Transparency in the real estate market - Preliminary results of a global comparative study

Grazyna WIEJAK-ROY, United Kingdom
Bastiaan REYDON, the Netherlands
Peter ACHE, Germany
Eva Katharina KORINKE, Germany
James KAVANAGH, United Kingdom
Agnieszka BIEDA, Poland

Key words: grey market, market transparency, real estate markets, property markets, transparency survey

SUMMARY

This is a collaborative research about Transparency in Real Estate Markets and its definition. The research is initiated by the International Federation of Surveyors (FIG), run and supported by the University of the West of England, Bristol, UK (UWE Bristol), the Royal Institution of Chartered Surveyors (RICS), the International Valuation Standards Council (IVSC) and The European Group of Valuers' Associations (TEGOVA). The research uses a global comparative study to examine the nature of transparency in real estate markets and identifies key differences between national markets due to the regulatory, economic, political, social, and cultural environment in which sellers and buyers operate. Market transparency reflects informational market efficiency and information asymmetry. The research is concerned with the perception, definition, and measurement of transparency in real estate markets and explores transparency deficits that negatively affect the economy and society. To obtain comparable evidence, data was collected using an international online survey and utilising the 'purposive sampling' technique, whereby professionals working in the field of land administration and management and in property surveying across the private and public sectors as well as in the higher education sector have been invited to contribute their insights. These included FIG, RICS, IVSC, CASLE and TEGOVA members. Understanding market transparency, beyond the current measures available for selected countries and selected real estate sectors only, should help improve policies aimed at enhancing market efficiency. From a global perspective, the results of this research inform policymakers and support the more vulnerable members of society who are often deprived of their real estate rights due to market opacity. Furthermore, the applied scientific approaches and the preliminary findings offer a framework for additional global research.

Transparency in the real estate market - Preliminary results of a global comparative study

Grazyna WIEJAK-ROY, United Kingdom
Bastiaan REYDON, the Netherlands
Peter ACHE, Germany
Eva Katharina KORINKE, Germany
James KAVANAGH, United Kingdom
Agnieszka BIEDA, Poland

1 INTRODUCTION

Transparency is widely endorsed in principle yet consistently resisted in practice when it requires the disclosure of concrete market information. In real estate markets, transparency is often framed as a matter of private commercial advantage rather than a public good. As a result, what constitutes "transparency" remains inconsistently defined across jurisdictions, unevenly implemented, and weakly enforced. This ambiguity contributes to persistent information asymmetries, elevated transaction costs, reduced market liquidity, and, ultimately, the misallocation of capital and erosion of public trust in market outcomes.

Real estate markets are particularly sensitive to transparency deficits. Transactions can be infrequent, assets are heterogeneous, and prices are negotiated privately (especially in informal markets), often with limited disclosure. Where market information is fragmented, inaccessible, or unreliable, buyers, sellers, valuers, lenders, and policymakers must operate under heightened uncertainty. Although greater transparency delivers long-term benefits—including improved market efficiency, valuation reliability, and social equity—these benefits are frequently underestimated relative to the short-term costs and distributional consequences of information disclosure. Structural barriers persist, including weak institutional frameworks, fragmented data infrastructures, restrictive access regimes, and vested interests that benefit from market opacity.

This analysis moves beyond normative assertions towards an empirical and comparative assessment of real estate market transparency. The objective is to identify transparency levels, perceptions, challenges and responses across jurisdictions in order to inform evidence-based improvements in market observation, valuation practice and policy design. The main research questions are therefore:

- What is the state of market transparency across various jurisdictions?
- What are the key differences in the perception of the importance of market transparency in the countries studied?

- What are the main challenges to transparency?
- How are the main transparency challenges addressed?
- What needs to be improved to close (or at least reduce) transparency gaps?

To answer these questions, a global online survey was conducted using purposive expert sampling. Participants were drawn from professional communities involved in land administration, property valuation, real estate market analysis, and related policy fields, including members of FIG, RICS, IVSC, TEGOVA, and associated organisations. The survey captures both quantitative assessments and qualitative insights, enabling comparative analysis across jurisdictions while preserving contextual nuance.

This research is a joint initiative of the University of the West of England (UWE Bristol), the International Federation of Surveyors (FIG), the Royal Institution of Chartered Surveyors (RICS), the International Valuation Standards Council (IVSC), and The European Group of Valuers' Associations (TEGOVA). By integrating institutional, professional, and behavioural perspectives, the study contributes to the development of a more consistent and operational understanding of real estate market transparency. Its findings have direct implications for valuation practice, market data governance, professional standards, and evidence-based policymaking aimed at improving market efficiency, credibility, and social outcomes.

The remainder of this study is organised as follows: Section 2 provides a literature review on real estate market transparency; Section 3 provides details of our methodology; Section 4 describes and discusses the data collected; and finally, Section 5 provides conclusions and recommendations for policy makers and practitioners.

2 LITERATURE REVIEW

2.1 Defining transparency

The importance and benefits of transparency are widely recognised. In real estate markets, transparency is a key prerequisite for addressing social, economic and political challenges, including the evaluation of policy interventions such as funding schemes for affordable housing across different spatial contexts.

Previous research highlights the importance of governance, regulation and data quality for transparent markets. Newell (2016) emphasises data integrity, clear regulatory frameworks, open transaction processes, strong governance structures and a culture of information disclosure. Similarly, Grover and Grover (2012) underline the role of land governance, freedom of information and association, institutional quality and the absence of corruption as central components of market transparency and valuation quality.

Against this background, an initially provisional and general understanding of market transparency refers to the degree of **accessibility, visibility, reliability and quality of information** available within a market (Ache *et al.*, 2024). Effectively, **Real Estate Market**

Transparency (*T*) is a function of **institutional design, data infrastructure, professional practice and culture:**

***T = f*(*Institutional Design, Data Infrastructure, Professional Practice, Culture*)**

This describes how comprehensive and consistent information on prices, transactions, assets, market participants and relevant market data can be accessed, understood and compared. From the perspective of the FIG, transparency is not limited to the mere availability of information but relates to the existence of an information environment that enables informed, reproducible and accountable decision-making in the public interest. A transparent market therefore supports fair competition, improves the efficiency of market processes, and underpins the credibility, robustness and consistency of valuation outcomes. In this sense, **market transparency comprises**:

- **Accessibility** of relevant market information on prices, transactions, assets, market participants and locations.
- **Quality and reliability** of data, enabling robust, credible and reproducible valuation and decision-making processes.
- **Comparability and consistency** of information across time, locations and market segments.
- **Traceability and clarity** of pricing mechanisms, valuation assumptions and transaction structures.
- **Information efficiency** that reduces uncertainty, supports fair competition and strengthens market integrity in the public interest.

Together, these elements provide a structured and operational basis for assessing market transparency and for linking transparency directly to market efficiency, valuation quality and the creation of public value, in line with the principles articulated by FIG and aligned with IVS thinking.

2.2 Transparency and institutions

In *The Great Transformation*, Polanyi defines land (together with money and labour) as a fictitious commodity – things that were embedded in social relationships and were not usually subject to be bought and sold or were not commodified, before the emergence of capitalism (Polanyi, 1944/2001). This leads to the creation and regulation of markets for those fictitious commodities by the state since they cannot be self-regulated. This argument justifies the necessity for the state and its institutions to regulate land rights and ownership. This regulation is used to make individual property rights clear and transparent, to minimise conflicts over rights and to simplify its trade.

Clear rules and well-defined property rights form the foundation of economic development because institutions shape human behaviour by establishing the *'rules of the game'*. However, institutional forms differ across countries and contexts, meaning no single institutional model can explain development everywhere (Angeles, 2011). In real estate markets, institutional

frameworks are essential for transparency but are not sufficient on their own; culture, innovation, and other social factors also influence market outcomes.

North (1981, 1990, 2005) proposed to understand transparency of the real estate markets in the context of transaction costs. When rules, information systems, or institutions are weak, buyers face costly information searches, fragmented records, and needs to reliance on potentially biased agents. Information asymmetry increases risk and may discourage transactions, reducing market liquidity. Buyers often mistrust well-informed agents, highlighting how poor transparency can distort behaviour and elevate transaction costs in real estate markets (Milgrom and Stokey, 1982).

Hernando de Soto (2000) sees market transparency as a way to reduce dead capital that can be *'unlocked'* through guaranteeing clear property rights over land, trading or using real estate as collateral for credit.

2.3 Perspectives on transparency

The **economic perspective** generally focuses on investment activities or their framework conditions. In an economic context, transparency means providing comprehensive and reliable information so that the market (or the market participant) has sufficient knowledge to operate efficiently and make informed decisions. The aims are therefore generally to promote business and trade, enhance the confidence and attractiveness of the market and promote the willingness to invest, but also to increase social prosperity among the population. The **social perspective** is not contradictory but focuses in particular on the aspect of fairness and equal conditions of participation in market processes. The objectives of transparent real estate market mechanisms from a socio-political perspective are such that attributes such as socio-economic status or ethnic or religious background should not play a role in access to information or the enforcement of rights.

2.4 Liquidity and transparency

The liquidity of land and real estate is closely tied to the clarity and trustworthiness of property rights. When ownership rights are transparent and reliable, assets can be bought and sold more easily and with lower risk of loss, making such assets more liquid. Land functions both as a productive and speculative asset. Its price reflects three key expectations: (1) the quasi-incomes resulting from its productive use, (2) liquidity, a product of its speculative use while a liquid asset, and (3) cost of maintenance arising from the land remaining in the portfolio of the economic agents (Reydon, 1992, 1994). These factors make land a viable asset to have in a portfolio, which leads to there being a demand for land from the most diverse ownership groups, from farmers to industry and banks. The more transparent the market, the higher the liquidity.

