

ANALYSIS OF FACTORS INFLUENCING LAND INVESTMENT DECISIONS RELATED TO THE DEVELOPMENT OF NORTH BALI INTERNATIONAL AIRPORT

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Abstract

The development of the North Bali International Airport in the Kubutambahan area, Singaraja, is expected to influence the region's economic dynamics, particularly in terms of land investment. This study aims to analyze the influence of land value changes and interest rates on land investment decisions in the airport development area. Using a quantitative approach, simulated data constructed based on relevant literature and theories were analyzed using multiple linear regression. The analysis results indicate that land value change has a significant effect on land investment decisions, with a regression coefficient of 3,271.549. In contrast, interest rate does not show a significant influence, as indicated by a significance value greater than 0.05. The regression model explains 93.3% of the variation in land investment decisions and has a statistically significant F-value at the 0.05 level. These findings suggest that land value change is the more dominant factor in attracting land investment in North Bali, in line with the airport development, which is expected to stimulate economic growth and enhance the investment appeal of the region.

Keywords: Land Investment Decision, Land Value Change, Interest Rate, Airport Development, Linear Regression

INTRODUCTION

Bali is one of Indonesia's provinces renowned for its natural beauty, cultural richness, and tourism appeal. It is unsurprising that tourist visits reached approximately 4.92 million in 2016. Air transportation plays a pivotal role in facilitating both domestic and international tourist arrivals. Currently, Ngurah Rai International Airport, located in Tuban, Badung, is the only airport serving the region. However, due to limited land availability, expanding this airport presents significant challenges. Consequently, the government plans to develop a new airport, named North Bali International Airport, in the Kubutambahan area, Singaraja.

The development of this new airport is expected to engage the regional economy, particularly by stimulating new investment opportunities, most notably in land investments whose values are projected to increase. According to Indonesia's Central Bureau of Statistics (BPS), land investment is considered one of the most stable forms of investment, offering promising long-term returns (Becker, 1964). Indonesians exhibit a high interest in land investment, especially in development zones where land value tends to appreciate, potentially catalyzing new economic growth.

According to data from BPS Bali Province, the tourism sector contributed approximately 54% to Bali's Gross Regional Domestic Product (GRDP) in 2022, underscoring the critical role of infrastructure in supporting this sector's growth. The need to stimulate economic development, tourism, and connectivity in Northern Bali—currently lagging behind the southern region—serves as the underlying rationale for the North Bali Airport project. This large-scale infrastructure development is anticipated to impact macroeconomic indicators that may influence land investors' behaviors and decisions in the region.

In the context of land investment, investor decisions are shaped not only by physical location or market opportunities but also by macroeconomic factors such as inflation rates and interest rates (Kustandi, 2024). This study aims to analyze the factors influencing land investment decisions in relation to the development of the North Bali Airport, with a focus on quantifiable economic variables.

As the airport project progresses, macroeconomic changes are likely to affect investor behavior, especially in relation to land investment decisions. These decisions are influenced by a combination of spatial potential, market prospects, and macroeconomic elements such as inflation, interest rates, and land value appreciation driven by major infrastructure projects. This research seeks to provide a comprehensive analysis of the factors affecting land investment decisions in the area, emphasizing measurable economic indicators.

The study is expected to yield both theoretical and practical insights into the dynamics of land investment in North Bali in connection with the airport's construction. Specifically, it aims to identify and evaluate the influence of land value changes on investment decisions and to understand how these changes shape investor behavior in selecting locations and making investment choices. Additionally, it investigates the impact of interest rates on land investment decisions and assesses the relative contribution of both land value appreciation and interest rates using a quantitative approach to determine their significance in influencing investor behavior.

Based on the analysis, the study will also formulate strategic recommendations for investors and policymakers to support sound and sustainable investment decisions that contribute to the region's economic and social development.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

1. Land Investment Decision

Land investment decisions are critical for investors, as they involve balancing risk with potential returns. According to Baum & Hartzell (2012), land is often chosen as an investment due to its stable long-term value appreciation. Compared to other forms of investment such as stocks or bonds, land is considered a relatively safe asset because its value tends to increase over time, especially in developing regions (Putra et al., 2023). Previous research by Pratama & Terapan (2024) highlighted that strategic land location and the presence of major infrastructure projects, such as airports, significantly influence investment decisions. Moreover, Feriansyah & Zulfikar (2025) emphasize that macroeconomic factors, such as inflation and interest rates, also affect the attractiveness of land investment. These factors play a pivotal role in shaping investor behavior, particularly in emerging areas like Bali.

