use to be properly evaluated, while the market approach faces practical limitations due to insufficient comparable data.

Stakeholder Theory

Stakeholder Theory is a framework within business ethics and organisational management that emphasises the responsibility of organisations to create value for a wide range of stakeholders, rather than focusing solely on shareholders. Stakeholders include all groups and individuals who can affect or are affected by organisational activities, such as employees, customers, communities, governments, suppliers, and shareholders. (Mahajan et al., 2023)

In the context of commercial real estate, stakeholders include occupiers, investors, lenders, regulators, local communities and society at large.

From a valuation perspective, stakeholder theory supports the inclusion of ESG factors where stakeholder expectations influence market behaviour, demand, risk perception, or regulatory compliance. Accordingly, incorporating ESG considerations into stakeholder management has become increasingly important for addressing stakeholder expectations and supporting informed valuation outcomes. The growing integration of ESG factors into property valuation is largely attributed to regulatory requirements, heightened stakeholder expectations, and the need for effective risk management. (Katarzyna Sobolewska-Mikulska and K., & Socik, P, 2025)

Institutional Theory

Institutional theory is useful for understanding why environmental, social, and governance considerations are increasingly being integrated into real estate markets. Real estate organisations, investors, and valuers work within an institutional environment shaped by laws, regulations, professional standards, and wider social expectations. As ESG expectations become more established, market participants are encouraged to adopt sustainability practices not only for financial benefits, but also to maintain legitimacy and align with accepted standards of responsible behaviour.

In property valuation, guidance from the Royal Institution of Chartered Surveyors (RICS) highlights the importance of considering sustainability-related risks and characteristics when they are relevant to market value. Institutional theory therefore provides a helpful foundation for explaining why ESG factors are becoming more common in real estate valuation practice.

When combined with stakeholder theory, institutional theory also shows that ESG integration in valuation is influenced not only by stakeholder expectations, but also by wider institutional pressures that shape what is considered acceptable and legitimate in the market. Together, these theories support the inclusion of ESG considerations in real estate valuation.

METHODOLOGY

Introduction

This chapter explains how the research was conducted and how Environmental, Social and Governance (ESG) factors are integrated into commercial property valuation in Sweden and Sri Lanka. The chapter describes the research design, research approach, data collection methods, sampling strategy, methods of data analysis, and ethical considerations.

Data Collection Methods

Data collection consists of three interconnected methods:

1. Questionnaire survey
2. Semi structured interviews
3. Documentary review

Each method addresses different aspects of the research questions.

Research Design

This study used mixed methods research design, combining quantitative and qualitative approaches. Creswell and Inoue (2024) note that mixed methods are widely used because it allows researchers to collect, analyze, and integrate both forms of data. By combining statistical findings with participants' experiences and perspectives, this approach provides a deeper understanding of the issue being studied. For this study, a mixed methods design is appropriate because ESG integration in commercial property valuation cannot be fully understood through numbers alone or through qualitative insights alone. Therefore, integrating both approaches gives a more complete understanding of ESG integration in commercial property valuation.

This research was conducted using data collected through questionnaires and interviews with RICS qualified valuers in Sri Lanka and Sweden. Structured interviews were carried out with RICS qualified valuers who have more than five years of professional experience to gather their perspectives on how ESG factors are applied in commercial property valuation in their regions, the challenges they face during this process, and the strategies that can be used to address these challenges.

Additionally, a documentary analysis was conducted using existing research papers to understand the challenges professional valuers face when integrating ESG factors into commercial property valuation. The documentary review helped to examine the second and third research questions in greater depth

Questionnaire survey

The questionnaire survey was mainly conducted to answer the first research question on how valuers incorporate ESG factors into commercial property valuation. The target population consisted of RICS qualified valuers engaged in commercial property valuation in Sweden and Sri Lanka.

The questionnaire was structured under three main components:

1. Demographic and professional information (country, experience, valuation role)
2. Quantitative ESG integration questions (Likert-scale items)
3. Qualitative open-ended questions relating to ESG challenges and strategies

The questionnaire used a rating scale from 1 to 5, where 1 represented "no influence" and 5 represented "strong influence." The quantitative questions were mainly used for statistical analysis of the collected data.

Semi structured interviews

Semi structured interviews were conducted to gain a deeper understanding of valuers' experiences regarding the integration of ESG factors in commercial property valuation. The questionnaire survey provided a detailed overview of their current practices, while the interviews gave participants the opportunity to express their views, practical experiences, and professional judgments.

Interview questions were designed to address all research questions, including how ESG factors are incorporated into valuation practices, the challenges faced by valuers, and the strategies that could support better integration of ESG criteria in commercial property valuation in Sweden and Sri Lanka.

Interview participants were selected using purposive sampling. The study targets experienced commercial property valuers with at least five years of professional experience and familiarity with commercial property valuation assignments.

Data analysis

Thematic analysis was used to analyse the qualitative data. Thematic analysis is a flexible and systematic qualitative data analysis method used to identify, organize, and interpret patterns within data. Alhojailan, (2012) explains that it is particularly useful for studies seeking to understand participants' experiences, perspectives, and meanings in detail.