2.5 Data availability and quality

A fundamental problem in assessing transparency is that many valuation models and standards make implicit assumptions about the access to data and quality of data governance. The key

useful resources providing international comparisons include Ease of Doing Business Index (World Bank, 2020), Global Real Estate Transparency (JLL, 2024) and State of Land Information Index (SOLIndex, 2024) (**Table 1**).

Table 1 Approaches for transparency measurements.

Institution (Year)	**Product/ Title**	**Purpose**	**Global reach**	**Instrument**	**Categories**
World Bank (2020)	Ease of Doing Business Index	Comparing frameworks for doing business, providing governments with benchmarks, identifying reforms for better business environment, enabling businesses with information to make informed decisions	190 economies (politically independent countries and territories with their own government and economy)	Survey and expert consultations In addition: information on potential regulatory reforms from governments and World Bank teams	12 areas of business regulation 10 areas are included in the score (assessing the absolute level of regulatory performance and its change over time) and the ranking (performance in business regulation relative to the performance of others)
JLL (2024)	Global Real Estate Transparency Index	Provide a global transparency benchmark as a guide for cross-borders real estate investors, lenders and corporate occupiers	89 countries and territories	Survey and follow-up interviews and market research for verification	6 sub-indices (see above) which incorporate 256 different datapoints /questions 5 levels of transparency: high, transparent, semi-transparent, semi-opaque, opaque
SOLIndex (2024)	State of Land Information Index	Assesses the completeness and openness of public sector land administration data globally	42 countries (Africa, Latin America and Caribbean countries)	No details	Completeness (Legal and policy, land tenure, land use, land development, land value) Openness (online, accessible, free, timely, metadata, standards, downloadable, open licence, machine readable)

2.6 Market maturity and transparency

Until the late 1990s, the main barrier to real estate market development was the lack of timely, accurate, and interpretable data, making transparency a defining feature of mature markets. Emerging economies in Central and Eastern Europe lacked performance benchmarks into the mid-2000s. However, today even in mature markets the debate on transparency continues, with notable differences between the UK, US, and Germany, where Germany still lags despite improvements. Comparative studies show that the most competitive and resilient countries have the most transparent markets. In advanced economies, transparency is driven by technology and strong institutions, whereas in emerging markets it is hindered by weak governance and corruption.

2.7 Decisions under uncertainty in Real Estate Markets

Experts, investors, journalists, banks and others observe often price developments in real estate markets over many years and derive seemingly logical conclusions from them. After a prolonged period of rising prices, a market is sometimes assessed as *'overheated'*, and a correction is judged to be inevitable. Out of concern for potential losses, investors postpone their investments – not because the fundamental data have changed, but because the historical price series itself becomes the dominant argument. Other actors interpret the same development in precisely the opposite way: sustained price increases are taken as evidence of the market's robustness, risks are disregarded, and investment activity is further intensified. Both decisions appear rational, and both draw on what is perceived as *'market experience'*. Yet they rely less on robust evidence than on psychological heuristics and expectations derived from short sequences of past events. This leads to *'misbehaviour of the real estate market'* (Ache *et al.*, 2025) – markets behaving irrationally despite the presence of professional actors, but rather because of them, as individual misjudgements and cognitive biases coalesce into collective market dynamics evidencing conflicting heuristics and biases (Tversky and Kahneman, 1974).

Three heuristics are particularly relevant for understanding decision-making and mispricing in real estate markets: representativeness, availability, and anchoring. The infrequency of property transactions, high capital intensity, long holding periods, and limited transparency further exacerbate these effects, as learning through repeated feedback is constrained. From this perspective, improving real estate market performance does not require the assumption of fully rational actors, but rather institutional and methodological frameworks that limit the influence of heuristics and biases. Greater transparency, systematic access to high-quality market data, and the explicit treatment of uncertainty through evidence-based and probabilistic methods are essential to counteract heuristic-driven misjudgements. By shifting the focus from point estimates and narratives to distributions, confidence intervals, and model performance, the behavioural roots of market misbehaviour can be addressed more effectively. Real estate markets are inherently characterised by uncertainty. Price formation is based on heterogeneous assets, infrequent transactions, long investment horizons and incomplete information. For investors, this means that decisions are routinely taken under conditions in which risks are not directly observable but must be inferred. Where such uncertainty is not made explicit, the likelihood of costly misjudgements increases. Improved transparency makes uncertainty visible and manageable and helps mitigating pro-cyclical risk. Access to high-quality, reliable

real estate market data reduces decision uncertainty, limits misallocations of capital, and sustainably strengthens the acceptance of valuation outcomes (Garmaise and Moskowitz, 2004; Granja *et al.*, 2017; French, 2020).

2.8 Markets activity and Material Uncertainty

Professional valuation standards function effectively in active markets with reliable data, but in low-activity markets or during periods of major disruptions, uncertainty becomes a significant challenge for valuers. Since the 1990s, research has shown that limited or unreliable evidence can lead to both under- and overvaluation during crises. Events such as the Global Financial Crisis, COVID-19 and ongoing geopolitical conflicts illustrate how market standstills intensify valuation difficulties. To address this, RICS and IVSC provide guidance on managing uncertainty, including the use of *'material uncertainty'* clauses when valuers cannot apply normal confidence levels due to extraordinary circumstances (RICS, 2003; IVSC, 2013). These clauses require transparent disclosure of data limitations, their reliability and how the data has informed the valuation. Although widely used during the COVID-19 pandemic, the principle remains essential whenever evidence is weak. Ultimately, material uncertainty statements support transparency, protect client understanding, and enable informed decisions in volatile or opaque markets.

2.9 Transparency across countries and cultures

Public perceptions of real estate market transparency are shaped by cultural and historical experience. Individuals with only personal or family involvement in property transactions develop greater discomfort, while experienced market participants perceive higher transparency because they know where to find information and how to interpret it, often using learned mental shortcuts. While in some countries access to real estate market data is restricted for political reasons, in others this is linked to differences in cultures (Hofstede *et al.*, 2010). There is a positive link between the accessibility of data including their reliability and the country's culture of sharing information (French, 2020). Hence, transparency across countries must be considered in both the political and cultural context.

2.10 Hierarchy of evidence

Valuation requires reliable information. In response to real estate's weak informational efficiency, several institutions provide instructions on the reliability of various types of data and the ability to use it in valuation for different purposes (IVSC, 2024; RICS, 2024; TEGOVA, 2024; French, 2020; IFRS, 2011) (**Table 2**). This allows market participants to operate under established criteria which helps ensuring consistency in making value estimates. While RICS (2019) refers to *'hierarchy of evidence'* which provides three categories: A (direct comparables), B (general market data) and C (other sources), IVSC (2024) refers to *'hierarchy of comparable evidence'* including direct comparable evidence, indirect comparable evidence, general market data and other sources. These can be compared to IFRS 13 - Fair Value Measurement (IFRS, 2011), that defines three levels of inputs for fair value estimation. However, these all differ from French (2020) approach that is based on veracity and reliability and categorises information as *'hard'* (comparable sale of a similar property) and *'soft'* (non-verifiable reports and commentaries of third parties).

Table 2 Real estate market transparency and valuation evidence.

Institution (Year)	Product/ Title	Purpose	Global reach	Instrument
IFRS Foundation (2011)	Fair Value Measurement (IFRS 13)	Establish uniform reporting standards for the fair value measurement approach; require disclosure of information; provide a basis for valuing assets and liabilities	All companies reporting under IFRS and public entities reporting fair value measurements	Guideline criteria
RICS (2019)	Comparable evidence in real estate valuation	Establish globally consistent principles for the use of comparable data; Discuss and address its use, its availability, its potential sources and its relative importance in the property valuation process	Requirements or expectations how to provide services/ outcomes apply for all RICS members and regulated firms	Setting of standards
IVSC (2024)	International Valuation Standards	Promote and maintain a high level of public trust in valuation practice	Global	Professional Standards
RICS (2024)	RICS Valuation Global Standards	Provide the highest levels of assurance to promote and maintain public trust in valuation professionalism and quality	Global	Professional Standards
TEGoVA / Nick French (2020)	Use of Comparable Evidence in Property Valuation	Identify the availability of comparable data in the market/income approach, and how professional valuers use and rank them	TEGoVA members	Survey
TEGoVA (2024)	Valuation Standards	Provide valuers with their essential practice tool in the most didactic manner and in a way that is also intelligible to clients and the authorities	Europe (TEGoVA members)	Professional Standards

2.11 Dynamics of real estate transparency

The recording of transparency in the real estate market means that its development progress over time should also be the subject of research. A key driver for such comparisons and analyses is the expanding global investment in real estate.

Newell (2015) based on data from the *Global Real Estate Transparency Index*, the T*ransparency International Corruption Perception Index* and the *World Economic Forum Global Competitiveness Index*, concluded that global real estate market transparency increased by 16% between 2004 and 2014 among the 49 markets consistently benchmarked. The strongest progress was observed in the Asia-Pacific region, followed by Europe, and several emerging markets, e.g. Turkey and Indonesia, ranked among the top improvers (Newell, 2015). However, many emerging markets, notably in Middle East/North Africa, Sub-Saharan Africa and Latin America, turned out to be *'underachievers'* and exhibited lower transparency than expected given their corruption levels (Newell, 2015).

As per the *Global Real Estate Transparency Index,* covering now 89 countries, over the last 10 years, most of the transparency growth has been in the area of sustainability. More recently. AI, big data and digital platforms lead to major advances in the field of market data and market fundamentals. However, highly transparent markets improve faster than less transparent ones (JLL, 2024). Key improvements include such as an introduction or improvements to beneficial ownership registers for foreign purchasers of real estate in countries such as Germany, UK, Spain, Canada and Australia (JLL, 2024), digitisation of land records in Kenya (JLL, 2022), sustainability and climate-related disclosures (JLL, 2024).

