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# Analysis of Determinants of Regional Disparities in Domestic Investment Absorption in Sumatra Island

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## Abstract

Domestic Investment is one of the strategic factors in promoting regional economic growth. However, disparities in investment absorption across Sumatra Island reveal significant gaps between provinces. Provinces with better infrastructure, higher labor productivity, and stronger regional competitiveness tend to attract more investors, while other provinces lag behind in investment realization. This study aims to analyze the factors that influence the disparity in Domestic Investment absorption across ten provinces in Sumatra Island during the period 2019–2023. The methods used include quadrant analysis to map the position of each province based on investment performance and panel regression using the Fixed Effect Model (FEM) approach to examine the influence of Regional Minimum Wage, National Road Conditions, Regional Competitiveness Index, and Labor Productivity on Domestic Investment. The quadrant analysis results show that Riau Province consistently occupies a superior position, while provinces such as Bengkulu and West Sumatra tend to lag in investment absorption. The panel regression results indicate that UMR has a positive and significant effect on Domestic Investment. National Road Conditions and Labor Productivity have positive but statistically insignificant effects, while the Regional Competitiveness Index has a negative and insignificant effect. These findings suggest that only Regional Minimum Wage plays a significant role in driving domestic investment, while the other variables have not yet made a substantial contribution to reducing investment disparities in Sumatra.

**Keywords:** Domestic Investment; Minimum Wage; Road Condition; Regional Competitiveness; Labor Productivity

## 1. Introduction

Investment constitutes a fundamental driver of economic growth, both at the national and regional levels. In the context of Indonesia's economic development, Domestic Investment serves as a key pillar that reinforces the economic structure, enhances production capacity, generates new employment opportunities, and broadens business prospects. Moreover, Domestic Investment is regarded as a critical indicator for evaluating the investment climate and assessing the attractiveness of a region from the perspective of domestic investors.

Tabel 1.1 Realization of Domestic Investment in the 10 Provinces of Sumatra Island

No	Province	2019	2020	2021	2022	2023
1	Aceh	3606.9	8241.1	7904.7	4424.2	8883.3
2	North Sumatra	19749	18189.5	18484.5	22789.2	21574
3	West Sumatra	3026.6	3106.2	4183.7	2559.8	4488.2
4	Riau	26292.2	34117.8	24997.8	43062	48243.3
5	Jambi	4437.4	3511.7	6204.2	8882.7	8939
6	South Sumatra	16921.1	15824.5	16266.9	23526	25602.4
7	Bengkulu	5458.1	5399.2	4923.5	6957.3	7218.7
8	Lampung	2428.9	7120.5	10513.2	5809.2	7625.8
9	Bangka Belitung Islands	2915.2	1863.8	3677.4	6309	7961.4

No	Province	2019	2020	2021	2022	2023
10	Riau Islands	5656.4	14249	9768.7	4817.4	8856.6

Source: Investment Coordinating Board.

In the case of Sumatra, the realization of Domestic Investment has shown an increasing trend over the 2019–2023 period. Nevertheless, this growth has not been evenly distributed across provinces. For instance, Riau and North Sumatra consistently occupy the top positions in terms of investment absorption, while provinces such as Bengkulu, Lampung, and West Sumatra encounter greater challenges in attracting domestic capital. Such disparities highlight the existence of regional imbalances that may further exacerbate the development gap among provinces [1]. These inequalities in investment absorption carry several important implications. First, they contribute to uneven economic development, which may hinder the attainment of sustainable development goals. Second, variations in the capacity to absorb investment can intensify interprovincial income disparities. Third, if not properly addressed, these gaps may give rise to more complex socio-economic challenges, including rising unemployment and increased urbanization.

Several factors are assumed to be determinants of disparities in domestic investment absorption, namely minimum wage levels, the availability of road infrastructure, regional competitiveness, and labor productivity. Accordingly, this study aims to examine the extent to which these variables influence domestic investment absorption across the provinces of Sumatra.

## 2. Literature Review

### 2.1 Eclectic Theory (OLI)

In the study of development economics, the Eclectic Theory of Investment developed by [2] explains why companies choose certain locations for investment through three main advantages: ownership, location, and internalization. Ownership advantage refers to internal company assets such as technology, human resources, capital, and brand reputation. Location advantage relates to external conditions of a region that offer low production costs, good infrastructure, policy stability, market access, and productive labor. Internalization advantage encourages companies to manage their production processes internally to increase efficiency and reduce risk. In this study, the focus is on location advantage because it reflects the attractiveness of a region for domestic investment [3]. Location factors such as labor costs, infrastructure quality, labor productivity, and regional policy support are key determinants of investment absorption. The four independent variables in this research regional minimum wage, national road quality, regional competitiveness index, and labor productivity can be explained through the framework of location advantage. Labor cost represents the structure of production costs, road quality indicates infrastructure conditions, the regional competitiveness index reflects institutional effectiveness and business climate, while labor productivity shows the efficiency of production factors. Understanding these factors is essential to explain regional variations in investment absorption.

