

# Investigating the UAE residential valuation system: a framework for analysis

**Investigating the UAE residential valuation system: a framework for analysis  
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**Structured Abstract:**

The development of the United Arab Emirates (UAE) into a regional trade, tourism, finance and logistics hub has transformed its real estate markets. However, UAE housing markets are prone to volatility caused by external factors and internal valuation system deficiencies. External influences on property values include capital flows, migration, geopolitical uncertainty, oil price volatility and global investment market sentiment. Internally, a complex interplay between tenure, building and evolving location characteristics fragment UAE residential property markets. The UAE Residential Valuation System (UAE-RVS) confronts multiple challenges to collect, filter and analyse relevant information in the complex and dynamic spatial and capital markets. A robust (RVS) can help to mitigate unhelpful volatility, speculative excess or investment mistakes. The research reviews the UAE backdrop and recent real estate trends and outlines a structured framework to investigate the UAE-RVS, involving a market reviews, stakeholder analysis, surveys and interviews to establish institutional capabilities, trust and valuation standards salience.

**Keywords:**

Systems, valuation, property rights, information sources, institutions

**Article Classification:**

## Introduction

Residential valuation systems ('RVS') facilitate property market functioning and include system boundaries, elements (stakeholders, institutions), processes (valuation practice and standards), outputs (registration, valuations, market reports) and feedback mechanisms (prices). The RVS records ownership, documents transactions, transfers title, evaluates risks and estimates various values. It strengthens market transparency, facilitates appropriate investment and strengthens conurbation resilience. The ultimate RVS output is trust, substantiated by registration clarity (property title, tenure, encumbrances, and boundaries), jurisdiction-dependent standards and credible valuations [1]. Local valuation practices engage with International Valuation Standards (IVS) produced by the International Valuation Standards Council (IVSC) but cultural and operational issues mean that valuations can diverge widely. In the UK, Market value ('MV') is distinct from investment value ('IV') or mortgage valuation for banks [2] but all are opinions whose reliability is conditioned by the institutional setting, the evidence supporting them [3], [4]. To benchmark a valuation system will involve considerations of its constituents (institutional capabilities), processes (valuation standards) and the reliability of its outputs (valuation accuracy). Capability challenges for the RVS institutions include the gathering and analyzing of complex spatial and market intelligence. Organizational and network architecture (structure) [7]; practices and cognitive social capital (values, beliefs, attitudes, behavior and norms) are involved [8]. Cities are a 'complex jumble of independent but interdependent activities' [5]. RVS valuations should use accepted valuation standards [6]. Social capital refers to trust, solidarity and reciprocity that valuation stakeholders may or may not share [9]. Institutions within the RVS should securely keep detailed records of ownership, charges, easements and transactions. It should measure areas and boundaries and note conditions. In terms of practice, the RVS should refer to properly sourced standards. Ideally, institutions and valuers should be independent, avoid conflicts of interest and objectively assess subject properties. Fragmented markets where consumers attempt to process information and reconcile multiple geographical and building quality attributes. Any RVS confronts complex ontologies in terms of spatial sub-markets and dwelling characteristics. Each conurbation in the Emirates is distinct as are intra-urban locales. Multiple positive and negative factors, including residents, socio-economic status, access to facilities (shopping malls, beach, parks), transport, exposure to risk from waste dumps, access to jobs, air quality etc.). Dwellings are also unique in terms of (site, design, structure, energy-efficiency, area, views and cultural suitability to buyer segments. To determine MV, the RVS needs to evaluate locales and building/dwelling quality and assess its monetized appeal (demand) by various active market players. The constant development in the UAE, unusual properties or special purchasers complicates the task. Property markets change continuously as infrastructure is built. In fast-changing cities like Dubai new towers, malls or roads alter property appeal and marketability. Planning permission or infrastructure announcements alter the risk landscape and signal development opportunities or danger. Markets like Dubai are also exposed to exogenous (externally) disturbances. Exogenous influences include unforeseen financial, macro-economic or geo-political events (e.g. the Syrian war) and natural or man-made disasters (e.g. Tsunamis or oil spills). The RVS should include mechanisms to monitor and distribute information about internal and external market conditions, liquidity fluctuations or sudden changes in capital market sentiment that can alter MV. In dynamic markets, valuers rely on data capture and analytic technologies, common sense and professional judgment.