The questionnaire data were analysed using descriptive analysis. Responses from Sweden and Sri Lanka were first organised in Excel and then grouped according to the main sections of the questionnaire. For the Likert-scale questions, numerical values from 1 to 5 were used to calculate mean values. Frequencies and percentages were calculated to identify the level of ESG application in commercial property valuation.

RESULTS

This section presents the findings from the questionnaire survey, semi-structured interviews and documentary analysis. Rather than reporting the three sources of evidence separately, the findings are integrated according to the main themes of the research: the extent to which ESG factors are incorporated into commercial property valuation, the mechanisms through which ESG considerations enter valuation practice, the principal barriers to ESG integration, and strategies for improving their application. Differences and similarities between Sweden and Sri Lanka are highlighted where supported by the collected data.

Respondent and Interview Participant Profile

The questionnaire generated 31 valid responses from RICS-qualified valuers actively engaged in commercial property valuation in Sweden and Sri Lanka. Of these, 25 respondents (80.6%) were from Sri Lanka and six (19.4%) were from Sweden. The largest group of respondents had between five and ten years of professional experience (41.9%), followed by those with 10–15 years of experience (25.8%). Respondents with less than five years of experience and those with more than 15 years of experience each represented 16.1% of the sample.

The questionnaire findings were complemented by six semi-structured interviews with professional commercial property valuers. Three interviewees were based in Sri Lanka and three in Sweden. The Sri Lankan participants included two Chartered Valuation Surveyors (MRICS) with six and eight years of experience and one Fellow Member of RICS with 18 years of experience. The Swedish participants had five, five and nine years of professional valuation experience, respectively. Participants were anonymised in the study using interview codes.

The interviews were used to obtain deeper explanations of the patterns identified in the questionnaire and to explore how ESG considerations are understood and applied in actual valuation practice.

ESG Integration in Commercial Property Valuation

The questionnaire and interview evidence demonstrates that ESG considerations are present in commercial property valuation practice in both Sweden and Sri Lanka. However, the three ESG dimensions are not incorporated equally. Environmental factors receive considerably greater attention than social and governance factors.

When questionnaire respondents were asked which ESG dimension currently has the strongest impact on valuation practice, 58.1% selected environmental factors. A further 22.6% considered all three ESG dimensions equally important, while social factors and governance factors were each selected by 9.7% of respondents.

The country-level results showed the same general pattern. In Sri Lanka, 52.0% of respondents identified environmental factors as the ESG dimension with the strongest influence on valuation practice. The concentration was even greater among Swedish respondents, with 83.3% selecting environmental factors.

The interview evidence supported this pattern. Valuers in both countries demonstrated awareness of ESG considerations but repeatedly identified environmental characteristics as the most prominent component in current valuation practice.

Importantly, the Swedish interviews revealed a distinction between *considering* ESG and determining that ESG has a measurable effect on property value. One Swedish participant explained:

“We should distinguish between saying ‘do we consider ESG?’ and ‘does it affect value?’ Because yes, we always consider ESG.”

The same participant explained that ESG does not necessarily affect value in every case and may sometimes remain a secondary consideration. The evidence therefore indicates that ESG awareness and ESG valuation impact should not be treated as identical concepts.

Environmental Factors

Environmental factors received the strongest consideration among the three ESG dimensions. The questionnaire examined energy performance, climate-related risks, environmental certifications, water efficiency and water management, and the sustainability of construction materials and building design.

Among Sri Lankan respondents, climate-related risks had the highest reported mean score of 3.38, followed closely by environmental certifications at 3.37. Energy performance received a mean of 3.29, while water efficiency and water management systems received 3.19. The overall environmental mean of 3.18 for Sri Lanka.

Among Swedish respondents, energy performance received the highest mean score of 3.42. Environmental certifications and water efficiency/management both received 3.32, climate-related risks received 3.28, and the sustainability of construction materials and building design received 3.18. The reported overall environmental mean for Sweden was 3.31.

The country comparison therefore indicates slightly different environmental priorities. Climate-related risk was the highest-rated environmental consideration among Sri Lankan respondents, whereas building energy performance was the highest-rated factor among Swedish respondents.

The interviews provide further insight into these results. Sri Lankan valuers described ESG integration as still being at a relatively early stage. One participant explained that ESG considerations are not normally followed for all small- and medium-scale commercial properties and are more commonly considered for larger properties.

At the same time, environmental characteristics may already enter Sri Lankan valuations indirectly through existing regulatory requirements. One participant explained:

“We usually check environmental certificates, building energy performance, and climate-related risks.”

The participant noted that these considerations may arise because of Sri Lankan rules, regulations and municipal requirements rather than because they are explicitly labelled as ESG requirements.

The Swedish interviews similarly demonstrated the importance of environmental characteristics. Participants identified issues including flooding, environmental risks and building energy performance. One Swedish participant stated that:

“Energy efficiency tends to be the most important consideration.”

