

2. Literature Review

Introduction to the Topic:

Property valuation is a fundamental process in global real estate markets, directly impacting transactions, investments, taxation, and urban development. In Saudi Arabia, the real estate sector is undergoing significant transformation, creating an urgent need for more efficient, accurate, and fair valuation methods. Traditional valuation approaches in Saudi Arabia have relied heavily on manual assessments by human appraisers, leading to personal biases, delays, and limited accessibility in remote areas. The integration of AI-driven agents into property valuation represents a paradigm shift that promises to address these limitations by leveraging data analytics, machine learning algorithms, and computer vision to deliver objective, efficient, and accessible valuation services across diverse geographical regions.

Review of Key Studies:

[The future of artificial intelligence \(AI\) in property valuation in Saudi Arabia:](#)¹

Elfakharany (2023) examined the current state and future potential of AI in property valuation within Saudi Arabia.

Methodology: The study employed a qualitative analysis of existing AI applications in the Saudi real estate market, including case studies of the Saudi Real Estate Institute's (SREI) AI-based property appraisal system.

Findings: The research identified key advantages of AI implementation, including the ability to analyze vast amounts of data quickly and efficiently, leading to more accurate and timely appraisals. The study found that AI-based systems in Saudi Arabia were already considering multiple factors such as location, size, age, property condition, and nearby sales history to generate valuations.

Limitations: The study acknowledged potential challenges, particularly the risk of algorithmic bias if training data is not sufficiently diverse and objective. It also noted that AI adoption in Saudi property valuation was still in early stages and would require further development to reach full maturity.

[AI Agents in Real Estate: Revolutionizing Property Valuation:](#)²

Quytech (2024) explored how AI agents are transforming property valuation processes.

Methodology: The research utilized a comprehensive analysis of AI agent applications in real estate, examining various use cases and implementation strategies across different markets.

Findings: The study identified several key applications, including real-time property valuation where AI agents collect and evaluate vast amounts of data to provide instant valuations. The research also highlighted predictive market analysis capabilities, where AI agents forecast future property values by evaluating market trends and economic indicators. The study concluded that AI agents offer significant benefits including improved efficiency, cost reduction, enhanced accuracy, fraud detection, and future value prediction.

Limitations: The research identified several challenges, including data quality and availability issues, difficulties in adapting to sudden market changes, the tendency to ignore subjective factors, algorithm bias, regulatory compliance concerns, and privacy and security risks. For each challenge, the study

proposed potential solutions, such as partnering with data providers, incorporating real-time data feeds, combining AI insights with human expertise, using diverse datasets.

8. References

1. Elfakharany, M. (2023). The future of artificial intelligence (AI) in property valuation in Saudi Arabia. LinkedIn. <https://www.linkedin.com/pulse/future-artificial-intelligence-ai-property-valuation-elfakharany>
2. Quytech. (2024). AI Agents in Real Estate: Revolutionizing Property Valuation. <https://www.quytech.com/blog/ai-agents-in-real-estate/>