2. Economic Factors Influencing Land Investment Decision

Economic variables such as changes in land value and interest rates are among the most influential factors affecting land investment decisions. Changes in land value are often linked to the development of large-scale infrastructure projects—such as airports, toll roads, or other major developments—that enhance the investment appeal of surrounding areas (Ahmad et al., 2024). For instance, the construction of the North Bali Airport is expected to increase land prices in adjacent regions due to heightened demand for commercial and residential land use. Prior studies by Purwadinata & Ridolof (2024) demonstrate that infrastructure development, such as airport construction, tends to drive up land prices and thereby influences investor decisions. Fitriana (2023) argues that interest rates represent a crucial economic factor in investment decision-making. When interest rates are low, the cost of investment financing decreases, encouraging investors to acquire land and property. Conversely, high interest rates can suppress investment due to increased financing costs.

3. Social Factors Influencing Land Investment Decisions

Social factors such as tourism growth and population increase significantly impact land investment decisions. Bali, as an internationally renowned tourist destination, directly affects land demand in areas near development zones like the North Bali Airport. According to the Central Bureau of Statistics (2022), the tourism sector contributes over 50% to Bali's Gross Regional Domestic Product (GRDP), underscoring the vital role of tourism in the province's economy. Research by Fattah (2023) also indicates that tourism growth and rising tourist arrivals can influence land investment decisions by boosting demand for accommodations, restaurants, and related businesses—thereby increasing the demand for land. In addition, population growth is another important social factor. Andayani et al. (2017) reveal that the increasing population in North Bali drives the demand for housing, public facilities, and supporting infrastructure. This demographic shift subsequently contributes to higher land demand in the region, which in turn affects investor decisions to purchase land in the area.

RESEARCH METHODS

This study adopts a quantitative descriptive research design based on simulation, aiming to describe and analyze the influence of economic, social, and environmental factors on land investment decisions in relation to the development of North Bali Airport. This approach is employed to provide a deeper conceptual understanding of the dynamics underlying investment decisions, particularly in the context of large-scale infrastructure projects that may trigger significant transformations in a region. Through this method, the researcher seeks to present a systematic depiction of how these factors influence investor behavior in responding to investment opportunities. The primary focus of the study lies in integrating economic, social, and environmental dimensions into the land investment decision-making process. Consequently, a simulation model is selected as a structured framework to examine the interrelationships among variables.

The data source used in this research is a simulated dataset constructed by the researcher. This dataset is developed based on relevant literature reviews, economic and investment theories, as well as logical assumptions about potential empirical conditions in the North Bali region. Although illustrative in nature and not derived from actual field data, the simulation data is designed to reflect plausible real-world dynamics. The purpose of constructing this dataset is to build a model capable of testing hypotheses and evaluating relationships among the selected variables. Despite not being sourced from primary surveys, this approach is valid within the scope of conceptual analysis and strategic investment modeling.

Data collection techniques involve an extensive literature review, analyzing a wide range of academic and practical references. The literature includes peer-reviewed journals, reference books, official government and private institution reports, and policy documents related to investment, regional development, and infrastructure planning. The goal of this literature review is to establish a strong theoretical framework supporting the formulation of variables used in the simulation. It also serves as the basis for determining logical assumptions underpinning the illustrative dataset. In this way, the research maintains a robust academic and empirical foundation, despite the absence of direct field data.

The data analysis technique employed is multiple linear regression analysis, aimed at testing the influence of independent variables on the dependent variable. The independent variables in this study encompass economic and social factors, while the dependent variable is the land investment decision. This analysis allows the researcher to assess the extent to which each factor contributes to the investor's decision-making process. The analytical process is facilitated through statistical software such as SPSS, enabling systematic and accurate processing of the simulated dataset. The results of this analysis are expected to provide strategic insights for stakeholders in making more informed and sustainable investment decisions.

RESULTS AND DISCUSSION

1. Descriptive Analysis

Table 1. Descriptive Analytics

Statistics					
		Year	Land Changing Value (X1)	Interest Rate (X2)	Land Investment Decision (Y)
N	Valid	6	6	6	6
	Missing	0	0	0	0
Mean		2020,50	618333,33	4,4583	1366666666,67
Median		2020,50	605000,00	4,6250	1350000000,00
Mode		2018 ^a	500000 ^a	5,00	1000000000 ^a
Std. Deviation		1,871	94109,865	,73172	314112506,384
Variance		3,500	8856666666,66	,535	9866666666666656,000
a. Multiple modes exist. The smallest value is shown					

Based on the results of descriptive statistics, the average change in land value over the past six years was IDR 618,333.33 per square meter, with considerable variation (standard deviation of IDR 94,109.87). The average interest rate was 4.46%, with relatively stable fluctuations (standard deviation of 0.73%). The average land investment decision value amounted to IDR 1,366,666,666.67, yet the variation was quite high (standard deviation of IDR 314,112,506.38), indicating significant differences in the size of investments made annually. This data reflects the fluctuations in land prices and investment decisions, which are influenced by external factors such as interest rates.