Knowing the dynamic context, RVS players need to analyze the forces of change shaping values [10]. Information restrictions undermine valuation reliability. In any event, the nature and source of information relied on should clearly be stated and attention drawn to any limitations. Ironically, when markets become illiquid and demand for quality RVS intelligence is acute, transaction data dries up, undermining empirical valuation support. Hence, RVS data quality (relevant, valid and timely) is critical. RVS assessment needs to vet the environmental scanning (ES), decision support systems (DSS) and data integration architecture (human and IT). Market players seek data quality assurance, supported by the dissemination of robust empirical property data on underlying contractual legalities, spatial and building characteristics and market dynamics.

## Investigating UAE RVS

Fig.1 illustrates the main qualities for a robust RVS. Table 1 details the four phases for a systematic investigation of the UAE RVS. The first phase is a conceptual one and includes a systematic review of

relevant academic and professional literature on real estate and its valuation. The conceptual phase concludes with a RVS framework and detailed research methodology. The Exploratory Phase involves, first, documenting the current institutions, standards and valuation practices in the Emirates. A robust assessment of UAE residential valuation system (UAE-RVS) begins with a market determination to establish the level of market maturity and the key market players. Once the market landscape is clear, the next step is to estimate the extent of any valuation inaccuracy [12] [13]. In practice, this will involve hedonic modeling to estimate the dispersion of system list prices from estimated ones. Later, any links between degree of inaccuracy and system characteristics can be investigated institutional capacity. Institutional analysis (IA) first documents the entities involved in the registration and valuation process (market players) in different Emirates. IA then collects evidence on valuation standards and valuation protocols in use. Practice observation and player discussions should establish whether the UAE-RVS collects useful ontological and dynamic intelligence. The research looks for indicators of good practices such as environmental scanning (ES).

The main capabilities required for RVS institutions banks, government, agents etc) is the ability to collect, and synthesize quality intelligence [*ibid.* 10]. Operational indicators of capability include technology, professional staff and robust praxis. Advanced technologies include spatial decision technologies (GIS mapping). A modern RVS should harness remote technologies to conduct desktop research for registration, due diligence, mass appraisals or locales quality criteria for planning. In the RVS, qualified professionals (surveyors) should handle this remote information but also undertake systematic site visits (to measure subject properties, ascertain condition and record key features or encumbrances). For MV determination, grounded evidence supports the selection of appropriate comparable properties (similar recently sold or leased premises). Practical indicators of RVS institutional capacity could involve:

- Documenting the technologies utilized
- Recording surveyor qualifications
- Observing or querying practice

Indicators of RVS intelligence capabilities could include use of advanced modeling [11]. Fig. 1 summarizes the constituent higher-order RVS domains for which key performance indicators (KPI) are required.

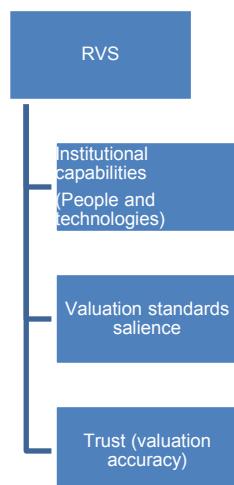


Fig. 1 RVS constituents, highlighting the key issues of capabilities, trust, and standards salience

### Data collection

The data collected should be relevant, reliable and timely. Is it the most appropriate to address the UAE-RVS research problem? The research can collect secondary and primary data about the RVS using many different approaches, such as surveys, interviews, questionnaires, observation, and archival research. Secondary data could e-Word or Mouth (eWOM) such as web sites, blogs and social medial or transaction data sets and archival documents. For primary data sources obtained by sampling, we need to justify how we select the sample from the population of relevant stakeholders.