Another Swedish participant explained that environmental considerations receive greater attention than the other two ESG dimensions. Collectively, the evidence indicates that environmental characteristics represent the most developed area of ESG integration in both countries.

Social Factors

Social factors were considered in commercial property valuation, although generally less strongly than environmental factors. The questionnaire covered building features supporting employee wellbeing and productivity, health and safety, accessibility to amenities, community and neighborhood characteristics, and building flexibility or adaptability.

The results presented in the thesis indicate that Swedish valuers generally assigned somewhat greater importance to social considerations than Sri Lankan valuers. The reported overall mean was 2.90 for Sri Lanka and 3.15 for Sweden.

Among the individual values reported in the thesis, building features supporting employee wellbeing and productivity received means of 2.28 in Sri Lanka and 2.85 in Sweden. Health and safety/access-related considerations were reported at 3.12 and 3.21, respectively. Community-related factors such as noise, congestion and neighborhood quality were reported at 3.36 for Sri Lanka and 3.46 for Sweden.

The interview findings help explain how social considerations enter valuation practice even when valuers do not explicitly identify them as ESG factors. One Sri Lankan participant explained that valuers may consider employee wellbeing, resting facilities, building safety standards and accessibility for disabled persons despite sometimes giving less explicit attention to the social and governance dimensions of ESG.

A Swedish participant similarly noted that social considerations may be particularly important for certain property types, including medical and residential buildings, but may already be reflected through traditional factors such as location and tenant characteristics.

This suggests that some social characteristics may already be embedded in established valuation considerations rather than being separately identified as ESG adjustments.

Governance Factors

Governance received the lowest direct ratings among the three ESG dimensions. The questionnaire examined transparency in property management and ownership structure, regulatory and legal compliance, quality of property management practices, and ethical management and corporate governance.

The reported overall governance mean was 1.70 for Sri Lanka and 1.75 for Sweden. The thesis therefore indicates that governance considerations had relatively limited direct influence on valuation judgement in both countries.

Transparency in property management and ownership structure received reported means of 1.48 in Sri Lanka and 1.53 in Sweden, while compliance with regulatory standards and legal requirements received 1.50 and 1.60, respectively. Quality of property management practices received 2.90 in Sri Lanka and 2.50 in Sweden, while ethical management and corporate governance practices received 1.30 and 1.40, respectively.

The questionnaire results therefore demonstrate a substantial difference between the treatment of environmental and governance factors. Although governance issues may be relevant to property ownership, regulation and management, respondents did not generally identify them as strong direct influences on valuation judgement.

The interviews were consistent with this overall pattern. Swedish participants specifically noted that the environmental component receives the strongest attention, while social and governance considerations can be overlooked.

How ESG Is Incorporated into Valuation Practice

Beyond identifying which ESG factors matter, the study examined how ESG considerations actually enter the valuation process. The results demonstrate that ESG is more frequently incorporated qualitatively than through explicit numerical valuation adjustments.

Qualitative and Quantitative Integration

When respondents were asked how ESG factors are typically reflected in commercial property valuation, the largest group indicated that ESG was considered qualitatively but not directly quantified.

The interviews strongly supported this finding. Swedish participants explained that ESG information is frequently incorporated into valuation reports from a risk perspective rather than through an automatic adjustment to market value.

One Swedish participant stated

“We have an ESG section where we describe ESG, mostly from a potential risk perspective.”

The same evidence indicates that Swedish valuers are cautious about making separate ESG adjustments without sufficient market evidence.

Sri Lankan respondents demonstrated some use of rental assumptions, yields or risk premiums and capital expenditure assumptions when incorporating ESG.

However, interview participants also described difficulties determining the exact numerical impact of ESG characteristics.

Consequently, the combined evidence suggests that ESG is recognized within professional valuation practice but has not yet developed into a universally standardized quantitative component of valuation models.

Mechanisms of ESG Integration

The questionnaire also examined the mechanisms through which valuers incorporate ESG information. Respondents could identify market evidence, professional judgement, regulatory requirements, client instructions or sustainability certification standards.

Market evidence was the dominant mechanism, selected by 54.8% of respondents. Professional judgement was the second most frequently identified mechanism at 19.4%.

Country-level analysis demonstrated particularly strong reliance on market evidence among Swedish valuers. In Sweden, 83.3% identified market evidence as the principal mechanism through which ESG factors are reflected in valuation practice.

Among Sri Lankan respondents, 48.0% selected market evidence, followed by professional judgement at 20.0%, regulatory requirements at 16.0%, sustainability certification standards at 12.0%, and client instructions at 4.0%.

These findings are important because they show that valuers generally expect ESG-related adjustments to be supported by observable market behaviour. ESG considerations therefore cannot necessarily be translated directly into valuation adjustments simply because an individual characteristic is considered environmentally or socially desirable.

ESG Across the Valuation Process

The questionnaire examined the stages of the valuation process at which ESG considerations are most commonly incorporated. The options included property inspection and investigation, market analysis, financial modelling, risk assessment, and reporting and disclosure.

The findings show that ESG considerations are concentrated particularly in the property inspection and investigation stage, which accounted for 54.8% of responses.

