

The Effect of Infrastructure, Labor Force, and Market Size on Domestic Investment in Indonesia

Rafiqah Nur Izzati^{1*}, Lucky Rachmawati¹

¹Universitas Negeri Surabaya, Surabaya, Indonesia



DOI : <https://doi.org/10.63230/jocsis.1.2.31>

Sections Info

Article history:

Submitted: May 7, 2025

Final Revised: June 18, 2025

Accepted: June 18, 2025

Published: June 20, 2025

Keywords:

Domestic Investment;

Infrastructure;

Labor Force;

Market Size;

Regression.

ABSTRACT

Objective: As one of the components of economic growth in Indonesia, domestic investment experiences inequality problems. This study aims to identify the influence of infrastructure, workforce, and market size on domestic investment in Indonesia in 2023. **Method:** This study uses a quantitative approach using multiple linear regression analysis methods on cross-section data from 34 provinces in Indonesia. The data used in this study comes from the Indonesian Central Bureau of Statistics. **Results:** After a quantitative approach using multiple linear regression analysis methods, the results obtained are: (1) infrastructure in the form of road stability has a significant positive effect on domestic investment or Domestic Investment (PMDN); (2) market size in the form of Gross Regional Domestic Product (PDRB) has a significant positive effect on domestic investment; (3) the workforce represented by the number of workers has a negative effect on domestic investment, but is not significant; and (4) together, there is an influence of infrastructure, workforce, and market size on the value of domestic investment. **Novelty:** In contrast to most previous studies that focused more on analyzing foreign investment, this study focuses on the determinants of domestic investment (PMDN) in Indonesia.

INTRODUCTION

The contribution of investment, especially domestic investment, to economic growth has been widely found in empirical results (Kansil & Chang, 2024). The emergence of new investment projects or the expansion of existing investment projects will create jobs and support community welfare (Hudaifah, 2018). Investment can also stimulate an economy experiencing a recession (Germaschewski, 2020). The value of Indonesian investment from 2010 to 2023 is presented in Figure 1 below.

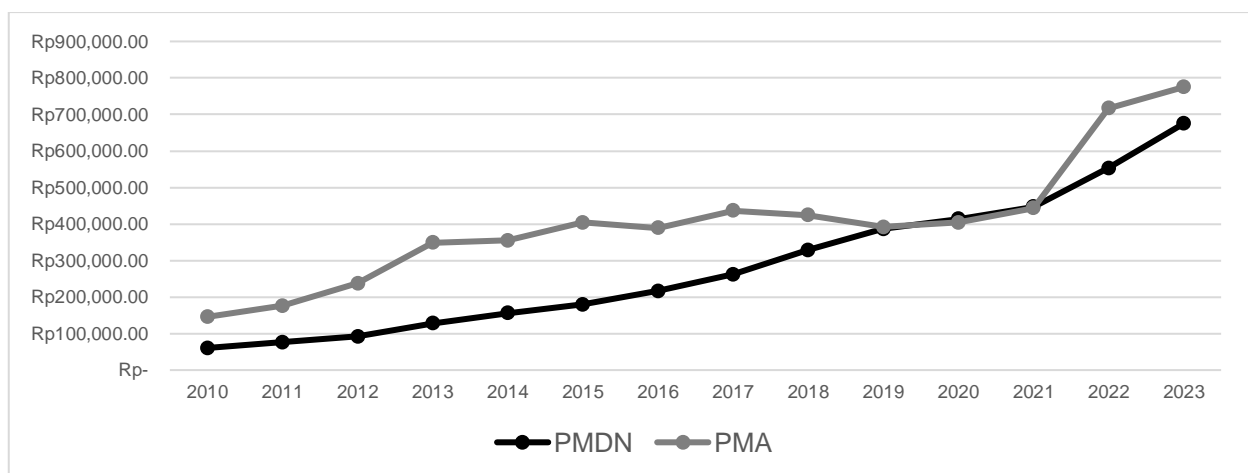


Figure 1. Trends of PMA and PMDN in Indonesia (billion rupiah)

Source: BPS Indonesia & BKPM (2024)

As shown in Figure 1, PMDN has experienced a stable increase from year to year, in contrast to PMA, which has experienced fluctuations. The value of PMA is generally higher than that of PMDN, except for the period from 2019 to 2021. The factors that determine investment value are dynamic, often causing variations in investment value from year to year (Setiyanto, 2023; Agustina et al., 2021; Kang et al., 2022). High fluctuations in PMA indicate that there are too many determinants of PMA, which makes it challenging to identify PMA determinants comprehensively. Based on this, this study primarily focuses on PMDN as a form of domestic investment. Although the value of PMDN in Indonesia tends to be stable from year to year, the inequality is evident in regional data. There is a significant difference in PMDN value among provinces in Indonesia. Based on data from BPS Indonesia (2024), the provinces in Java have the highest investment values in Indonesia, both for PMA and PMDN. Meanwhile, the provinces with the lowest investment values are the provinces in Papua and Maluku. The disparity of PMDN can be seen in Figure 2 below.