The World Bank's *Ease of Doing Business (EoDB)* Index, published annually from 2003 to 2020, assessed business regulations and property rights across 190 economies. Although not intended as an investment guide, it measured how regulatory environments support or hinder entrepreneurial activity, including starting a business, accessing credit, registering property, taxation, investor protection, and insolvency. EoDB indicates positive correlations between higher EoDB scores, economic freedom, GDP growth, and reduced poverty. The data also reveal that property registration remains particularly problematic in South Asia and Sub-Saharan Africa (World Bank, 2020).

SOLIndex developed so far for 42 countries is a much narrower resource that assesses the completeness and openness of public sector land administration data globally (SOLIndex, 2024). For the investigated countries, scores are relatively low. However, even though countries may score low on completeness, they are frequently scoring higher for the openness of that data suggesting that there is a momentum to continue progress on the open publication of readily available data.

2.12 Formal vs. informal markets

Globally, 70% of land and property remains unregistered (GLTN, 2021). Valuation can occur without formal registration, but informality is inherently opaque. Without transparent valuation data and comparable evidence, markets lack credibility, weakening tenure security and limiting access to finance (Obeng-Odoom & McDermott, 2018; GLTN, 2018; GLTN, 2021). However, informality is by its very nature opaque. *'Informal markets'* are outside of government agency control, and the informality risks can lead to all kinds of issues including adoption of inappropriate valuation methods and undervaluation of assets (Obeng-Odoom and McDermott, 2018).

Real estate valuation most frequently required when properties change hands. Because real estate markets are decentralised and transactions occur infrequently, valuations play a crucial role in filling information gaps and supporting transparent decision-making. While many countries have well-established valuation practices, others still lack professional capacity despite recognising the importance of impartial and objective valuation processes. Land rights may embody multiple forms of value: market value based on economic potential, alternative-use value shaped by state regulation, and non-market value derived from natural capital or sociocultural significance. Unlike economic value, non-market values cannot be easily expressed in monetary terms and may instead reflect broader notions of *'importance'*. Recent initiatives such as the UN GLTN manual and FAO's VGGTs (FAO, 2022) highlight the need to address these non-market dimensions and in particular the *'natural capital value'* (HM Treasury 2021). Ultimately, transparent and accessible valuation systems are essential components of effective land administration, alongside registration, mapping, and planning.

2.13 Transparency and sustainability

Sustainability disclosure requirements have become a major driver of improvements in real estate market transparency. According to JLL (2024), increasing regulatory expectations, particularly in Europe, are pushing companies to disclose more detailed information on the environmental performance of buildings. A central element of this shift is the EU-Taxonomy, a complex and politically sensitive framework designed to classify economic activities. Rooted in the ESG principles and the UN Sustainable Development Goals, the Taxonomy is expected to drive capital toward sustainable investments. Other EU directives—the updated Energy Performance of Buildings Directive (EPBD) (Directive (EU) 2024/1275) and the Energy Efficiency Directive (EED) (Directive (EU) 2023/1791) —reinforce transparency through binding requirements on renovations, zero-emission standards, energy performance reporting, and lifecycle CO_2 disclosures. These regulations are prompting member states to develop comprehensive building-level data registers to manage increasingly complex decarbonisation policies.

Despite this regulatory momentum, the future of sustainability-related transparency is uncertain. While mandatory reporting increases data availability and reduces greenwashing risk, recent political signals suggest a potential weakening of EU climate ambitions (e.g., scaling back of the 2050 net-zero target to a 90% emissions-reduction goal and possible delays

to the implementation of ETS II for buildings and transport). Such adjustments reflect tensions between climate ambition, economic competitiveness, and social impact.

Valuation surveyors must account in valuations and development appraisals for sustainability issues (RICS, 2024). While the valuation methodologies for sustainability accounting are still in their infancy and there is a severe lack of consistent market transactional information.

Companies also face uncertainty due to rapidly evolving regulations and fragmented reporting frameworks. Ironically, firms aiming for Net-Zero may hesitate to disclose sustainability improvements when data or methodologies remain imprecise, particularly regarding embodied carbon, for fear of misleading reporting or legal exposure (Weinfeld and Wiejak-Roy, in press).

3 RESEARCH DESIGN AND METHODOLOGY

3.1 Data collection

This research is based on an online survey through which views of a wide range of surveyors operating across the targeted countries have been collected. which allowed the gathering evidence of first-hand experience. An on-line survey as a research instrument has been selected as it enables data comparison through both qualitative and quantitative analysis and helps boost the response rate needed to collect sufficient evidence from participants across various countries. To obtain a rich picture of participants' understanding and impressions on the real estate market transparency, the survey also included qualitative questions (Denzin and Lincoln, 2005).

Given the large scope of this task, a pilot survey among members of Commission 9 of FIG (n=5) was conducted to validate draft questions (Gillham, 2008) and to improve the wording, layout, and design to ensure accessibility and clarity for professionals operating across different jurisdictions. The final questionnaire comprised six sections:

1. Personal profile (Q1-8): professional membership, profession, years of professional experience, education background, specific interest in the real estate market, market segment of focus, and the country for which transparency is assessed;
2. Defining *'transparency'* (Q9-10): participant's own view of what is meant by real estate market transparency and what they think is the understanding of the transparency by the wider public;
3. Legislation and centralisation (Q11-14): existence of national regional and or local regulations, their enforcement, the existence of government-led transaction recording systems, and their level of centralisation;
4. Government transaction recording (Q15-26): comprehensiveness of the system, types of rights recorded, market sectors for which recording is in place, or is not and should be or is not required, accessibility of data, responsibility for recording, reliability of existing systems, dealings with discrepancies between recorded and real transaction prices, strengths and weaknesses of the systems;
5. Non-government transaction recording (Q27-38): same characteristics as for government transaction recording; and

6. Change orientation (Q39-42): evaluation if the systems in place are good enough to support the reasonable functioning of the real estate market, needs for changes to improve market transparency, news on any recent or ongoing projects to improve transparency, and other thoughts on the real estate market transparency.

While questions across all survey parts required text responses, several questions used 3- to 6-point Likert scales (parts (3), (4), (5), and (6)) or multiple-choice responses (part (1)). The survey was designed for desktop and mobile use via Qualtrics XM platform. For details see, the full The Global Real Estate Market Transparency Survey: https://uwe.eu.qualtrics.com/jfe/form/SV_6zCR9PWpZsuo63A or use the following QR code:

3.2 Sampling and sample size

In line with Etikan *et al.* (2016), experienced professionals were selected as respondents via purposive expert sampling. These included professionals working in the field of land administration and management and in property surveying across the private and public sectors as well as in the higher education sector. Participants were specifically sourced among members of FIG and its member organisations such as RICS, TEGOVA, CASLE and IVSC via communication channels of these organisations, including regular newsletters, conferences and events, etc. Further sampling was enabled by members of the relevant professional bodies distributing the survey via their equivalent communication channels. This method helped reaching a sufficient number of members across multiple countries. The survey was launched in early 2024 in English language. Recognising limitations to data collection, in Autumn 2025 a Spanish language version of the survey has been distributed to Spanish speaking FIG member organisations. The survey was closed in late 2025.

Addressing the survey to participants, who are members of their relevant national professional organisations, ensured that they were all fully competent to respond to the whole survey. Across most professional bodies affiliated with FIG, members are bound by strict ethical standards and duty of care to their relevant professional societies. Thus, they can be reasonably expected to provide well informed and factually correct responses to survey questions.

3.3 Data analysis

For statistical analysis, all primary data gathered were imported into Microsoft Excel. Part (1) and all other multiple-choice and Likert scale data was analysed using primarily descriptive statistics. Qualitative text responses were examined using the six-step thematic analysis including (1) familiarising with data; (2) generating initial codes; (3) searching for themes by combining codes; (4) reviewing themes; (5) defining themes; and (6) reporting findings (Guest *et al.*, 2012; Braun and Clarke, 2022).

3.4 Ethical considerations

The research was subject to internal ethical approval by the university, ID No. CATE-2223-191 dated 16 October 2023. The authors certify that the study was performed following the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments Before commencing the survey, all participants were informed of the nature of the study via a participant information sheet detailing that their consent and involvement were anonymous and entirely voluntary. Following the survey, participants were given a two-week window to allow them (if they desired) to withdraw their responses.

4 PARTICIPANTS PROFILES

The survey was completed by 88 people active in specific national real estate markets. European countries were the most represented (57 responses), with the highest number of respondents recorded from Germany (11), Poland (6), Italy (6), Austria (5), the Netherlands (5) and the United Kingdom (5). Lest than 5 responses were received from European countries including Belgium (4), Ukraine (4), Greece (2), Slovakia (2), Latvia (1), Moldova (1) and Romania (1), Portugal (1), North Macedonia (1), Finland (1) and Bosnia and Herzegovina (1). African countries were represented by 16 respondents, coming from Ghana (7), Nigeria (3), Uganda (3), Tanzania (2) and Zimbabwe (1). South America was represented by 12 respondents from Brazil (7), Colombia (2), Uruguay (2) and Argentina (1). The representation of Asia was much smaller (2 respondents) and consisted of representatives of Bhutan (1) and Nepal (1), while North America appeared in the survey through responses referring to the United States (1). Each respondent related their answers to one country of their main area of professional or research interest.

In terms of organizational affiliation, membership in the International Federation of Surveyors (FIG) was declared by 24 respondents. Respondents also indicated their affiliation to other professional organisations, in particular RICS (17) and TEGOVA (11), which confirms the high level of professionalisation of the surveyed group.