The interviews supported this result. Both Swedish and Sri Lankan participants described inspection and analysis as important stages for identifying ESG-related characteristics and risks.

One Sri Lankan participant stated:

“Most of time I consider during inspection and analysis.”

A Swedish participant similarly explained:

“Mostly I would say during inspection and analysis. We try to identify any ESG-related issues before the inspection process.”

The evidence indicates that ESG assessment can therefore begin before physical inspection through the review of property information and risk records and continue during the inspection itself.

ESG Compared with Traditional Valuation Factors

Respondents were also asked to assess the importance of ESG relative to traditional valuation factors such as location, lease structure and market demand.

The largest group, 46.7%, considered ESG factors equally important to traditional valuation factors. A further 23.3% considered ESG more important, while 20.0% considered ESG much more important.

The results suggest that respondents generally do not perceive ESG as completely separate from mainstream valuation considerations. Instead, ESG is increasingly viewed as part of the broader set of property characteristics and risks that may affect commercial property performance.

However, the interview evidence again demonstrates that recognising ESG as important does not necessarily mean that a distinct monetary adjustment can always be identified.

ESG in Valuation for Financial Reporting

The questionnaire further examined how ESG considerations are reflected when commercial properties are valued for financial reporting purposes.

The largest group of respondents, 40.0%, stated that ESG is reflected through narrative discussion within valuation reports. A further 36.7% indicated that ESG is reflected through adjustments to valuation assumptions, including rents, yields or other financial inputs. 20.0% reported that ESG is systematically reflected using market evidence and valuation standards, while 3.3% stated that ESG is not reflected in valuation practice.

In Sri Lanka, narrative reporting was the most common approach (41.7%), followed by adjustments to valuation assumptions (37.5%). 16.7% reported systematic incorporation using market evidence and valuation standards, while 4.2% stated that ESG was not reflected.

For Sweden, the thesis reports an equal share of respondents (33.3% each) identifying narrative discussion, adjustments to valuation assumptions, and systematic incorporation using market evidence and valuation standards.

Together, these findings reinforce the broader result that ESG integration is developing but remains uneven and frequently descriptive rather than fully quantitative.

Challenges Affecting ESG Integration

A consistent finding across the documentary analysis, questionnaire and interviews was that practical ESG integration is constrained by limitations in data, market evidence and measurement.

Questionnaire Evidence

The questionnaire identified lack of reliable ESG data as the most frequently reported challenge, selected by 80.6% of respondents.

The remaining challenges were:

- Limited market evidence – 67.7%
- Difficulty quantifying ESG impacts – 48.4%
- Lack of standardised methods – 41.9%
- Lack of training – 35.5%
- Lack of regulatory support – 29.0%

These findings indicate that the principal obstacles are not simply related to awareness of ESG. Rather, valuers experience practical difficulties obtaining reliable information, identifying observable market effects and translating ESG characteristics into defensible valuation inputs.

Evidence from Documentary Analysis

The documentary analysis identified closely related barriers.

Palm (2025), examining Sweden, identified limited reliable data and market evidence, difficulty measuring the effect of ESG on value, the absence of a common industry method, and difficulty translating ESG characteristics into risk premiums or price adjustments.

Chandrasekara and Wickramaarachchi (2025), examining Sri Lanka, identified difficulties quantifying ESG components, limited comparable evidence, inadequate disclosure and limited ESG attention among some commercial property owners.

The literature reviewed in the study also identified limited knowledge, challenges connecting sustainability characteristics to value, insufficient guidance and difficulties pricing climate risk.

The documentary findings therefore correspond closely with the barriers identified independently through the questionnaire and interviews.

Interview Evidence from Sri Lanka

Sri Lankan interview participants repeatedly identified lack of reliable data, difficulty quantifying ESG components and inadequate mechanisms for ESG disclosure as significant challenges.

All participants similarly identified difficulties converting ESG characteristics into measurable valuation adjustments.

The interviews therefore suggest that ESG awareness exists among the participating Sri Lankan valuers, but the practical methodology required to translate that awareness into valuation calculations and reporting remains underdeveloped.

Interview Evidence from Sweden

Swedish interview participants also identified limited market evidence as a central challenge.

One participant stated

“There is less direct evidence.”

The participant further explained that it can be difficult to obtain ESG-specific evidence that can be separated from other property characteristics. This is particularly relevant because ESG performance may be associated with other characteristics, such as building age, condition and location.

Another participant highlighted reliance on external sources:

“We are very much reliant on third parties and municipalities to receive information.”

Participants also noted that the market has not always demonstrated a clear willingness to price individual ESG factors separately.

Therefore, even in the Swedish context, where the interview findings indicate comparatively greater ESG awareness, valuers still experience difficulty identifying the independent price effect of ESG characteristics.

Comparison of Challenges

The combined results reveal substantial similarities between the two countries.

In both Sweden and Sri Lanka, valuers encounter difficulties with:

data availability → market evidence → quantification → valuation adjustment.

