

A Platform for Smart Real Estate Contracts Utilizing Blockchain Technology

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Background/Purpose

Traditional real estate transactions are constrained by burdensome paperwork, high intermediary fees, country-specific regulations, exchange rate risks, low liquidity, and asymmetric information that creates fraud risks. These inefficiencies are particularly acute in markets such as South Korea, where recurring issues of false listings, illegal resales, and speculative activity undermine market stability. This study proposes an innovative integrated model to address these structural challenges.

Study Design/Methodology/Approach

Drawing on extensive literature reviews, international regulatory frameworks, and industry best practices, this study develops a conceptual integrated model that combines blockchain-based real estate asset tokenization with stablecoin-enabled payment systems. The model is examined through the lens of smart contract automation, enhanced AML/KYC mechanisms, Decentralized Identity (DID) application, Central Bank Digital Currency (CBDC) integration potential, and DeFi product development. The South Korean real estate market is used as a primary application context.

Findings

Applying the proposed model to the South Korean real estate market demonstrates its potential to suppress fraudulent activities including false listings, illegal resales, unauthorized brokerage, and dissemination of inaccurate pricing information, thereby securing market trust and price stability. The model enhances transaction transparency, reliability, and efficiency through decentralised automation. Considerations of international cooperation, technology standardisation, and sustainability from an ESG (Environmental, Social, Governance) perspective are incorporated to propose future development directions.

Originality/Value

This research provides a blueprint for building the next-generation global real estate ecosystem by synthesising blockchain technology components into a comprehensive, interoperable platform. It offers comprehensive insights on policy recommendations, implementation scenarios, and future research agendas, contributing to both academic literature and practical frameworks for digital real estate market reform.

Keywords: blockchain; stablecoin; asset tokenization; real estate transactions; smart contracts; AML/KYC; DID; DeFi; CBDC; ESG