### 2.2 Production Cost Theory

In production cost theory, wages are a major component affecting a company's cost structure. An increase in wages raises total production costs, and without higher productivity, it can reduce profit margins and influence investment decisions research by [4]. [5] found that in Indonesia, the minimum wage plays an important role in ensuring worker welfare and maintaining industrial stability, as regulated by Government Regulation No. 78 of 2015. Minimum wage policy has a dual effect on investment. Higher wages can improve worker welfare and purchasing power, but they also increase production costs, potentially reducing investment interest, particularly in labor-intensive sectors. [6] found that in the short term, increases in minimum wages tend to reduce domestic investment, whereas in the long term, higher wages significantly boost investment. This indicates that investors consider not only labor costs but also social stability, productivity, and community purchasing power.

### 2.3 Location Theory

Location theory explains how economic activities, including production, distribution, and investment, are geographically distributed based on economic and geographic considerations [7]. Location factors are classified into transportation-oriented factors, such as transportation costs, availability of resources, labor, energy, and markets, and local-input-oriented factors, such as agglomeration, quality of life, and regional policies. Classical approaches, proposed by [8], emphasize transportation costs as the main determinant of optimal location. Factories tend to be established close to raw material sources or markets depending

on distribution costs. [9] Research Modern approaches highlight the efficiency of access to local inputs, such as low-cost labor, infrastructure quality, and favorable fiscal policies. [10] research also Infrastructure plays a crucial role in attracting investment. Adequate roads enhance the mobility of goods and services, speed up distribution, and increase labor productivity. Research by [11] found that the length and quality of paved roads significantly affect investment levels in regional areas. Good infrastructure reduces production and distribution costs, improves accessibility to markets and resources, and minimizes regional disparities. Accessibility, influenced by distance, infrastructure quality, transportation frequency, and route safety, is also critical in investment location decisions. Regions with high accessibility are more attractive to investors because they facilitate raw material acquisition and product distribution. Previous studies indicate that areas with better accessibility tend to have higher investment levels, demonstrating a reciprocal relationship between infrastructure, productivity, and investment location.

#### 2.4 Porter's Diamond Model

[12] developed the Diamond Model to explain the factors that determine regional competitiveness. The model emphasizes four main components: factor conditions, domestic demand conditions, related and supporting industries, and firm strategy, structure, and rivalry. These elements interact dynamically to create a productive business environment where innovation, efficiency, and adaptability are key determinants of competitive advantage, rather than mere resource availability. The theory highlights the importance of institutional aspects, including bureaucratic efficiency, infrastructure quality, technology, and workforce readiness, explaining why some regions attract more investment than others. Views from Krugman (1994), OECD (1999), and the UK Department of Trade and Industry (1998) emphasize that competitiveness depends on a region's ability to enhance productivity and sustain productive economic activities. In Indonesia, the Regional Competitiveness Index measures provincial performance based on supporting environment, human resources, market conditions, and innovation ecosystem. [13] found that regional competitiveness positively and significantly affects investment, while wage levels have a significant negative effect.

#### 2.5 Solow-Swan Growth Model

Labor productivity is a key indicator of economic efficiency, reflecting the workforce's ability to generate output per unit of input. In the [14], a region's output is determined by the combination of capital, labor, and labor efficiency, with productivity representing the effective use of technology and resources. Regions with high productivity are more attractive to investors as they promise higher output with the same input, reduce unit production costs, and improve operational efficiency. Labor productivity can be measured as the ratio of Regional Gross Domestic Product to the number of workers, reflecting the value added by each worker. Differences in productivity across provinces in Sumatra are a major factor in disparities in domestic investment absorption. Research by [15] emphasizes that both the quantity and quality of labor significantly influence investment attraction. Moreover, [16] found a positive relationship between labor productivity and domestic investment, indicating that higher productivity increases the contribution of investment to regional economic growth. These findings highlight that labor efficiency is a crucial factor considered by investors when determining investment location and scale.