However, the interview findings suggest somewhat different contexts. Sri Lankan participants described ESG integration itself as relatively new and highlighted the need for clearer methodologies and disclosure mechanisms.

Swedish participants appeared more accustomed to considering ESG but remained constrained by the inability to isolate its effect from other property characteristics and demonstrate that effect through transaction evidence.

Thus, different levels of ESG maturity do not eliminate the fundamental valuation challenge: valuers require sufficient market evidence before ESG characteristics can confidently be converted into numerical adjustments.

Strategies to Improve ESG Integration

The final part of the analysis examined strategies that could support stronger ESG integration in commercial property valuation.

Questionnaire respondents identified improved ESG data availability as the most preferred strategy, selected by 48.4%.

This was followed by

- Stronger valuation standards guidance – 25.8%
- Professional ESG training for valuers – 16.1%
- Stronger government regulation – 9.7%

The priority given to data availability corresponds directly with the identification of unreliable ESG data as the largest barrier.

The interview findings reinforced the importance of better data and market evidence. Sri Lankan participants highlighted the need for a clear methodology for applying ESG considerations in valuation practice. They also identified better ESG information and clearer market signals as important for more consistent implementation.

Swedish participants similarly emphasised market evidence and transparency. One participant stated:

“We need stronger evidence from the market showing pricing differences between assets with different ESG characteristics.”

Another highlighted the need for:

“Higher transparency when it comes to transactions.”

Improved information from property owners and clients was also identified as important. Participants explained that the quality of ESG information can vary substantially between clients, with some possessing extensive ESG information while others provide very limited data.

The findings therefore suggest that stronger ESG integration requires improvements at several interconnected levels. Better property-level ESG information would provide valuers with more reliable inputs; greater transaction transparency could help demonstrate whether ESG characteristics affect market pricing; clearer professional guidance could improve consistency; and training could support valuers in interpreting and applying ESG information.

Summary of Results

The integrated results provide clear findings in relation to the three research questions.

Regarding RQ1, ESG considerations are incorporated into commercial property valuation in both Sweden and Sri Lanka, but environmental factors receive substantially greater attention than social and governance considerations. 58.1% of respondents identified environmental factors as the ESG dimension with the strongest influence on valuation practice. Sweden showed a particularly strong concentration on environmental factors, with 83.3% of Swedish respondents selecting this dimension compared with 52.0% of Sri Lankan respondents.

The findings further demonstrate that ESG is often considered qualitatively rather than directly quantified. Market evidence is the principal mechanism through which ESG considerations enter valuation practice, and ESG factors are frequently identified during property inspection, investigation and analysis. Narrative

reporting remains common, particularly where the market does not provide sufficient evidence to support explicit adjustments to rents, yields or other valuation assumptions.

Regarding RQ2, the three evidence sources reveal a highly consistent set of barriers. The questionnaire identified lack of reliable ESG data (80.6%), limited market evidence (67.7%), difficulty quantifying ESG impacts (48.4%), and lack of standardised methods (41.9%) as the principal challenges. Documentary and interview evidence reinforced these findings. Although ESG integration appears more established among the Swedish interview participants than among their Sri Lankan counterparts, valuers in both countries experience difficulty isolating and quantifying the effect of ESG characteristics on property value.

Regarding RQ3, improved ESG data availability was the most preferred strategy for strengthening ESG integration, selected by 48.4% of respondents, followed by stronger valuation standards guidance (25.8%), professional ESG training (16.1%), and stronger government regulation (9.7%). Interview participants additionally emphasised clearer methodologies, stronger market evidence, improved transaction transparency and better ESG information from clients.

Overall, the findings indicate that ESG has entered commercial property valuation practice in both Sweden and Sri Lanka, but its incorporation remains uneven and predominantly evidence-dependent. Environmental characteristics currently dominate ESG consideration, while social and governance factors have a less explicit role. The central limitation is therefore not simply whether valuers recognise ESG, but whether sufficient data and market evidence exist to translate ESG characteristics into measurable and defensible valuation adjustments.

DISCUSSION AND THEORY APPLICATION

This section discusses all the results and the information I gathered through questionnaires, semi structured Interviews, and documentary analysis. It connects these findings with the theoretical framework to answer the research questions.

To answer the first research question, how do valuers in Sweden and Sri Lanka incorporate ESG factors into commercial valuation practices? I collected answers through a questionnaire by asking different sub questions to understand how ESG is integrated into commercial property valuation and how familiar valuers are with these concepts. According to the answers I received, valuers in both countries have a good awareness of these ESG factors and most respondents identified environmental factors as the most influential factor in commercial property valuation. During the interviews too I received similar answers showing that environmental factors received greater attention than social and governance factors.

Similar findings were reported by Syeda Marjia Hossain et al., (2023), who argued that environmental aspects are often easier to identify and incorporate because they have measurable physical characteristics. This finding is also supported by Palm (2025) in Sweden. Palm found that energy performance is the most important environmental factor in valuation. This is because energy use can be measured and compared with other properties. It also affects energy costs, which can influence the property's net operating income and market value. This suggests that environmental factors currently dominate ESG integration because they are easier to assess compared with social and governance dimensions. Stakeholder theory also helps explain this result, since environmental issues are more visible to investors, regulators, and market participants, creating stronger pressure for valuers to consider them.