Table 1: Research questions, data collection and data analysis

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CONCEPTUAL PHASE/STAGE	RESEARCH QUESTION	DATA TOOLS	COLLECTION	DATA ANALYSIS
<b>EXPLORATORY PHASE</b>				
5 Exploring valuation systems in the UAE	RO5a: Emirate environments and practices	Document valuation and	<ul style="list-style-type: none"> <li>Secondary sources such as e-Word of Mouth (eWOM)</li> <li>Archival material from different institutions with each Emirates</li> </ul>	<ul style="list-style-type: none"> <li>Descriptive statistics of key data.</li> <li>Exploratory analysis with maps</li> <li>RVS key stakeholder identification</li> <li>Factor analysis (with principle component extraction) / to establish key factors</li> </ul>
	RO5b Determine valuation accuracy in each Emirate		<ul style="list-style-type: none"> <li>Primary transaction analysis to investigate valuation accuracy</li> </ul>	<ul style="list-style-type: none"> <li>Hedonic modeling</li> </ul>
6 Towards a UAE-RVS	RO6: Apply the exploratory findings to hone investigation of RVS.	NA	NA	NA
<b>OPERATIONAL PHASE</b>				
7 Research evidence: testing the UAE-RVS	RO7: Operationally test the refined RVS using quantitative and qualitative research evidence.		<ul style="list-style-type: none"> <li>Stakeholder analysis</li> <li>Case study based questionnaires</li> <li>Selective interviews of key stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Stakeholder matrix</li> <li>Questionnaire analysis, via structural equation modeling.</li> <li>Interview transcriptions and analysis using Nvivo</li> </ul>
<b>REFLEXIVE PHASE</b>				
8 Focus group meeting	RO8: Consider institutional issues, which moderate UAE valuation systems.	<ul style="list-style-type: none"> <li>Recoding</li> </ul>		<ul style="list-style-type: none"> <li>Interview transcriptions and analysis using Nvivo</li> </ul>
9 Discussion, conclusion and recommendations	RO9: Conduct a focus group dialogue with valuation experts to corroborate key policy recommendations.	NA	NA	

Source: Author 2015

## Model

Fig 2 below presents a model of the factors influencing the UAE-RVS robustness. What it implies is that valuation accuracy or RVS robustness is determined by institutional capabilities as well as the salience or prominence of professional valuation standards and the degree of trust market players place in the valuations undertaken by various agencies and investment companies or the information disseminated by government agencies in each Emirate.

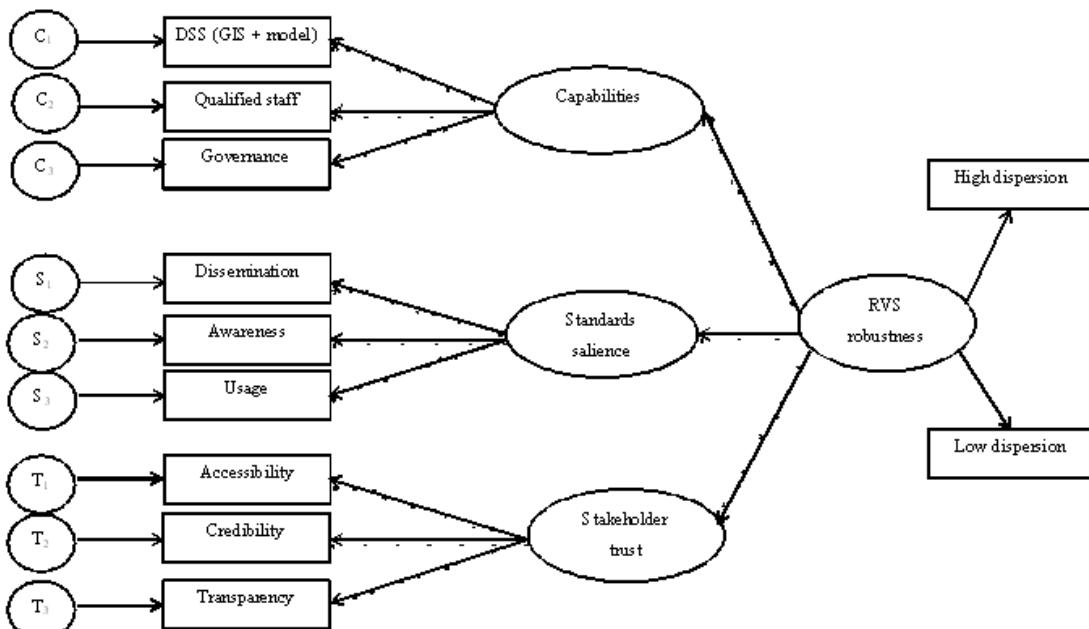


Figure 2: RVS structural equation model.

Key: Ovals represent variables linked to at least 3 measured variables (rectangles), each with an associated error term (circles)

Source: Authors (2015), adapted from Streiner, D. (2006) *Research Methods in Psychiatry Building a Better Model: An Introduction to Structural Equation Modelling*

## System

The assessment of a valuation system will involve considerations of its constituents (entities), processes (valuation standards, professionalism, governance and administrative procedures) and the reliability of its outputs (valuations) [7]. To understand the UAE market and valuation backdrop, the system itself will need to be documented with flow diagrams. Institutional analysis (IA) first documents the entities involved in the registration and valuation process (market players) in different Emirates. The RVS must provide reasonable valuations. Crosby (2000) makes the useful distinction between 'valuation accuracy', 'valuation variation' and 'valuation biases'. Valuation accuracy is the ability of the valuation to correctly identify the target (*ibid*:131), whilst valuation variation arises when different valuers get divergent results. Valuation bias is where valuations are consistently over or under target. The determination of RVS valuation accuracy provides some evidence of market maturity. IA then collects evidence on valuation standards and valuation protocols in use. Practice observation and player discussions should establish whether the UAE-RVS collects useful spatial and dynamic intelligence. The research looks for indicators of good practices such as environmental scanning (ES).