The professional structure of the sample was clearly diverse. The largest group were private sector consultants dealing with surveying or similar service (40 people), public servants (20 people) and academics (19).

Respondents had significant professional experience in the area of land and real estate. The largest group consisted of experts with more than 20 years of experience (46), followed by people with experience of 11-15 years (19) and 16-20 years (14). Respondents with shorter experience were less represented: 6-10 years (6) and 0-5 years (3).

The educational background of participants was also high. People with a master's degree or equivalent (49) and a doctorate (21) dominated, with a lower share of respondents with a bachelor's degree (14) and lower degrees (2).

The scope of substantive interests of the respondents included key areas of real estate market functioning, in particular valuation (70), land management (34), cadastre (34), real estate development (31) and real estate taxation (28).

Such a diverse structure of the sample reflects the complexity of the issue of transparency of real estate markets in an international perspective.

5 RESULTS

The results of the research are presented in a thematic layout, reflecting the key areas of the *Real Estate Transparency Survey*. The analysis covers both the institutional and legal framework and the functioning of transaction recording systems, with particular emphasis on the differences between governmental and non-governmental solutions. The presented results are based on response distributions and co-occurrence matrices, which allows us to capture not only the frequency of individual assessments, but also the relationship between key dimensions of real estate market transparency.

5.1 Legal regulations and the effectiveness of their enforcement

We started by asking if the country has national legislation ensuring data transparency in the real estate market and to what extent is this legislation enforced (**Table 3**). This allowed us to assess the relationship between the existence of a legal framework for the transparency of data in the real estate market and the degree of its actual enforcement.

Table 3 Relationships between assessments of the existence of a legal framework for transparency of data in the real estate market and the degree of its actual enforcement.

		National legislation				
		Comprehensive legislation	Limited or poor legislation	I do not know	No legislation	All
Legislation enforcement	Fully	11	4	0	0	15
	Not at all	2	1	0	10	13
	Partially	10	24	0	0	34
	Poorly	2	10	0	3	15
	I do not know	2	0	3	2	7
	No response	0	0	0	4	4
	All	27	39	3	19	88

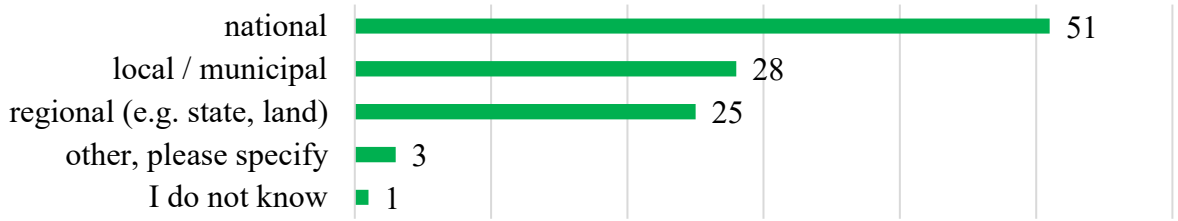
Source: Authors' own

For countries where respondents indicated the existence of comprehensive legislation, the assessment of its enforcement as full (11) or partial (10) prevailed, but a number of respondents also indicated weak (2) or even no enforcement (2). In countries where transparency regulations were assessed as limited or weak, partial enforcement was most often reported (24). At the same time, a significant number of responses indicating weak enforcement were observed (10). Only a few respondents assessed them as fully enforced (4). In the countries where respondents declared a lack of national legislation on market data transparency, responses indicating a lack of enforcement prevailed (10). **Overall, there is a clear positive relationship between the perceived quality of the legislative framework and the assessment of its enforcement. The better the legal regulations are evaluated, the more often their full or partial enforcement is indicated, but even in this group this does not eliminate implementation problems. On the other hand, the lack or low quality of regulation almost unambiguously correlates with assessments indicating ineffective or non-existent enforcement mechanisms, which is a significant barrier to real transparency of real estate markets.**

5.2 Real estate transaction registration systems

In most of the analysed countries there are formal, government systems for registering transactions in the real estate market. As many as 81 (92%) participants confirmed the existence of government systems, while the lack of such systems was indicated by 6, and 1 person declared a lack of knowledge in this area. This means that the sample is dominated by countries where real estate trading is subject to institutional public supervision. However, these systems are characterized by varying degrees of centralization (**Figure *1***). Nationwide solutions were most often referred to (51), but a significant proportion of respondents referred to systems operating at local or municipal level (28) and regional (25). Lack of knowledge in this area was declared by 1 person.

Figure 1 Existence of government systems for registering transactions on the real estate market.

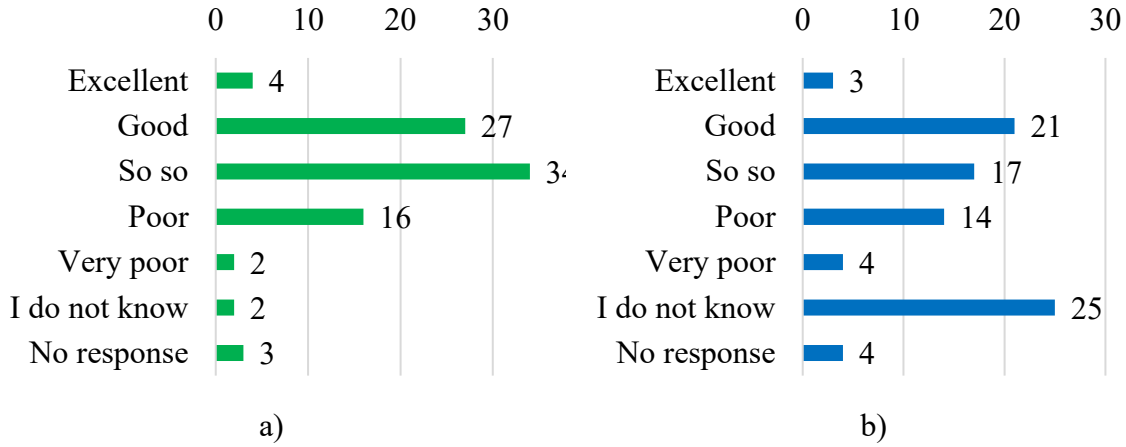


Source: Authors' own.

The assessment of the overall completeness of the government's transaction registration systems was moderately critical (**Figure 2a**). Participants most often referred to government systems as *so so* (34) or *good* (27), with a relatively smaller share of *poor* (16) and *very poor* (2) ratings. Only 4 (5%) respondents considered the systems to be *excellent*, while 2 participants declared a lack of knowledge in this area, and 3 did not provide an answer. This

distribution suggests that **while government systems are common, their functioning is rarely perceived as fully satisfactory.**

Figure 2 Overall completeness of the systems for registering transactions by (a) governmental; b) non-governmental organizations.



a) b)

Source: Authors' own.

The range of registered legal titles in government systems is relatively wide and uneven (**Figure 3a**). Most frequently registered are *freehold* (64) and *leasehold* (49). Much less commonly, the schemes include *conditional and or optional sales* (28) and *customary rights* (27). Other types of rights were indicated in 8 cases, while 5 respondents declared a lack of knowledge about the scope of registered titles.

Together, these results show that government transaction registration systems are a common part of real estate market infrastructure, but their degree of centralisation, completeness and scope of registered rights remain highly diverse, which affects market transparency.

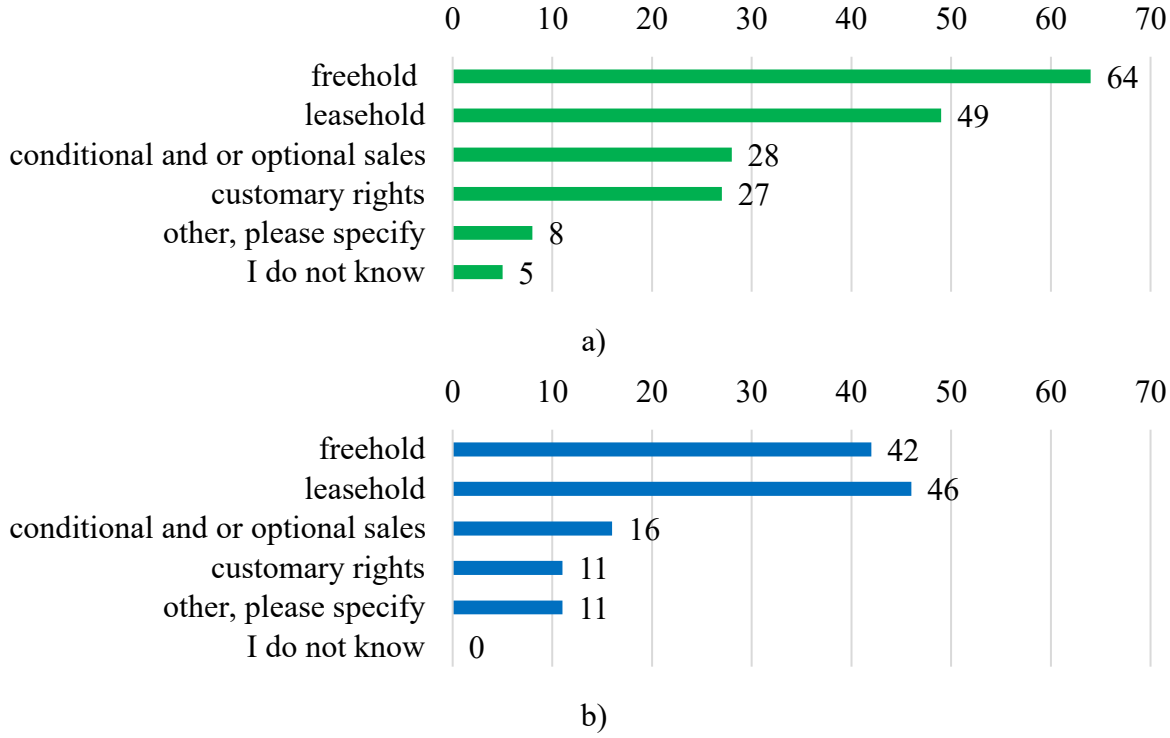
The institutional oversight of the real estate market is complemented by systems for recording transactions outside the structures of public administration, the meaning and nature of which, according to the respondents, differ from government solutions.