Another important point that comes to discussion when discussing how ESG integrated in commercial property valuation is ESG factors are considered as qualitatively not directly quantified. In the interview participants explain that they show ESG factors generally through the risk identification rather than direct valuation adjustments. This finding also supports Palm (2025), who noted that ESG considerations are frequently incorporated indirectly through professional judgement rather than numerical calculations.

During the interviews with the valuers in Sri Lanka mentioned that they usually consider the environmental certificates, building energy performance and climate related risk when valuing large scale properties.

According to them they mainly check these because of the rules and regulations in Sri Lanka. Even though these factors are not considered directly as the ESG requirements, environmental factors are still included indirectly. This shows that ESG considerations may not always be integrated as ESG requirements. However, environmental factors are still incorporated indirectly as part of the valuation process and legal and regulatory requirements.

Palm (2025) further mentioned that valuers may consider all parts of ESG, but they do not always include everything in the valuation report. For example, a green or environmentally certified property may attract more tenants, which can lead to better rental income and lower vacancy risk. Similarly, in the interview, SW Valuer 3 stated that ESG is always considered, but it does not always affect the property value. Sometimes, it is only a secondary factor in the valuation process. This may indicate that ESG integration remains at a transitional stage, where awareness exists but standardized implementation methods are still developing.

The interview participant mentioned that ESG may not always be considered directly, but environmental factors are still included indirectly. Similar findings were reported by Palm (2025). Although RICS standards require valuers to consider sustainability and ESG-related factors but are always directly reported as “ESG” in the valuation report. Instead, they may be considered indirectly through transaction analysis, portfolio analysis, or general risk assessment. This shows that some sustainability risks are already considered in valuation, even if they are not directly called ESG. For example, valuers may consider flood risk, soil contamination, and environmental restrictions because these can affect future development, property risk, or investor interest. This strongly connects with valuation approaches.

By asking my second research question, what challenges regarding the integration of ESG criteria into commercial property valuation are identified in the existing literature and experienced by professional valuers in Sweden and Sri Lanka? I identified several challenges through the questionnaire responses. According to the answers the main challenge mentioned was the lack of reliable marketing data. Valuers do not always get enough information to understand how sustainability factors affect property value.

During the interview too, valuers highlighted that limited market evidence emerged as a major challenge they faced when integrating ESG into commercial property valuation, as well as the difficulty identifying direct pricing effects of ESG characteristics.

Additionally in the documentary analysis I found similar challenges that valuers face when integrating ESG into commercial property valuation.

Similar concerns were found in the questionnaire responses, where respondents frequently selected lack of reliable ESG data and limited market evidence as key barriers. This is consistent with Palm (2025) and Chandrasekara and Wickramaarachchi (2025), Newell, Nanda and Moss (2023), who identified data limitations as a major obstacle to ESG integration. Key challenges include the need for improved data quality and transparency. This suggests that market transparency remains essential for stronger ESG implementation. Valuers need enough information and knowledge to use their professional judgement and skills effectively and provide the best outcome for their clients (Hossain et al., 2023).

Warren-Myers (2013) mentioned that valuers need more training and clearer guidance to properly include sustainability in valuation practice.

The third research questions were identifying strategies that can support valuers in Sweden and Sri Lanka in overcoming barriers to integrating ESG criteria into commercial property valuation practice. According to the responses from the questionnaire the preferred strategy is the improvement of ESG data availability, and the second most preferred strategy is stronger valuation standards guidance. That means respondents always expected clear professional guidance. According to the Interview participants in both countries suggested that greater market transparency and stronger market evidence would support better ESG integration.

Overall, the findings match the theory. Valuation theory explains why market evidence is important. Stakeholder theory explains why ESG is becoming more important because of pressure from investors,

regulators, and clients. Institutional theory explains how standards and professional expectations influence valuation practice.

Finally, through my results I understood that valuers in both countries are aware of ESG factors and the effect of those factors on valuation. At the same time valuers identified environmental factors as the most important and they are applied mostly due to data availability. However, valuers still face different challenges including the availability of reliable market data and they suggest different strategies to overcome those challenges. Therefore, both countries are in the learning stage in the ESG integration process and are also trying to find a specific and systematic method to adjust this into their valuations.

CONCLUSION

This study examined the integration of Environmental, Social and Governance (ESG) criteria into commercial property valuation, with particular focus on valuers' experiences in Sweden and Sri Lanka. The findings show that ESG is increasingly recognized in valuation practice in both countries, but its application remains a learning stage still relatively new. Among the three ESG dimensions, environmental factors were found to have the strongest influence on valuation practice. Both the questionnaire survey and the interviews showed that valuers pay greater attention to environmental issues such as energy performance, climate related risks, environmental certifications, and building efficiency. Social factors were considered to a moderate extent, while governance factors received the lowest level of attention in both countries. This suggests that environmental factors currently receive the most attention because they are easier to identify, measure, and link to property value than social and governance factors.