### 3. Research Method

This study employs a quantitative approach with the unit of analysis consisting of ten provinces in Sumatra, namely Aceh, North Sumatra, West Sumatra, Riau, Riau Islands, Jambi, South Sumatra, Bengkulu, Lampung, and Bangka Belitung. The research period covers the years 2019 to 2023. The data used are secondary data obtained from the Investment Coordinating Board (BKPM) [1], Statistics Indonesia (BPS) [17], the Ministry of Public Works and Public Housing (PUPR) [18], the National Research and Innovation Agency (BRIN)[19], and the Ministry of Manpower [20].

The dependent variable in this study is domestic investment realization (Y), while the independent variables are Regional Minimum Wage (X1), Road Infrastructure Quality (X2), Regional Competitiveness Index (X3), and Labor Productivity (X4).

The analytical methods applied consist of two stages. First, quadrant analysis is used to map the relative positions of provinces based on investment performance and the influencing factors. Second, panel data regression analysis is employed to examine the effect of the independent variables on domestic investment realization. Model selection is conducted through a series of statistical tests, namely the Chow test, Hausman test, and Lagrange Multiplier test.

### 3.1 *Quadrant Analysis*

Quadrant analysis is a visual method employed in this study to map the relative positions of regions based on two quantitative variables. This method is used to identify interprovincial disparities in domestic investment absorption in Sumatra, by considering determinant variables such as minimum wage, labor productivity, regional competitiveness, and road infrastructure.

In this study, quadrant analysis is applied to evaluate the relative performance of provinces based on the combination of independent variables and the dependent variable Domestic Investment. The first step involves calculating the mean values of variable X (Regional Minimum Wage, National Road Conditions, Regional Competitiveness Index, and Labor Productivity) and variable Y (Domestic Investment). The mean formulas are expressed as follows:

$$\bar{x} = \frac{\sum_{i=1}^n x_i}{n} \quad \bar{y} = \frac{\sum_{i=1}^n y_i}{n}$$

Where  $\bar{x}$  and  $\bar{y}$  represent the mean values of the independent and dependent variables, respectively;  $x_i$  and  $y_i$  are the variable values for province  $i$  and  $n$  is the total number of provinces.

After calculating the mean, each province is plotted on the X and Y axes according to its actual variable values. The intersection point of the X and Y axes represents the regional mean, dividing the area into four quadrants as follows:

- Quadrant I (Upper Left): High investment realization, low supporting variables.
- Quadrant II (Upper Right): High investment realization, high supporting variables (leading regions).
- Quadrant III (Lower Left): Low investment realization, low supporting variables (lagging regions).
- Quadrant IV (Lower Right): Low investment realization, high supporting variables.

### 3.2 Panel Data Regression

In addition to quadrant analysis, this study also applies panel data regression to examine the effect of independent variables on Domestic Investment. Panel data regression combines time series and cross-sectional data (Basuki, 2017). The general form of the panel data equation in this study is as follows:

$$DI_{it} = \beta_0 + \beta_1 MW_{it} + \beta_2 RIQ_{it} + \beta_3 RCI_{it} + \beta_4 LP_{it} + e_{it}$$

Notes:

$DI_{it}$	: Domestic Investment Realization in province
$MW_{it}$	: Minimum Wage of province
$RIQ_{it}$	: Road Infrastructure Quality
$RCI_{it}$	: Regional Competitiveness Index
$LP_{it}$	: Labor Productivity
$\beta_0$	: Constant term
$\beta_1, \beta_2, \beta_3, \beta_4$	: Regression coefficients of the independent variables
$e$	: Error Term
$i$	: Cross Section
$t$	: Time Series

#### 1. Model Estimation

In estimating the panel data regression model in this study, two approaches are employed: the Fixed Effect Model (FEM) and the Random Effect Model (REM). The model specification tests used include the Chow Test, the Hausman Test, and the Lagrange Multiplier (LM) Test.

##### a) Chow Test

The Chow Test is conducted to choose between the Common Effect Model and the Fixed Effect Model.

##### b) Hausman Test

The Hausman Test is applied to determine the most appropriate estimation model between the Fixed Effect Model and the Random Effect Model.

##### c) Lagrange Multiplier (LM) Test

This test aims to decide between the Common Effect Model and the Random Effect Model.

#### 2. Hypothesis Testing

In this study, hypothesis testing is carried out using the t-test, the F-test, and the Coefficient of Determination ( $R^2$ ). Results and Discussion

### 3.3 Quadrant Analysis

Quadrant analysis is used to map the position of each province in Sumatra based on the relationship between the independent variables and the realization of Domestic Investment. The mapping results indicate that the relationship between minimum wage, road stability, regional competitiveness, and labor productivity is not always linear with investment absorption.