With regard to non-governmental systems for recording transactions in the real estate market, the analysis focused on two aspects. First, respondents assessed the overall comprehensiveness of these systems (**Figure 3b**) which indicated a different level of functioning of these systems and covered the full spectrum of assessments, from *good* (21), to *so so* (17), to *poor* (14). However, a significant group of respondents were not able to unambiguously assess systems' completeness or did not provide answers (25 people).

Secondly, the respondents indicated the scope of registered legal titles in non-governmental systems (**Figure 3b**) by stating that the most frequently registered are *leasehold* (46) and *freehold* rights (42). As in the case of government systems, non-governmental systems include *conditional and or optional sales* (16) and *customary rights* (11) much less frequently.

Nevertheless, each type of title has been observed to be better captured by government systems than by non-governmental databases.

Figure 3 Scope of registered legal titles in the following systems: a) government; b) non-governmental organizations.

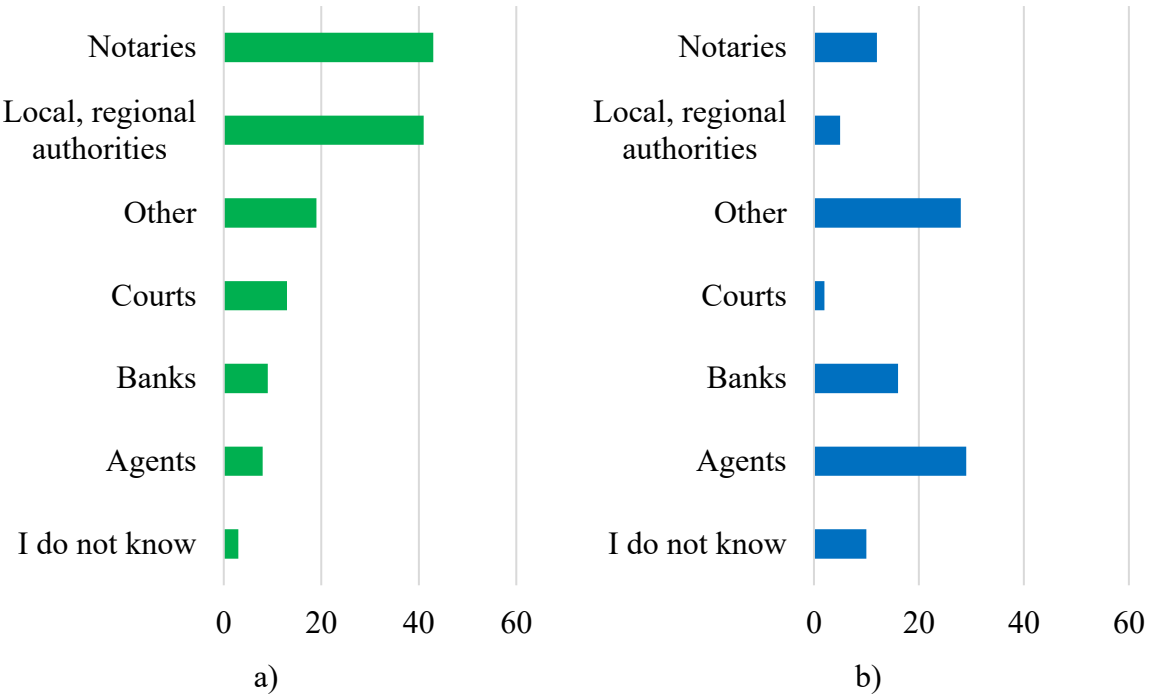


Source: Authors' own

In addition, in government systems, the process of recording data is clearly institutionalized (**Figure 4a**). In government transaction recording systems data is most frequently recorded by *notaries* (43) and *local and regional public administration* (41) were most often cited as entities responsible for data entry. *Courts* (13), *banks* (9) and *real estate agents* (8) play a smaller but still important role. The category *other* (19) indicates the existence of additional, country-specific institutional arrangements, with a small share of *I don't know* responses (3).

In the case of non-governmental systems, transaction recording is carried out by mostly real estate agents (29) and alternative sources of information (28) where data recording can be carried out by different actors (**Figure 4b**). The key difference does not concern the categories of entities themselves, but the degree of their formal empowerment. Government systems are dominated by entities operating on the basis of clearly defined legal competences, while in non-governmental systems they may be more dependent on market practices and the national context.

Figure 4 Institutions recording data in the following systems: a) government; b) non-governmental organizations.



Source: Authors' own

In order to assess the data contained in these transaction recording systems, we then asked to what extent recorded prices reflect the actual prices. While the responses were moderately positive, although clearly diverse. The full reflection of prices was indicated by 15 respondents, while 26 rated it as quite accurate. At the same time, a significant group of respondents perceived this agreement as *average* (19), *weak* (15), *very poor* (5), and 6 people declared a lack of knowledge on the subject.

Next we asked apart from prices, how reliable are these systems. Here the responses were less positive – *good* (30) and *so so* (22) were most often indicated, with a noticeable share of *excellent* grades (12). Negative assessments (*poor* and very poor) occurred less frequently (a total of 16 times), although still in a significant number, while 5 respondents declared a lack of knowledge.

Co-occurrence of answers to the above two questions allowed to assess the relationship between the perception of the quality of price data and the assessment of other components of government transaction registration system (**Table 4**). There is a concentration of responses in the middle categories of the scale, indicating moderate confidence in both the accuracy of prices and the overall reliability of the systems.

Table 4 Relationship between assessment of the extent to which prices recorded in government systems reflect actual transaction prices and the assessment of the overall reliability of these systems outside of price data.

		Reliability of systems beyond prices							
		Excellent	Good	So so	Poor	Very poor	I do not know	No response	All
Extent to which prices recorded in government systems reflect actual	Fully	4	6	3	1	0	0	1	15
	Fairly accurately	6	14	3	1	1	1	0	26
	So so	2	1	12	4	0	0	0	19
	Poorly	0	8	2	3	2	0	0	15
	Very poorly	0	1	2	1	1	0	0	5
	I do not know	0	0	0	1	1	4	0	6
	No response	0	0	0	0	0	0	2	2
	All	12	30	22	11	5	5	3	88

Source: Authors' own

With regard to non-governmental systems, the assessment of the conformity of recorded prices with real prices was more polarized and subject to greater uncertainty. Only 8 respondents indicated full agreement, and 24 respondents indicated a fairly accurate agreement, while average and negative answers (*poor* and *very poor*) constituted a significant part of the sample (a total of 21 interviews). However, the high rates of *I don't know* (12) and lack of replies (18) indicate limited transparency or recognisability of these systems in terms of price data.

As in the case of prices, the overall reliability of non-governmental systems outside of prices was assessed more cautiously than for government systems. The answers *good* (24) and *so so* (19) dominated, with a very small share of *excellent* ratings (2). At the same time, the number for no responses (22) and lack of knowledge (10) was relatively high, which again highlights the fragmented and less formal nature of these solutions. The co-occurrence revealed that even respondents who considered prices in non-governmental systems to be fairly accurate most often rated their overall reliability as good or average, rarely as very high.

As before, co-occurrence of the answers to the above two questions allowed to assess the relationship between the perception of the quality of price data and the assessment of other components of non-governmental transaction registration systems (**Table 5**). The response system contained in it is much more scattered and ambiguous than in the case of government systems. The high share of non-responses and declarations of lack of knowledge indicates the limited recognition and fragmented nature of non-governmental sources of transactional data. Even among respondents who rate price compliance as fairly good, overall reliability ratings are good or average, with a marginal share of excellent ratings. The arrangement of the matrix suggests that non-governmental systems function rather as complementary, selective sources of market information, the reliability of which depends to a large extent on the local context and market practices, rather than on uniform institutional standards.

Table 5 Relationship between the assessment of the extent to which the prices recorded in the non-governmental systems reflect the actual transaction prices and the assessment of the overall fairness of these systems outside the price data.

