

Feasibility Analysis of Villa Infrastructure Investment Considering Market Risk and Operational Risk in the Pecatu Area, Bali

I Putu Agus Krisnadinata

Master's Student

Postgraduate School of Megister Engineering Management

University Of Warmadewa Denpasar, Bali, Indonesia

dogleskrisna@gmail.com

I Ketut Darma

Civil Engineering Study Program

Faculty of Engineering and Planning

Warmadewa University

Denpasar, Bali, Indonesia

ketutdharma@warmadewa.ac.id

Dewa Ayu Nyoman Sriastuti

Civil Engineering Study Program

Faculty of Engineering and Planning

Warmadewa University

Denpasar, Bali, Indonesia

dwayusriastuti@warmadewa.ac.id

Abstract

Tourism is a key driver of Bali's economy, with villa investments in Pecatu, South Kuta, growing rapidly due to its beaches, natural landscapes, and proximity to Uluwatu. However, local villa owners face challenges from foreign investor competition and fluctuating market conditions. This study evaluates the feasibility of villa infrastructure investment in Pecatu by analyzing both market and operational risks using expert questionnaires and document review. The operational risk assessment shows that construction schedule delays (mean probability 4.60, mean impact 3.70, risk score 17.02), difficulty obtaining skilled labor (4.27, 3.80, 16.23), adverse weather (4.40, 3.47, 15.27), and villa service quality deficiencies (4.53, 3.43, 15.54) are classified as Very High risks, requiring immediate mitigation strategies such as workforce planning, buffer scheduling, and continuous staff training. Other operational risks, including material availability, design changes, and utility instability, have High risk scores (11.8–13.32), highlighting areas that need ongoing monitoring. The market risk assessment indicates that seasonal patterns (4.60, 3.47, 15.96), monthly occupancy fluctuations (4.20, 3.67, 15.41), and new villa development competition (4.30, 3.50, 15.05) are Very High risks affecting profitability. High risks also include tourist demand fluctuations, reliance on OTAs, online reviews, global economic instability, and foreign exchange changes, with risk scores ranging from 10.19 to 14.77. The findings demonstrate that villa investment feasibility in Pecatu is influenced by both operational and market factors. Effective risk mitigation through proactive planning, service quality improvement, dynamic pricing, and market diversification is essential to maintain occupancy, reduce operational disruptions, and ensure sustainable long-term

profitability.

Keywords

Villa investment, Pecatu, Bali, market risk, operational risk, risk assessment, feasibility analysis.