3.3.1 *Quadrant Mapping: Provincial Minimum Wage and Domestic Investment*

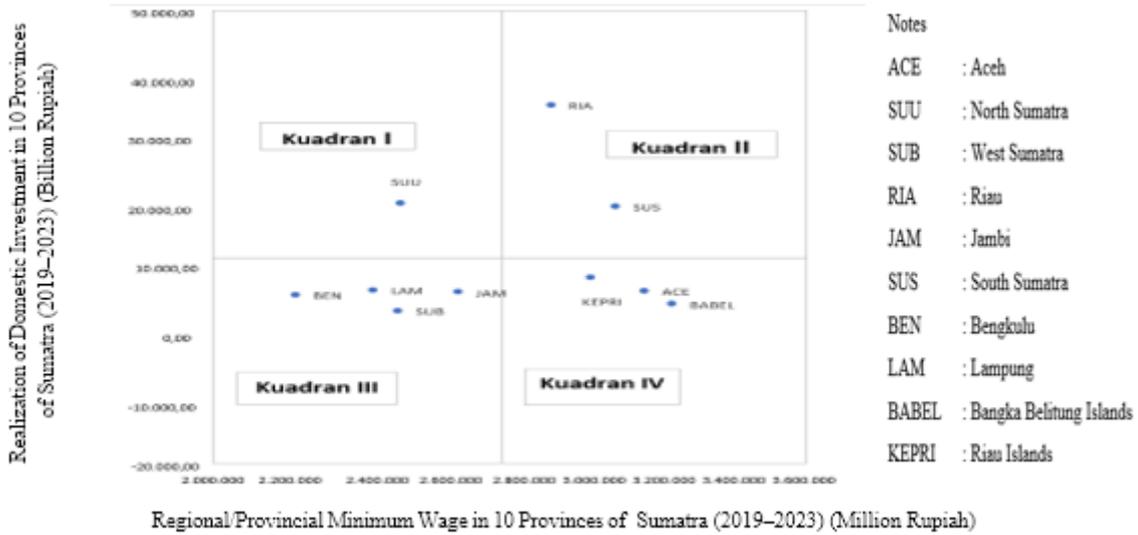


Figure 4.1.1 Quadrant of Minimum Wage and Domestic Investment Source: Processed by the Researcher (2025)

The mapping shows that North Sumatra is in Quadrant I (high realization of domestic investment, low minimum wage), Riau and South Sumatra in Quadrant II (high realization of domestic investment, high minimum wage), Bengkulu, Lampung, Jambi, and West Sumatra in Quadrant III (low realization of domestic investment, low minimum wage), while Aceh, Bangka Belitung Islands, and Riau Islands in Quadrant IV (low realization of domestic investment, high minimum wage). This result emphasizes that minimum wages are not the sole determinant of investment, as provinces with higher wages are not always able to attract significant realization of domestic investment.

3.3.2 *Quadrant of National Road Quality and Realization of Domestic Investment*

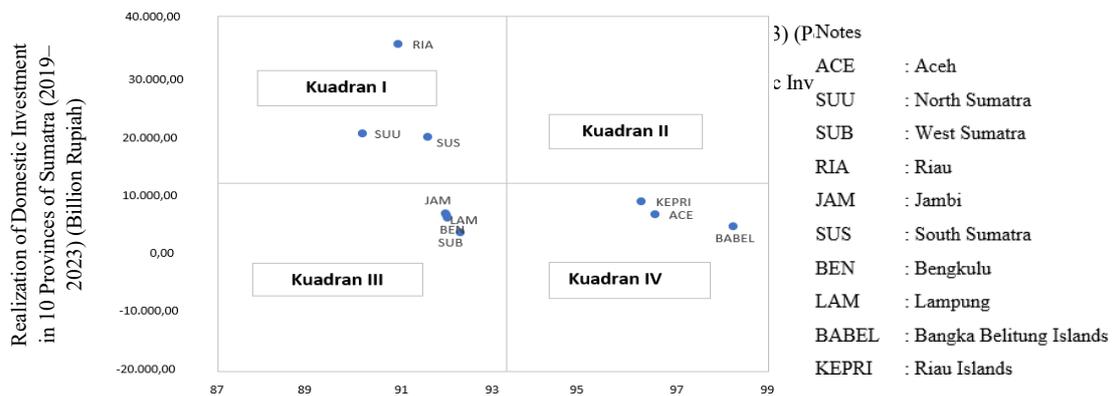


Figure 4.1.2. Quadrant of Regional Competitiveness Index and Domestic Investment Source: Processed by the Researcher (2025)

The analysis shows that Riau, North Sumatra, and South Sumatra are in Quadrant I (high realization of domestic investment, low road quality). No province is in Quadrant II (high realization of domestic investment, high road quality). Jambi, West Sumatra, and Bengkulu fall into Quadrant III (low realization of domestic investment, low road quality), while Aceh, Lampung, Riau Islands, and Bangka Belitung are in Quadrant IV (low realization of domestic investment, high road quality). This indicates that although road quality is relatively high, infrastructure alone is insufficient to significantly increase investment attraction.