2. Classical Assumption Test

Table 2. Normality Test

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	,243	6	,200 [*]	,947	6	,715
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

The normality test results indicate that the residual data do not exhibit significant deviations from a normal distribution. In the Kolmogorov-Smirnov test, the significance value was 0.200 (greater than 0.05), indicating that the residuals are normally distributed. Similarly, the Shapiro-Wilk test yielded a significance value of 0.715 (also greater than 0.05), further confirming the normality of the data. Therefore, it can be concluded that the residuals from this model follow a normal distribution.

Table 3. Multicollinearity Test

Coefficients ^a		
Model	Collinearity Statistics	
	Tolerance	VIF
1 (Constant)		
Land Changing Value (X1)	0,840	1,191
Interest Rates (X2)	0,840	1,191

a. Dependent Variable: Land Investment Decision (Y)

The results of the Variance Inflation Factor (VIF) analysis show that the VIF values for both independent variables—Change in Land Value (X1) and Interest Rate (X2)—are each 1.191. A VIF value less than 10 indicates that there is no significant multicollinearity problem between the two independent variables. In other words, there is no indication of a high correlation between these variables, meaning that the model is free from multicollinearity.

3. Multiple Linear Regression Analysis

Table 4. Multiple Linear Regression

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,966 ^a	,933	,888	105088672,230	3,375

a. Predictors: (Constant), Interest Rate (X2), Land Changing Value (X1)
 b. Dependent Variable: Land Investment Decision (Y)

Based on the results of the Model Summary analysis, the R value was found to be 0.966, indicating a very strong relationship between the independent variables (Change in Land Value and Interest Rate) and the dependent variable (Land Investment Decision). The R Square value of 0.933 suggests that 93.3% of the variation in Land Investment Decision can be explained by the independent variables used in this model (Change in Land Value and Interest Rate). The Adjusted R Square value, which is 0.888, accounts for the number of predictors in the model and demonstrates that the model maintains a good fit, even after adjusting for the number of variables included.

Table 5. F Test (Anova)

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46020244623993 5170,000	2	23010122311996 7584,000	20,836	,017 ^b
	Residual	33130887093398 024,000	3	11043629031132 674,000		
	Total	49333333333333 3180,000	5			

a. Dependent Variable: Land Investment Decision (Y)
 b. Predictors: (Constant), Interest Rate (X2), Land Changing Value (X1)

Based on the results of the ANOVA, the F-value is 20.836 with a significance level (Sig.) of 0.017, indicating that the regression model is statistically significant at the 0.05 significance level. This means there is a significant relationship between the independent variables (Change in Land Value and Interest Rate) and the Land Investment Decision. Therefore, the regression model can be reliably used to predict land investment decisions.

Table 5. T-Test

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	-727632184,870	545391296,728		,274
	Land Changing Value (X1)	3271,549	545,019	,980	,009
	Interest Rate (X2)	16012894,043	70097232,658	,037	,834

a. Dependent Variable: Land Investment Decision (Y)

$$Y = 727,632,184.870 + 3,271.549 \cdot X1 + 16,012,894.043 \cdot X2$$

Based on the results of the regression analysis, the linear model equation describing the relationship between Change in Land Value (X1) and Interest Rate (X2) on Land Investment Decision (Y) can be written as follows:

According to the derived linear regression model, it can be concluded that Change in Land Value (X1) has a significant influence on Land Investment Decision (Y). This finding is consistent with economic theory, which posits that land prices tend to be influenced by external factors such as infrastructure development. Such developments increase land value and attract investment interest (Baum & Hartzell, 2012). As a result, investors tend to prioritize investment decisions in areas experiencing substantial increases in land value.

On the other hand, the Interest Rate (X2) does not show a significant effect on land investment decisions within this model. This finding may be attributed to several factors, such as the nature of the land market, which tends to be less sensitive to interest rate fluctuations compared to capital markets, which are more directly impacted by changes in interest rates (Feriansyah & Zulfikar, 2025).

These findings provide the insight that Change in Land Value is a more dominant factor in land investment decision-making, especially in emerging regions like Bali, which is projected to experience a surge in land prices due to the development of major infrastructure such as a new airport. This aligns with the study by Widodo et al. (2022), which found that large-scale infrastructure development can significantly increase both land demand and property values in surrounding areas.

In this context, investors should place greater emphasis on factors that influence land value, such as government infrastructure policies, rather than focusing solely on interest rate fluctuations when making their investment decisions

CONCLUSION

A This study demonstrates that changes in land value in the development area of North Bali International Airport have a significant influence on land investment decisions. In other words, the higher the land value, the greater the interest from investors to invest in the region. However, interest rate, as one of the economic factors, was not found to have a significant effect on land investment decisions in this area.

Overall, the regression model used in this study explains 93.3% of the variation in land investment decisions, indicating that land value change plays a critical role in attracting investor interest. These findings suggest that effective land value management can enhance the potential for land investment in the region.

It is recommended that relevant stakeholders focus more on managing and enhancing land value in the area to attract greater investment. Furthermore, attention should also be given to other potential factors—beyond interest rates—that may influence land investment decisions in the future.

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