		Reliability of systems beyond prices							
		Excellent	Good	So so	Poor	Very poor	I do not know	No response	All
Extent to which the prices recorded in the non-governmental systems reflect the	Fully	2	3	2	0	0	0	1	8
	Fairly accurately	0	16	6	1	0	0	1	24
	So so	0	3	12	2	0	0	1	18
	Poorly	0	0	1	4	0	0	0	5
	Very poorly	0	0	0	0	1	2	0	3
	I do not know	0	0	0	1	1	8	2	12
	No response	0	0	0	0	1	0	17	18
	All	2	22	21	8	3	10	22	88

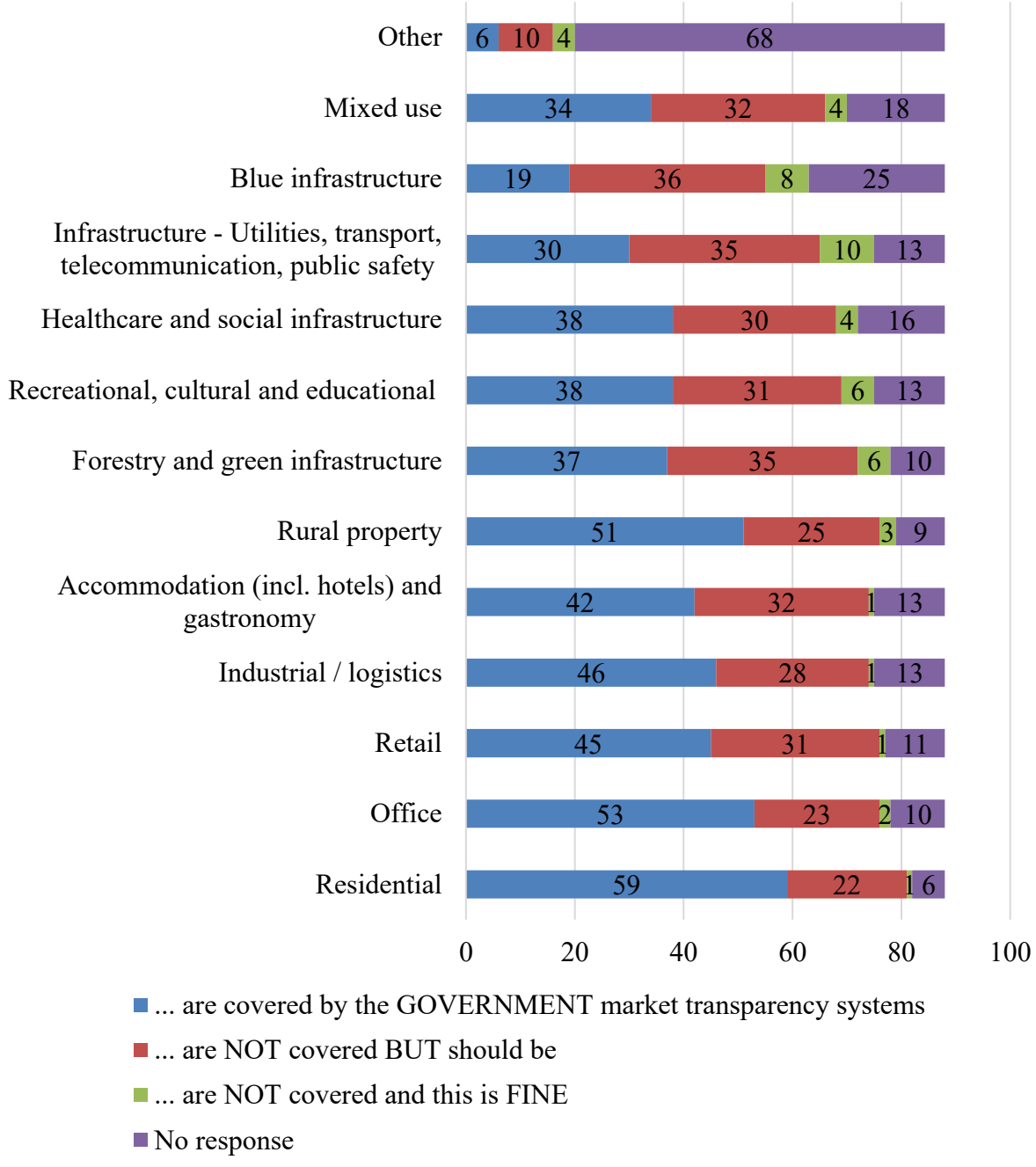
Source: Authors' own

Government systems are perceived as more recognisable and institutionally stable, which is reflected in lower non-response rates and higher overall reliability ratings. Non-governmental systems, on the other hand, are characterised by greater ambiguity of assessments, especially with regard to price data, and a significantly higher level of uncertainty among respondents. These results suggest that while both types of systems play an important informative role, transaction prices remain the weakest link in transparency, especially outside formal public records.

A comparison of responses regarding the types of real estate about which information is collected in governmental and non-governmental systems allows us to capture the differences between their subject scope in the context of real estate market transparency, as well as the expectations of respondents regarding the possible expansion of these systems.

In the case of government systems (**Figure 5**), the highest level of coverage applies to the core market segments. The most frequently indicated schemes include residential (59), office (53), rural land and real estate (51), and industrial and logistics real estate (46). At the same time, for many segments, there is a significant gap between the actual scope and the expectations of respondents. They see shortcomings in particular in relation to retail (31), hotel and catering facilities (32), green infrastructure and forestry (35) and technical and transport infrastructure (35). Segments such as blue infrastructure (10) or recreational and cultural (6) were relatively more often considered to be acceptable if not covered by government systems.

Figure 5 Types of real estate and their coverage by government systems

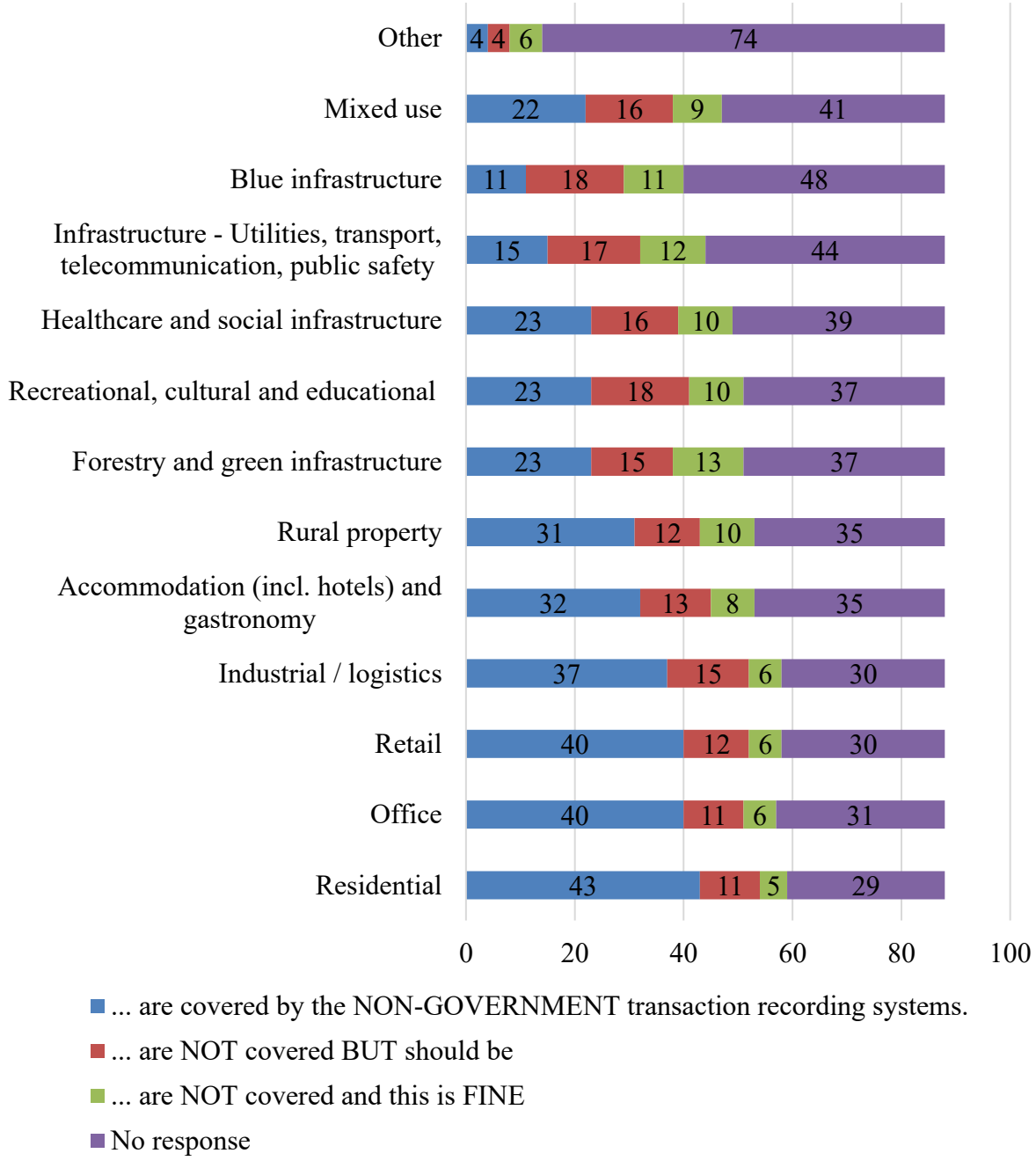


Source: Authors' own

The scope of non-governmental systems is clearly narrower and more selective (**Fejl! Et bogmærke kan ikke henvise til sig selv.**). These most commonly include residential (43), office (40) and retail (40) properties, but even in these basic segments, the percentage of responses indicating lack of coverage is high, accompanied by a significant share of non-response. In many categories, especially in real estate with infrastructure related to media,

transport, telecommunications and public safety (44 non-responses), blue infrastructure (48 non-responses) and health and social infrastructure (39 non-responses), non-governmental systems are rarely identified as a source of data, and their absence may more often be considered acceptable than problematic.

Figure 6 Types of real estate and their coverage by non-government systems



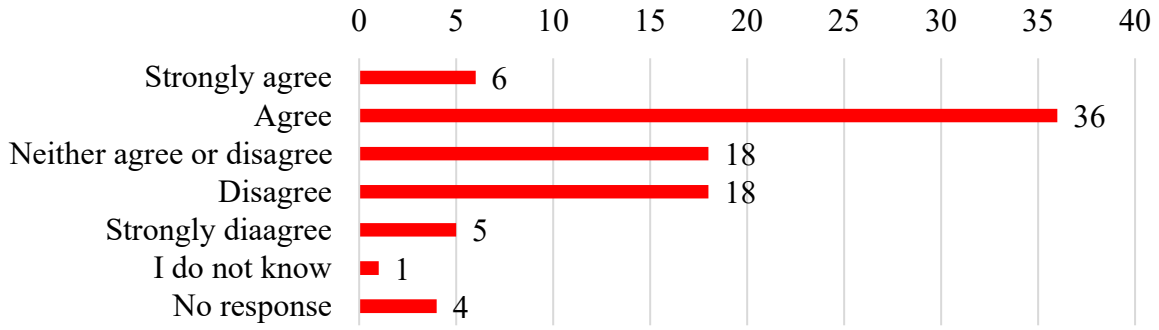
Source: Authors' own

Comparison of the answers to both questions shows that government systems are perceived as the basic and expected information carrier for a wide range of real estate types, including public and infrastructure segments. In the case of non-governmental systems, expectations regarding their scope are significantly lower, and their role is mainly limited to selected, market-attractive segments. At the same time, the high proportion of responses indicating that a given type of property 'is not covered but should be', especially on the part of government systems, highlights the existence of significant gaps in current real estate market transparency solutions.