3.3.3 Quadrant of Regional Competitiveness Index and Realization of Domestic Investment

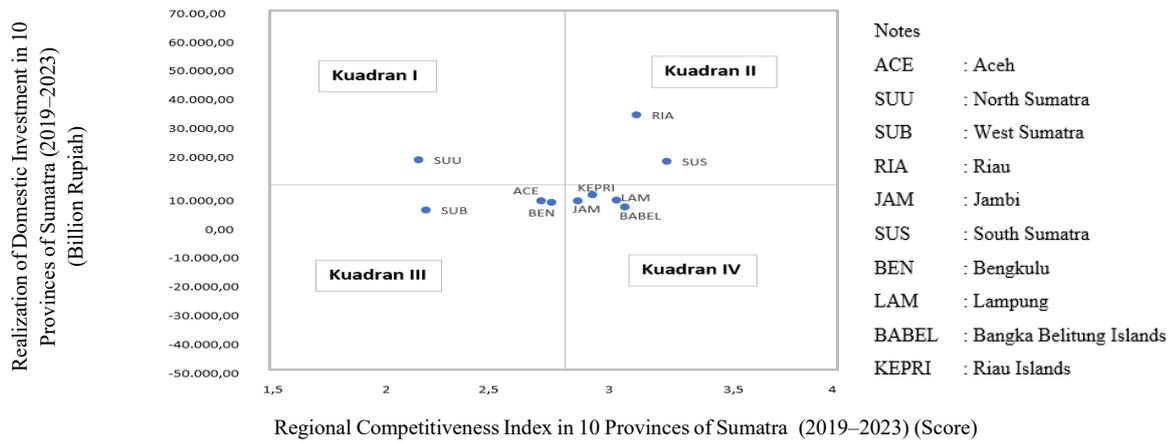
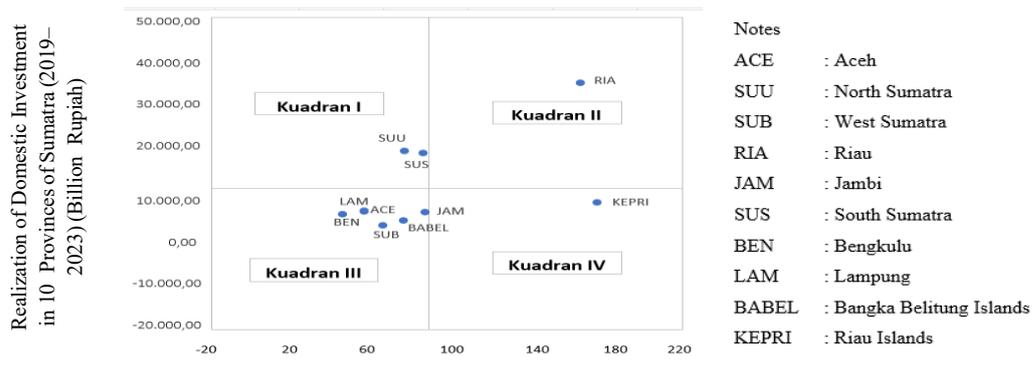


Figure 4.1.3. Quadrant of Regional Competitiveness Index and Domestic Investment Source: Processed by the Researcher (2025)

The mapping of competitiveness and realization of domestic investment reveals that North Sumatra falls into Quadrant I (high realization of domestic investment, low competitiveness), Riau and South Sumatra into Quadrant II (high realization of domestic investment, high competitiveness), Aceh, West Sumatra, and Bengkulu into Quadrant III (low realization of domestic investment, low competitiveness), and Lampung, Bangka Belitung, Jambi, and Riau Islands into Quadrant IV (low realization of domestic investment, high competitiveness). This suggests that high competitiveness scores do not necessarily translate into greater investment, as institutional quality and policy implementation remain critical factors.