### Entities (institutional capabilities)

A RVS needs intelligence and professional capabilities to consider spatial complexity, property pathology and observe market dynamics. Table 2 illustrates the criteria to assess institutional intelligence capabilities.

<b>Area</b>	<b>Systems Aspect</b>	<b>Reason</b>
Valuation purpose	ADMIN.	Stakeholder's identified and valuation base (MV, IV, RV or MGV) is clear so that the reporting entity provides client decision useful information.
Principles of valuation	STANDARDS SALIENCE	<p>Valuation standards are disseminated and professionals conduct valuations who are knowledgeable about:</p> <ul style="list-style-type: none"> <li>• Scope (period)</li> <li>• Materiality</li> <li>• Measurement</li> <li>• Prudence</li> </ul>
Data capture	CAPABILITIES	<p>Primary data is securely and systematically captured to provide necessary details for robust valuation:</p> <ul style="list-style-type: none"> <li>• Date of valuation</li> <li>• Location</li> <li>• Legal matters (title, lease, encumbrances)</li> <li>• Property characteristics and conditions</li> <li>• Analytics</li> <li>• Performance indicators</li> <li>• Valuation</li> </ul>
Data handling	ADMIN CAPABILITIES	Data is analysed by competent people, using latest technologies.
Reporting	OUTPUT	Reporting frequency
Information quality	OUTPUT	<ul style="list-style-type: none"> <li>• Transparency</li> <li>• Completeness</li> <li>• Accuracy</li> <li>• Auditability</li> <li>• Relevance</li> <li>• Comparability</li> <li>• Clarity</li> <li>• Neutrality</li> <li>• Sustainability Content</li> <li>• Inclusiveness</li> </ul>

Table 2: Criteria to assess RVS intelligence robustness (Source Author (2015), adapted from Lamberton 2005)

Table 2 illustrates that three aspects are central to the proper functioning of a RVS:

- Stakeholder (entity) technological (DSS, GIS, AIS) and human resource (professional people) CAPABILITIES
- Administrative procedures should inspire TRUST
- Valuation standards and principles are widely disseminated or SALIENT in the system.

Our analysis to identify the key features for an ideal RVS system is supported by a review of the terms of professional competence, the Red Book (2014: PS2 3.1) which states:

- Appropriate academic/professional qualifications which demonstrate technical competence (CAPABILITIES),
- Membership of a professional body (RICS) which demonstrates a commitment to ethical standards
- Sufficient knowledge about asset class, demonstrated by skills and local, national or international market experience (TRUST)
- Compliance with legal regulations governing valuation practice (SALIENCE)

Quality information is central to the proper RVS functioning. A robust RVS should systematically collect, register, categorize and synthesize [*ibid.*] diverse intelligence sources on property markets and values. Relevant operational indicators of intelligence capability could include, for example, the application of spatial decision technologies such as GIS mapping for property registration, taxation, utilities charging and boundary dispute resolution. A modern RVS should make use of remote technologies to conduct desktop research for registration, due diligence, mass appraisals or locales quality criteria for planning. Indicators of RVS intelligence capabilities regarding market dynamics could include use of advanced modelling techniques to inform cyclical determination (Heps and Vatansever, 2011). Valuation is not an exact science but based on the opinion of informed and professional valuers. To supplement mass appraisal, qualified professionals (surveyors) should undertake systematic site visits to measure subject properties, ascertain condition and record key features or encumbrances. For MV determination, grounded evidence supports the selection of appropriate comparable properties (similar recently sold or leased premises). Practical indicators of RVS institutional capacity could involve:

- Documenting the technologies utilized
- Recording surveyor qualifications
- Observing or querying practice

### Conclusion

The research provides some backdrop to UAE property markets before outlining a structured approach to evaluation the UAE residential valuation system. It notes that the UAE is a small open hydrocarbon-based 'rentier' economy, seeking to diversify in an unstable but rapidly growing region. Fickle capital flows, spatial complexity and valuation system issues undermine its RVS. To evaluate it systematically, the research proposes to investigate institutional capabilities (professional qualifications and intelligence systems, standards salience (valuation practice), and output trust or valuation accuracy).

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**Running Heads:**