The study also found that ESG is not yet fully integrated into valuation models in a systematic way. In many cases, valuers consider ESG factors qualitatively rather than directly incorporating them into rents, yields, or cash flow calculations. The questionnaire results showed that ESG is often reflected only in narrative discussion within valuation reports, while some valuers also include ESG through adjustments to valuation assumptions. The interviews supported this finding by showing that ESG is often treated as part of risk identification rather than as a direct numerical adjustment. This indicates that ESG awareness exists, but full methodological integration is still limited.

A further important finding is that ESG integration differs between Sri Lanka and Sweden. In Sri Lanka, ESG is describing as at an early stage. Valuers explained that ESG is more commonly considering in large scale commercial properties, while small and medium-scale properties receive less ESG attention. Some environmental factors are included indirectly because of legal and regulatory requirements, even when they are not intentionally treated as ESG factors. In Sweden, valuers showed a relatively higher level of ESG awareness, and ESG is considering in the valuation process. However, they still struggle to incorporate ESG factors clearly into valuation practice.

The study identified several important challenges affecting ESG integration in commercial property valuation. The most significant barriers were lack of reliable ESG data, limited market evidence, and difficulty quantifying ESG impacts. Respondents also highlighted lack of standardized methods, lack of training, and lack of regulatory support as additional challenges. The interviews in both countries confirmed that valuers often struggle to isolate the effect of ESG on value and to convert ESG information into measurable valuation adjustments. Therefore, the main problem is not a lack of awareness of ESG, but rather the lack of practical tools, consistent data, and clear evidence needed to apply ESG confidently in valuation practice.

In relation to improvements, the study found that the most important strategy for better ESG integration is improved ESG data availability. This was followed by stronger valuation standards guidance, professional training for valuers, and greater market transparency. Interview participants in both Sri Lanka and Sweden also mentioned the importance of clearer methodology, better information from clients, and stronger market signals showing how ESG factors influence property pricing. These findings suggest that stronger ESG integration requires not only awareness, but also practical support through better data systems, improved reporting, and clearer professional guidance.

This study has some limitations. It only focused on RICS-accredited valuers in Sweden and Sri Lanka, and the sample size was relatively small, especially in Sweden. Due to time limitations, a larger sample could not be collected. However, the use of both questionnaires and interviews helped strengthen the results. Future research could include a larger sample, more countries, and explore how ESG can be more directly incorporated into valuation models and different property sectors.

Overall, this study concludes that ESG is becoming an important part of commercial property valuation, but it is still in a learning stage in both Sweden and Sri Lanka. The study highlights the need for better data, clearer methodologies, and stronger professional guidance to support valuers in integrating ESG more effectively into future valuation practice.

REFERENCES

1. Alhojailan, M.I. (2012). Thematic Analysis: A Critical Review of Its Process and Evaluation. *West East Journal of Social Sciences*-December, [online]
2. Bukola Titilayo Fagbemi, Saah, B.P., Nduka, A.I. and Echezona Matthew Aloke (2025). The Evolution of ESG and Sustainability Reporting: A Review of Standards, Challenges, and Impacts on Corporate Transparency. *Journal of Economics Business and Commerce*, [online] 2(2), pp.297–305. doi:<https://doi.org/10.69739/jebc.v2i2.1239>.
3. Chaiwat Riratanaphong and Naramon Pewklieng (2024). ESG as a Sustainability Approach in Corporate Real Estate Management. *Journal of Architectural/Planning Research and Studies (JARS)*, 22(1), pp.270055–270055. doi:<https://doi.org/10.56261/jars.v22.270055>.
4. Chandrasekara, U. and Wickramaarachchi, N. (2025). The Impact of ESG Components on Market Value Changes in Commercial Property Valuation: Challenges and Insights from Sri Lankan Valuers. *International Journal of Real Estate Studies*, 19(1), pp.34–47. doi:<https://doi.org/10.11113/intrest.v19n1.407>.
5. Creswell, J.W. and Inoue, M. (2024). A Process for Conducting Mixed Methods Data Analysis. *Journal of General and Family Medicine*, 26(1). doi:<https://doi.org/10.1002/jgf2.736>.
6. Franck Bancel, Glavas, D. and Karolyi, G.A. (2025). Do ESG factors influence firm valuations? Evidence from the field. *Financial Review*. doi:<https://doi.org/10.1111/fire.12444>.
7. Gabrielli, L. and French, N. (2020). Pricing to market: property valuation methods – a practical review. *Journal of Property Investment & Finance*, ahead-of-print(ahead-of-print). doi:<https://doi.org/10.1108/jpif-09-2020-0101>.
8. Ifediora, C.O. and Igwenagu, C.L. (2024). Identifying Environmental, Social and Governance (ESG) Factors as Key Factors in Residential and Commercial Properties/Real Estate Investment Decision. *International Journal of Energy and Environmental Research*, 12(3), pp.1–19. doi:<https://doi.org/10.37745/ijeer.2013/vol12n1119>.
9. Katarzyna Sobolewska-Mikulska and K., & Socik, P (2025). Impact of Esg Factors on Property Value. *GIS Odyssey Journal*, [online] 5(2), pp.135–150. doi:<https://doi.org/10.57599/gisoj.2025.5.2.135>.
10. Khamisu, M.S. and Paluri, R.A. (2024). Emerging Trends of Environmental Social and Governance (ESG) Disclosure Research. *Cleaner Production Letters*, [online] 7, pp.100079–100079. doi:<https://doi.org/10.1016/j.clpl.2024.100079>.
11. Kseniia Zakharova (2025). Competitive Strategies In Sustainable Development Ecosystems: Challenges And Opportunities. *Economics Finance And Management Review*, [online] (2(22)), pp.16–28. doi:<https://doi.org/10.36690/2674-5208-2025-2-16-28>.
12. Larisa, A. and Ionaşcu, A. (n.d.). The Importance of ESG in the Real Estate Investments. [online] Available at: <https://stec.univ-ovidius.ro/html/anale/ENG/wp-content/uploads/2024/02/28.pdf>.
13. Li, X. (2024). Stakeholder Engagement and Communication Strategies in Real Estate Project Management. *Highlights in Business, Economics and Management*, 41, pp.73–78. doi:<https://doi.org/10.54097/4mfdq914>.
14. Mahajan, R., Lim, W.M., Sareen, M., Kumar, S. and Panwar, R. (2023). Stakeholder Theory. *Journal of Business Research*, [online] 166(1). doi:<https://doi.org/10.1016/j.jbusres.2023.114104>.