3.3.4 Quadrant of Labor Productivity and Realization of Domestic Investment



Labor Productivity in 10 Provinces of Sumatra (2019-2023) (Million Rupiah/Worker)

Figure 4.1.4 Quadrant of Labor Productivity and Domestic Investment

Riau is the only province in Quadrant II (high realization of domestic investment, high labor productivity), while North Sumatra and South Sumatra are in Quadrant I (high realization of domestic investment, low productivity). Aceh, Bengkulu, Lampung, and West Sumatra are in Quadrant III (low realization of domestic investment, low productivity), and Riau Islands, Jambi, and Bangka Belitung fall into Quadrant IV (low realization of domestic investment, high productivity). This analysis highlights that labor productivity plays an important role, but is not sufficient by itself to drive investment without supportive infrastructure, regulatory efficiency, and a conducive business climate.

#### 4.2. Panel Data Regression Analysis

##### 4.2.1 Chow Test

Table 4.2.1 Results of the Chow Test

Result	Statistic	d.f	Prob.
Cross-Section F	28.892752	(9,36)	0.0000
Cross-Section Chi-Square	105.347899	9	0.0000

Source: Data Processing Result, 2025

Based on the table above, the probability value of the Cross-section Chi-Square is  $0.0000 < 0.05$ . Therefore,  $H_0$  is rejected, and it can be concluded that the Fixed Effect Model is more appropriate to be used in this study compared to the Common Effect Model.

##### 4.2.2 Hausman Test

Table 4.2.2 Results of the Hausman Test

Result	Chi-Sq Statistic	Chi-Sq.d.f	Prob
Cross-section random	20.435180	4	0.0004

Source: Data Processing Result, 2025

The output shows a probability value of  $0.0004 < 0.05$ , thus  $H_1$  is accepted, and the Fixed Effect Model is preferred over the Random Effect Model. Both the Chow and Hausman tests confirm FEM as the best model, making the Lagrange Multiplier Test unnecessary. Therefore, the Fixed Effect Model (FEM) is concluded as the most appropriate for this study.

Tabel 4.8 Result of Cross-Section Test – Effect (Individual Effect)

Country	Effect
Aceh	-5.814,3
North Sumatra	13.734.58
West Sumatera	-1.373,307
Riau	9.657,935
Jambi	-3.705,97
South Sumatera	5.507,079
Bengkulu	8.864,341
Lampung	5.254,961
Bangka Belitung Island	-11.864,08
Riau Island	16.730,23

Source: Data Processing Result, 2025

The results of the cross-section effect test indicate variations in investment attractiveness across provinces in Sumatra. Provinces with the highest positive effects are Riau Islands with 16,730.39 billion rupiah, North Sumatra with 13,734.58 billion rupiah, and Riau with 9,657.93 billion rupiah. These values reflect the advantages of strategic location, infrastructure support, and abundant natural resources. In contrast, provinces with negative effects include Bangka Belitung Islands with minus 11,864.08 billion rupiah and Aceh with minus 5,814.30 billion rupiah. These regions face structural barriers such as limited industrial zones, high logistics costs, and regulatory as well as socio-cultural constraints. The findings highlight that the realization of domestic investment in Sumatra is not solely determined by economic variables but is also strongly influenced by the unique characteristics of each region.

### 4.2.3 Panel Data Regression Equation

Table 4.2.3 Panel Data Regression Results of the Fixed Effect Model

Variable	Coefficient	Prob
C	-40198,93	0,0055
MW	0,014428	0,0011
RIQ	6,855910	0,9565
RIC	-1030,814	0,1988
LP	157,0124	0,1530

Source: Data Processing Result, 2025

Based on the Chow and Hausman tests, the most appropriate model to use is the Fixed Effect Model. The estimation results show the following regression equation:

$$\text{Domestic Investment} = -40,198.93 + 0.0144 (\text{MW}) + 6.8559 (\text{RIQ}) - 1,030.81 (\text{RIC}) + 157.01 (\text{LP}) + \text{eit}$$

The interpretation of the estimation results is as follows: the coefficient of the Regional Minimum Wage is 0.0144 with a probability value of 0.0011, indicating that an increase in the Regional Minimum Wage by one rupiah increases Domestic Investment by 0.0144 billion rupiah. The coefficient of the Labor Productivity is 157.01 with a probability value of 0.1530, showing a positive effect on Domestic Investment, although it is not statistically significant at the five percent level. The coefficient of the Nasional Road Conditions is 6.8559 with a probability value of 0.9565, showing a positive direction but not statistically significant. Meanwhile, the coefficient of the Labor Productivity is -1,030.81 with a probability value of 0.1988, indicating that an increase in the Human Development Index decreases Domestic Investment by 1,030.81 billion rupiah.