5.3 Overall perception of real estate market transparency

The assessment of the overall level of transparency of the real estate market indicates a moderately critical and somewhat ambiguous attitude of respondents. A small group of respondents expressed that o*verall, the current level of real estate market transparency is good enough to support the reasonable functioning of the market* (6 people strongly agreed with this statement), but 36 already declared their agreement with it (**Figure 7**). In total, this means that 42 respondents perceive the current level of transparency as generally sufficient.

Figure 7 General assessment of the level of transparency of the real estate market.



Source: Authors' own

At the same time, a significant part of the respondents took a neutral or critical position. The answer 'neither agree nor disagree' was indicated by 18 respondents. The same number of people disagreed with the presented statement, and another 5 respondents expressed a strong opposition to this statement. Lack of knowledge in this area was declared by 1 person, while 4 respondents did not provide an answer.

The distribution of responses shows that **although a moderately positive assessment of the transparency of the real estate market prevails, almost half of the respondents remain sceptical or unconvinced about its sufficiency. This result confirms that transparency is seen as an area for further improvement, even in countries with formal data registration and sharing systems.**

6 TOWARDS A CONSISTENT DEFINITION OF TRANSPARENCY

This global comparative study demonstrates that real estate market transparency is neither a fixed attribute nor a binary condition. Instead, it is an evolving institutional quality shaped by legal frameworks, data infrastructures, professional practices, and cultural norms. Transparency emerges not simply from the existence of information, but from the reliability, accessibility, interpretability, and enforceability of market data within an institutional environment that supports accountable decision-making.

The survey findings reveal **substantial variation in transparency across jurisdictions**, even where formal legislation and transaction recording systems are in place. The presence of regulatory frameworks does not guarantee effective enforcement, nor does the centralised transaction registration ensure complete or reliable price information. Across countries, **transaction prices remain the weakest and least trusted component of market transparency**, particularly outside government-led systems. Non-governmental data sources play an important complementary role but are characterised by fragmented standards, uneven coverage, and limited recognisability among professionals.

Transparency deficits have tangible economic and social consequences. Information asymmetry increases transaction costs, constrains liquidity, weakens confidence in valuation outcomes, and amplifies behavioural biases in market decision-making. These effects are particularly pronounced in informal and semi-formal markets, where opacity undermines tenure security, limits access to credit, and contributes to systematic undervaluation of assets. Conversely, where transparency is supported by coherent institutions and professional standards, valuation processes become more robust, market risks more observable, and policy interventions more effective.

The findings also highlight an important shift in the concept of value underpinning real estate markets. Increasing attention to sustainability, natural capital, and socio-cultural value challenges traditional market-based valuation approaches and intensifies demands for broader and more transparent data frameworks. At the same time, professional tools such as **material uncertainty disclosures** demonstrate how transparency can be operationalised even in low-activity or highly volatile markets, reinforcing trust without overstating precision.

Taken together, the results underscore that transparency is a **public good with ethical, economic, and governance dimensions**. It supports market efficiency and social equity simultaneously, strengthening the legitimacy of both professional practice and public policy. However, improving transparency requires coordinated action across multiple domains. On this basis, the study identifies the following implications.

6.1 Implications

Implications for Policymakers

1. **Move from formal compliance to enforceable transparency regimes**
   The study shows a consistent gap between the existence of transparency-related legislation and its effective enforcement. Policymakers should prioritise enforcement capacity, audit mechanisms, and sanctions related to transaction reporting and data accuracy, rather than relying on formal legal provisions alone.

2. **Expand the scope of public transaction systems beyond core market segments**
   Respondents consistently identified gaps between the real estate types covered by government systems and those that *should* be covered, particularly infrastructure, green assets, and mixed-use developments. Broadening coverage is essential for credible valuation, infrastructure planning, and sustainability policy implementation.

Implications for Valuation and Professional Standard-Setters

1. **Explicitly embed data availability and transparency assumptions within standards**
   Current valuation standards presuppose the availability of reliable market evidence. The findings suggest a need for clearer guidance on how varying levels of transparency affect method selection, risk assessment, and reporting, particularly in cross-border and emerging markets.
2. **Strengthen and normalise uncertainty disclosure as a transparency tool**
   Practices such as material uncertainty statements should be framed not as exceptional caveats, but as standard mechanisms for communicating data limitations and market conditions. This supports informed client decision-making and reinforces public trust in valuation outcomes.

Implications for Market Data Infrastructure

1. **Prioritise accuracy and consistency of transaction price data over volume of data**
   Across jurisdictions, price information was identified as the least reliable element of transaction records. Investment in verification processes, standardised reporting formats, and reconciliation of recorded versus actual prices would deliver disproportionate transparency gains.
2. **Improve interoperability between governmental and non-governmental data sources**
   Non-governmental systems are widely used but poorly integrated with public records. Establishing common data standards, metadata requirements, and referencing frameworks would enhance recognisability, comparability, and professional confidence in these sources.

Implications for Professional Education and Capacity Building

1. **Integrate transparency literacy into valuation and land administration education**
   The results indicate that experienced professionals perceive greater transparency partly because they know how to navigate opaque systems. Education and continuing

professional development should explicitly address data quality assessment, information hierarchies, and critical use of imperfect evidence.

2. **Strengthen training on decision-making under uncertainty and behavioural bias** Given the role of heuristics, anchoring, and narrative-driven judgement in real estate markets, professional education should place greater emphasis on uncertainty analysis, probabilistic thinking, and the limits of market evidence, particularly in low-transparency contexts.

6.2 Concluding Remark

This research establishes a comparative empirical foundation for understanding real estate market transparency beyond country rankings or sector-specific indices. By capturing professional perceptions across diverse institutional settings, it demonstrates that transparency is not a technical add-on but a systemic property of markets. Improving it requires coordinated reforms in policy, standards, data infrastructure, and professional education. Future research should extend this analysis to underrepresented regions and explore how transparency interacts with behavioural decision-making, sustainability transitions, and the formalisation of land and property rights.

REFERENCES

Ache, P., Wiejak-Roy, G., Kavanagh, J., Korinke, E. K. and Reydon, B. (2024) FIG Position Paper: Viewpoint on Transparency of Real Estate Markets. *International Federation of Surveyors*, available from: https://www.fig.net/resources/monthly_articles/2024/Ache_et_al_November_2024.asp

Ache, P., Wiejak-Roy, G., Kavanagh, J., Korinke, E. K. and Reydon, B. (2025) Misbehaving of Markets and the FIG-Goal of Transparency on Real Estate Markets. In 4th international land management conference, Book of abstracts, pp. 97-102, available from: https://landinternational.network/wp-content/uploads/2025/03/ILM4-Book-of-abstracts-20250328.pdf

Angeles, L. (2011) Institutions, Property Rights, and Economic Development in Historical Perspective. *Kyklos*, 64(2), pp. 157–177. https://doi.org/10.1111/j.1467-6435.2011.00500.x

Braun, V. and Clarke, V. (2022) *Thematic Analysis: A Practical Guide*, Thousand Oaks (CA): SAGE Publications.

De Soto, H. (2000) *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*. New York (NY): Basic Books.

Denzin, N. and Lincoln, Y. (2005) *The SAGE handbook of qualitative research*. 3rd ed., Thousand Oaks (CA): Sage Publications.

Economic Crime (Transparency and Enforcement) Bill UK, available from: https://bills.parliament.uk/bills/3120

Etikan, I., Musa, S.A. and Alkassim, R.S. (2016) Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), pp. 1-4. https://doi.org/10.11648/j.ajtas.20160501.11

FAO (2022) *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security*, available from: https://www.fao.org/3/i2801e/i2801e.pdf