15. Mikulska, K.S. and Socik, P. (2025). the Impact of ESG Investment on Firm Value. *GIS Odyssey Journal*, vol.5(2).
16. Newell, G. and Marzuki, M.J. (2023). The Increasing Importance of Environmental Sustainability in Global Real Estate Investment Markets. *Journal of Property Investment & Finance*, 40(4). doi:<https://doi.org/10.1108/jpif-01-2022-0005>.
17. Newell, G., Nanda, A. and Moss, A. (2023). Improving the benchmarking of ESG in real estate investment. *Journal of Property Investment & Finance*, 41(4). doi:<https://doi.org/10.1108/jpif-10-2021-0084>.
18. Nguyen, H.H. and Nguyen, H.T. (2025). Do the ESG factors truly enhance real estate companies' valuation and performance in uncertain times. *Journal of Property Investment & Finance*, 43 No. 2, pp.190–221. doi:<https://doi.org/10.1108/jpif-03-2024-0036>.
19. Pagourtzi, E., Assimakopoulos, V., Hatzichristos, T. and French, N. (2018). Real estate appraisal: a review of valuation methods. *Journal of Property Investment & Finance*, 21(4), pp.383–401. doi:<https://doi.org/10.1108/14635780310483656>.
20. Palm, P. (2025). Practice Briefing: Environmental, social and governance (ESG) and real estate valuation - the case of Sweden. *Journal of Property Investment & Finance*, 43(2), pp.255–264. doi:<https://doi.org/10.1108/jpif-12-2024-0163>.
21. Park, H.-W., Jun, Seung, P.A. and Kim, S.-G. (2012). A Comparative Study on Methods of Income Approach to Technology Valuation. *Comparative Study on Methods of Income Approach to Technology Valuation Journal of Supply Chain and Operations Management*, [online] 10(2), p.76. Available at: https://www.csupom.com/uploads/1/1/4/8/114895679/jscom_2012-2-6.pdf.
22. Rahman, S. (2017). The advantages and disadvantages of using qualitative and quantitative approaches and methods in language 'testing and assessment' research: A literature review. *Journal of Education and Learning*, [online] 6(1), pp.102–112. doi:<https://doi.org/10.5539/jel.v6n1p102>.
23. RICS (2025). Red Book Global Standards. [online] Rics.org. Available at: <https://www.rics.org/profession-standards/rics-standards-and-guidance/sector-standards/valuation-standards/red-book/red-book-global>.
24. Syeda Marjia Hossain, van, Devaney, S. and Sayce, S. (2023). UK commercial real estate valuation practice: does it now build in sustainability considerations? *Journal of Property Investment & Finance*, 41(4), pp.406–428. doi:<https://doi.org/10.1108/jpif-11-2022-0083>.
25. Tajani, F., Morano, P., Salvo, F. and De Ruggiero, M. (2019). Property valuation: the market approach optimised by a weighted appraisal model. *Journal of Property Investment & Finance*, 38(5), pp.399–418. doi:<https://doi.org/10.1108/jpif-07-2019-0094>.
26. Warren-Myers, G. (2023). Valuing sustainability Part 2: Australian valuers' perception of sustainability in valuation practice. *Journal of Property Investment & Finance*. doi:<https://doi.org/10.1108/jpif-11-2021-0092>.
27. Warren-Myers, G. (2013). Is the valuer the barrier to identifying the value of sustainability? *Journal of Property Investment & Finance*, 31(4), pp.345–359. doi:<https://doi.org/10.1108/jpif-01-2013-0004>.