Overall, these findings emphasize that labor-related factors, particularly the Regional Minimum Wage which is significantly positive, play an important role in attracting Domestic Investment. On the other hand, the Regional Competitiveness Index shows a negative effect, while the National Road Conditions and the Labor Productivity do not yet demonstrate a strong significance in increasing Domestic Investment.

### 4.2.3 Hypothesis Testing Results

#### 4.2.3.1 Partial Test (t-test)

Table 4.2.3.1 Partial Test Results (t-test)

Variable	t.Statistic	Prob
C	-2953537	0,0055
MW	3,542664	0,0011
RIQ	0,054970	0,9565
RIC	-1,309130	0,1988
LP	1,459883	0,1530

Source: Data Processing Result, 2025

The partial test results indicate that only the Regional Minimum Wage has a positive and significant effect on Domestic Investment Realization in the ten provinces of Sumatra, with a probability value of  $0.0011 < 0.05$  and a t-statistic of  $3.54 > t\text{-table } 2.022$ . Meanwhile, the variables National Road Stability, Regional Competitiveness Index, and Labor Productivity show no significant effect on Domestic Investment Realization, as their probability values exceed 0.05 and their t-statistics are lower than the t-table value.

#### 4.2.3.2 Simultaneous Test (F-test)

Table 4.2.3.2 Simultaneous Test (F-test)

Statistical Test	Prob
F-statistic	33,10880
Prob(F-statistic)	0,000000

Source: Data Processing Result, 2025

The F-test results show that the independent variables, namely Regional Minimum Wage, National Road Stability, Regional Competitiveness Index, and Labor Productivity, jointly have a significant effect on Domestic Investment Realization in the ten provinces of Sumatra. This is indicated by an F-statistic value of 33.11 with a probability of 0.000000, which is smaller than

0.05 and greater than the F-table value of 2.08.

#### 4.2.3.3 Coefficient of Determination (R-Square)

Statistical Test	Statistical Test	Prob
R-squared		0,922815
Adjusted R-squared		0,894943

Source: Data Processing Result, 2025

The coefficient of determination (R-Square) measures the extent to which the model explains the variation in the dependent variable. An R-Square value close to one indicates that the independent variables provide nearly all the information needed to predict the dependent variable. Based on the results, the Adjusted R-Square value is 0.894943, indicating that the independent variables explain 89.49% of the variation in Domestic Investment Realization, while the remaining 10.51% is influenced by other factors outside the regression model.

#### The Effect of Provincial Minimum Wage on Domestic Investment Realization

The panel regression using the Fixed Effect Model indicates that the Provincial Minimum Wage has a positive and significant effect on Domestic Investment Realization in Sumatra. A one-million-rupiah increase in the minimum wage is estimated to raise domestic investment by 0.0144 billion rupiah, assuming other variables remain constant. This finding contradicts the initial hypothesis based on Production Cost Theory, which predicted a negative effect due to higher labor costs. However, the 2019–2023 trend data support the regression results. In Aceh and Bangka Belitung, higher minimum wages were followed by increased investment, while Bengkulu, with the lowest wage, experienced slower growth. These findings align with [21], who reported a significant positive effect of the minimum wage on domestic investment in Java. [22], who emphasized that fair wages enhance labor performance, productivity, and firm competitiveness. From a Keynesian perspective, higher minimum wages boost aggregate consumption, creating a multiplier effect that stimulates demand growth and makes the region more attractive for investment. Thus, the minimum wage serves as a key driver of domestic investment growth in Sumatra.

#### The Effect of National Road Stability on Domestic Investment Realization

The panel regression using the Fixed Effect Model indicates that the National Road Condition variable has a positive coefficient of 6.8559, but a p-value of 0.9565 shows that its effect on Domestic Investment Realization in Sumatra is statistically insignificant. Theoretically, based on classical and modern location theories, better road conditions should enhance distribution efficiency, market access, and investment attractiveness; however, the empirical findings do not fully support this. Previous studies support this perspective, though with similar findings of positive but insignificant effects. [23] in North Sumatra found that road length positively influenced investment, though insignificantly. [24] in Bali reported that road infrastructure affects economic growth but is not significant for investment, whereas electricity infrastructure had a significant impact. This suggests that road quality serves as a basic prerequisite rather than a dominant factor in attracting investment. Thus, although the coefficient for road condition aligns with initial expectations, empirically it is not significant for Domestic Investment in Sumatra. This finding aligns with prior research emphasizing that road infrastructure is a basic requirement, while enhancing investment attractiveness requires a comprehensive approach, including regulatory improvement, business climate strengthening, and human capital development.