French, N. (2020) *Pricing to Market An Investigation into the use of Comparable Evidence in Property Valuation (TEGOVA Report),* available from: https://tegova.org/static/062574e026cb01499849ffe9a6d29f00/Pr.%20Nick%20French%20Report%20(296%20KB).pdf
Garmaise, M.J., and Moskowitz, T.J. (2004) Confronting information asymmetries: Evidence from real estate markets. *Review of Financial Studies*, 17(2), pp 405-37. https://doi.org/10.1093/rfs/hhg037
Gillham, B. (2008) *Developing a Questionnaire*, 2nd ed., London, UK: Continuum.
GLTN (2018) *Valuation of Unregistered Lands: A Policy Guide*, available from: https://gltn.net/download/valuation-of-unregistered-lands-a-policy-guide/
GLTN (2021) *Valuation of Unregistered Land: A Practice Manual*, available from: https://gltn.net/download/valuation-of-unregistered-land-a-practice-manual/?wpdmdl=17187&ind=1630494931913
Granja, J., Matvos, G. and Seru, A. (2017) Selling failed banks. *Journal of Finance*, 72(4), pp. 1723- 1784. https://doi.org/10.1111/jofi.12512
Grover, R. and Grover, C. (2012) Valuation and Land Governance. *Journal of Property Investment and Finance*, 30(1), pp. 88-98. https://doi.org/10.1108/14635781211194836
Guest, G., MacQueen, K. M. and Namey, E.E. (2012) *Applied Thematic Analysis*, SAGE Publications Inc. https://doi.org/10.4135/9781483384436
HM Treasury (2021) *Final Report - The Economics of Biodiversity: The Dasgupta Review*, available from: https://www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review
Hofstede, G., Hofstede, G. J. and Minkov, M. (2010) *Cultures and organizations: software of the mind : international cooperation and its importance for survival*, 3rd ed, McGraw-Hill.
https://tegova.org/static/062574e026cb01499849ffe9a6d29f00/Pr.%20Nick%20French%20Report%20(296%20KB).pdf
IFRS Foundation (2011) *IFRS 13 Fair Value Measurement,* available from: https://www.ifrs.org/content/dam/ifrs/publications/pdf-standards/english/2022/issued/part-a/ifrs-13-fair-value-measurement.pdf?bypass=on
IVSC (2013) Technical Information Paper 4 Valuation Uncertainty, available from: https://www.ltva.lt/wp-content/uploads/2014/03/IVS-TIP4-Uncertainty.pdf
IVSC (2024) International Valuation Standards (IVS), available from: https://www.ivsc.org/new-edition-of-the-international-valuation-standards-ivs-published/
JLL (2022) *Global Real Estate Transparency Index, 2022 - Transparency in an age of uncertainty*, available from: https://www.jll.co.uk/content/dam/jll-com/documents/pdf/research/global/jll-global-real-estate-transparency-index-2022.pdf
JLL (2024) *Global Real Estate Transparency Index, 2024 - Transparency in a time of transition*, available from: https://web.archive.org/web/20250326190409/https://www.us.jll.com/en/trends-and-insights/research/global-real-estate-transparency-index#download
Milgrom, P. and Stokey, N. (1982) Information, trade and common knowledge. *Journal of Economic Theory*, 26(1), pp. 17-27. https://doi.org/10.1016/0022-0531(82)90046-1
Newell, G. (2016) The changing real estate market transparency in the European real estate markets. *Journal of Property Investment and Finance*, 34(4) pp. 407-420. https://doi/10.1108/JPIF-07-2015-0053/full/html

North, D.C. (1981) *Structure and Change in Economic History*, New York: W. W. Norton &Co.
North, D.C. (1990) *Institutions, Institutional Change and Economic Performance*, New York: Cambridge University Press.
North, D.C. (2005) *Understanding the Process of Economic Change*, Princeton: Princeton University Press.
Obeng-Odoom, F. and McDermott, M. (2018) *Valuing unregistered land*, RICS, available from: https://www.rics.org/content/dam/ricsglobal/documents/to-be-sorted/valuing-unregistered-land-rics.pdf
Polanyi, K. (1944/2001) *The great transformation: The political and economic origins of our time*, 2nd ed., Boston (MA): Beacon Press.
Reydon, B.P. (1992) *Mercados de terras agrícolas e determinantes de seus preços no Brasil: um estudo de casos*. Ph.D. Thesis, Campinas (SP): Instituto de Economia da Unicamp.
Reydon, B.P. (1994) *Especulação com terras agrícolas: uma interpretação a partir do referencial teórico Pós-Keynesiano*. Campinas, SP: UNICAMP. IE (Texto para Discussão, n. 34).
RICS (2003) Red Book, 5th edition, amendment 3 effective 01/12/2003 (1 of 2) - Guidance Note 5 Valuation Uncertainty, available from: https://www-isurv-com.uwe.idm.oclc.org/downloads/file/3354/archive_red_book_5th_edition_amendment_3_effective_01122003_1_of_2
RICS (2019) *Comparable evidence in real estate valuation,* RICS Professional Standard. Global 1st ed, available from: https://www.rics.org/content/dam/ricsglobal/documents/standards/Comparable%20evidence%20in%20real%20estate%20valuation.pdf
RICS (2024) *RICS Valuation – Global Standards*, available from: https://www.rics.org/content/dam/ricsglobal/documents/standards/Red-Book-Global-Standards-incorporating-IVS.pdf
SOLIndex (2024) How open is land data around the world? https://solindex.landportal.org/
TEGOVA (2024), *European Valuation Standards – 10th edition – 2025,* available at: https://tegova.org/static/60080e3fa590549029f8358dabce4508/EVS%202025_1.pdf
Tversky, A. and Kahneman, D. (1974) Judgment under Uncertainty: Heuristics and Biases: Biases in judgments reveal some heuristics of thinking under uncertainty. *Science*, 185(4157), pp. 1124–1131. https://doi.org/10.1126/science.185.4157.1124
Weinfeld, S. and Wiejak-Roy, G.A. (in press) Carbon reporting frameworks and regulations for the real estate sector – challenges to implementation. In: Booth, C.A., Proverbs, D.G., Gorse, C. and Lamond, J.E., *Solutions to Climate Change Challenges in the Built Environment*. (2nd Edition), Wiley–Blackwells, Oxford, UK.
World Bank (2020) *Doing Business 2020*, available from: https://openknowledge.worldbank.org/server/api/core/bitstreams/75ea67f9-4bcb-5766-ada6-6963a992d64c/content

BIOGRAPHICAL NOTES

Dr Grazyna Wiejak-Roy is a Senior Lecturer in Urban Economics and Real Estate. Her research is on investment strategies, transaction risk, the changing nature of the retail real estate market, and land management. Grazyna is a Fellow of the Royal Institution of Chartered Surveyors, Chartered Valuation Surveyor and a Senior Fellow of the Higher Education Academy. Grazyna is a co-founder of LINK – Land – International Network for Knowledge, Vice-President Europe of the Commonwealth Association of Surveyors and Land Economists (CASLE) and Trustee of Aubrey Barker Fund.

Professor Bastiaan Reydon is a Senior Advisor at Kadaster International since 2019, and has been working with Land Administration improvements in Brazil, Colombia, Perú, Mozambique, Kazakhstan and is taking part in several projects inside the Kadaster. He is a retired Professor from the Economics Institute from UNICAMP (Campinas, Brazil). Besides obtaining his Doctoral degree at UNICAMP, has done postdoctoral studies at: in Land Management at the University Wisconsin (USA) and ITC - University of Twente (The Netherlands). He has been giving classes at the University of Utrecht, ITC Twente, Leiden on Land Governance and Land Administration. He is also professor at the ICLPST- Taiwan where he teaches a course on Agricultural Economic and Land Governance.

Peter Ache is Chair of FIG Commission 9 since 2023 and Chair of the working group *Real Estate Valuation* of DVW - German Association for Geodesy, Geoinformation and Land Management. For many years, he has headed the office of the governmental upper committee of experts for property values in Lower Saxony, Germany. He is a speaker, host and moderator and was the editor in chief for the Real Estate Market Report for Germany of state expert committees in Germany for over 15 years.

Eva Katharina Korinke is Senior Research Consultant with a qualified background in geography and real estate economics. She has been monitoring residential and commercial real estate markets for the German Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) for many years. Her research interest is on the interdependencies of real estate markets, their influence on urban development, office and retail property, and the contribution of the real estate sector to greater transparency and sustainability.

James Kavanagh, MRICS C.Geog is a Chartered Surveyor & Chartered Geographer. James is head of Land & Resources with The Royal Institution of Chartered Surveyors (RICS). James is chair of the International Land Standard (ILMS) Coalition, Secretary General of CASLE and vice chair of FIG Commission 9. James is working on further research, insight, and standards on issues of valuation within informal settlements, on customary land issues, land acquisition and compensation, and the process of land and property rights formalisation.

Dr Agnieszka Bieda is an Associate Professor at the AGH University of Krakow, Poland. Her research interests include spatial planning, urban regeneration, cadastre, and real estate valuation and market analysis. She is Editor-in-Chief of the journal ‘Geomatics and

Environmental Engineering', a member of the Task Force for Legal and Urban Planning within the Polish Academy of Sciences, and Poland's national delegate to FIG Commission 3. She is also a board member of the Polish Real Estate Scientific Society, member of the Polish Association for Spatial Information, Croatian-Polish Scientific Network, and the Association of Polish Surveyors.

CONTACTS

Grazyna Wiejak-Roy
Centre for Advanced Built Environment Research, University of the West of England
Frenchay Campus, Coldharbour Lane, BS16 1QY, Bristol, United Kingdom
grazyna.wiejak-roy@uwe.ac.uk
Ph. +44 11732 84385
https://www.uwe.ac.uk/

Bastiaan Reydon
Cadastre, Land Registry and Mapping Agency (Kadaster)
Hofstraat 110, 7311 KZ Apeldoorn, The Netherlands
bastiaan.reydon@kadaster.nl
Ph: +31 650085311
https://www.kadaster.com/

Peter Ache
International Federation of Surveyors – FIG
Kalvebod Brygge 31-33
DK-1780 Copenhagen V, Denmark
figcommission9@fig.net or peter.ache@outlook.de
Ph. +49 1739309148
https://www.fig.net/organisation/comm/9/

Eva Katharina Korinke
Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR)
Deichmanns Aue 31-37
53179 Bonn, Germany
EvaKatharina.Korinke@BBR.Bund.de
Ph. +49 228994011614
www.bbsr.bund.de

James Kavanagh
Royal Institution of Chartered Surveyors - RICS
12 Great George Street
Westminster London SW1P 3AD, UK
jkavanagh@rics.org
Ph. +44764119409
www.rics.org

Agnieszka Bieda
Department of Photogrammetry, Remote Sensing of Environment and Spatial Engineering, AGH University of Krakow
30 Mickiewicza Av.
30-059 Kraków, Poland
bieda@agh.edu.pl
Ph. +48126173430
https://www.agh.edu.pl/