#### The Effect of Regional Competitiveness Index on Domestic Investment Realization

The panel regression using the Fixed Effect Model indicates that the Regional Competitiveness Index has a negative coefficient of -1030.814 with a p-value of 0.1988. This suggests that an increase in the index is statistically insignificant in affecting Domestic Investment Realization in Sumatra, even though the negative direction contradicts the initial hypothesis of a positive effect. The hypothesis was based on Porter's Diamond Model, which states that a region's competitiveness is determined by four main factors: factor conditions, domestic demand, related and supporting industries, and firm strategy, structure, and rivalry. High-competitiveness regions are expected to have efficient business ecosystems and a competitive climate, thereby attracting investments. However, empirical results show that an increase in the competitiveness score does not always correlate with higher investment realization in Sumatra's provinces. These findings align with Rosano and Widodo (2023), who emphasized that formal the Regional Competitiveness Index scores do not necessarily reflect the real attractiveness to investors, as policy implementation and institutional capacity are also crucial. External factors, such as the COVID-19 pandemic, affected the effectiveness of these indicators, as investors prioritized macroeconomic stability, fiscal flexibility, and fast permitting over mere index scores. In conclusion, while theory predicts a positive relationship between regional competitiveness and domestic

investment, empirically, the Regional Competitiveness Index is not significant. Enhancing competitiveness must be accompanied by policy reform and institutional strengthening to genuinely attract domestic investment.

#### The Effect of Labor Productivity on Domestic Investment Realization

The panel regression using the Fixed Effect Model indicates that labor productivity (LP) has a positive coefficient of 157.0124, but with a p-value of 0.1530, making the effect statistically insignificant. This suggests that although the relationship supports the initial hypothesis that labor productivity positively affects Domestic Investment Realization, empirically the effect is not strong enough to be significant. During 2019–2023, increases in labor productivity in Sumatra have not consistently translated into higher domestic investment, although it remains an important factor. Theoretically, this finding aligns with the Solow-Swan growth model, which emphasizes labor efficiency and capital accumulation as key drivers of long-term output growth. Higher labor productivity increases potential output, making a region more attractive to investors. Dunning's OLI Paradigm also supports this view, as labor productivity is part of the Location Advantage, affecting operational efficiency and cost structures. Previous studies support this evidence. Nadzir and Kenda (2023) found that labor productivity positively affects domestic investment, but the influence is indirect and mediated by bureaucratic efficiency, infrastructure, and regulatory certainty. Yani Rizal (2019) also found that labor quantity significantly affects investment, even though productivity was not measured. Thus, labor productivity remains a key indicator of investment potential, especially when supported by institutional and structural factors.

#### 4. Conclusions

Based on the results of the study, it is known that the absorption of domestic investment in Sumatra still shows disparities among provinces. Quadrant analysis indicates that Riau and South Sumatra occupy an ideal position with high wages balanced by high investment absorption, while several provinces such as Bengkulu, Jambi, and West Sumatra remain in low investment quadrants. The panel data regression with the Fixed Effect Model shows that provincial minimum wages have a positive and significant effect on domestic investment realization, while national road stability, regional competitiveness index, and labor productivity do not have statistically significant effects. These findings suggest that investment absorption in Sumatra is influenced not only by cost efficiency and infrastructure but also by institutional and structural factors that vary across provinces.

1. Suggestions for Government and Related Agencies. Regional investment policies need to be designed based on local characteristics rather than uniform measures. Incentives such as tax relief, simplified licensing, and support for human resource development are needed to increase provincial competitiveness. Infrastructure development must also focus on improving connectivity to industrial areas and ports, not only on maintaining road stability. Moreover, institutional reforms and regulatory certainty are essential to create a conducive investment climate.

2. Suggestions for the Community. Communities are expected to strengthen their role in supporting investment through improving workforce quality. Active participation in vocational training, skill upgrading, and adaptation to industry needs will increase local competitiveness and attract more investors. Social support in maintaining stability and a conducive business environment is also vital in reducing regional investment gaps.

3. Suggestions for Future Researchers. Future studies are encouraged to expand the scope of analysis by including additional variables such as regional GDP, political stability, ease of doing business index, and institutional quality. Applying a larger sample size, mixed-method approaches, or longitudinal analysis will provide a deeper understanding of investment dynamics and offer stronger policy recommendations for narrowing regional disparities in Sumatra.

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