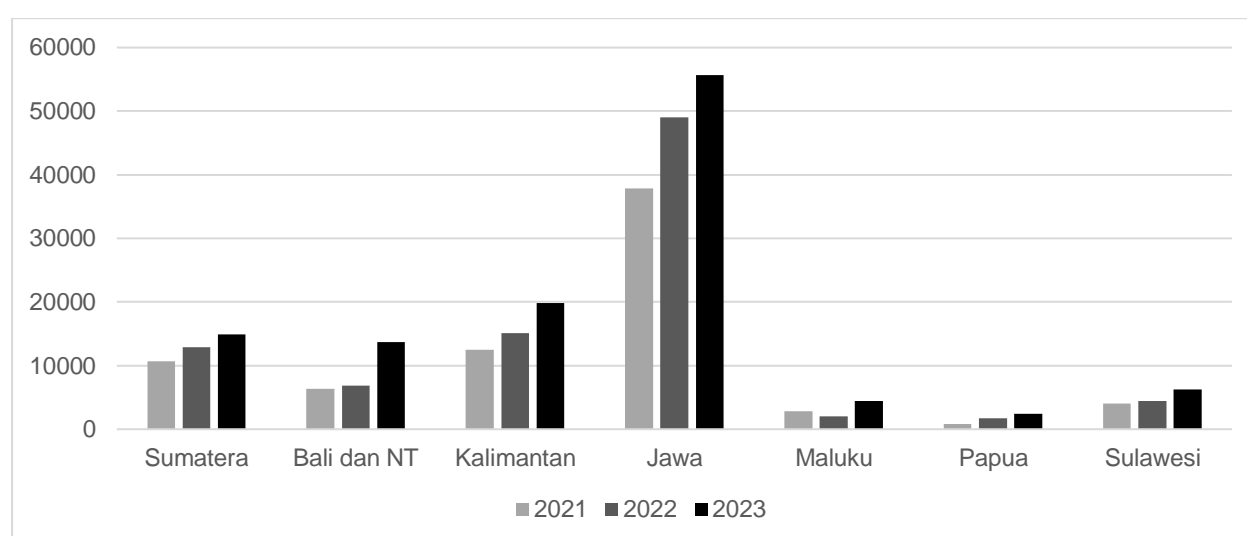


Figure 2. Domestic direct investment disparity in Indonesia (Billion Rupiah)
Source: BPS Indonesia (2024)

Given the high inequality shown in Figure 2, it is necessary to identify the factors that contribute to determining investment value. In several previous studies, factors such as inflation, interest rates, exchange rates, and several factors have shown an influence on investment, but these factors cannot be determinants of the inequality of investment value between one province and another. There are factors outside of that that can increase investment and have the potential to cause inequality if these factors are not evenly distributed in each region (Hudaifah, 2018). In other words, these factors are an investment attraction in each region, which makes a region superior in attracting investors compared to other regions. These factors are explained by Dunning & Lundan (1993) in the eclectic theory, which explains the existence of the OLI (Ownership, Location, Internalization) paradigm which can be summarized as three main motivations for choosing a location for multinational companies that invest. The three main motivations are resource seeking, market seeking, and efficiency seeking. Resources in this case can be in the form of infrastructure and workforce, while the market is considered by looking at the market size of a region.

In theory and empirically, infrastructure equity is an aspect that supports domestic investment equity (Keynes, 1936; Kinda, 2008; Budiono & Purba, 2023; Wahyudi & Zapita, 2022; Bakar et al., 2012). Infrastructure supported by a conducive domestic environment in the country that serves as an investment destination will contribute to increasing the value of Foreign Direct Investment (FDI) in an area (Shah et al., 2020; Ross, 2019; Ross, 2015). Developing countries, such as Indonesia, continue to experience infrastructure gaps between rural and urban areas, highlighting the need for further attention in development programs (Wiratama et al., 2023). Infrastructure inequality can be a determinant of the high difference in the value of domestic investment entering each region. In eclectic theory, the availability of supporting transportation facilities and infrastructure, such as roads and ports, is included in location advantages, which are aspects that support the attractiveness of an area as an investment destination. This theory is supported by Blakely's (2017) theory, which states that cities with adequate building supplies and physical infrastructure will be able to stimulate the emergence of new companies and foster the development of existing ones. Based on the theory and previous studies, one of the hypotheses proposed in this study states that infrastructure is suspected of influencing the value of domestic investment.

In addition to infrastructure, Dunning's eclectic theory (1993) also explains the availability of labor as a location advantage and is included in the resource-seeking motive. The results of research by Gharaibeh (2015) also explain that the phenomenon of a surge in the workforce is a supporting factor in increasing the value of Foreign Investment (PMA) in a country. Indonesia is experiencing a surge in the workforce as an effect of the demographic bonus, where the proportion of the population included in the workforce or productive age population is very high (Ernawan et al., 2023; Rajagukguk, 2022). Population growth is closely related to economic growth (Johnson, 1999).

This surge in the working-age population indicates that Indonesia has a high labor supply. However, the distribution of the workforce in Indonesia is imbalanced due to the uneven population distribution. Data from the Central Statistics Agency (2024) show that the working-age population living on the island of Java exceeds 50%. This situation makes Java a superior region in terms of labor availability. The highly productive population in Indonesia, when accompanied by high labor absorption, will be able to reduce the unemployment rate (Prakoso, 2021). Companies established by investors who make domestic investments will contribute to labor market absorption in Indonesia (Jamaliah, 2016). The contribution of a high workforce to determining investment value has been discussed in previous studies, with results indicating that a company will consider an abundant workforce before establishing a business or investing in an area (Tarigan et al., 2021). Building on the theoretical basis and empirical studies presented previously, this study proposes a hypothesis that the workforce may have an impact on the value of domestic investment.

Another motive explained by the eclectic theory in the discussion of location advantages besides resource seeking is market seeking. The market potential, as indicated by the market size of a region, is one aspect that attracts investors. The theory of induced investment also explains that investment is driven by increasing aggregate demand. Kang and Lee (2007) use provincial GDP as a proxy for market size. Related to this, Indonesia experiences significant disparities in the value of GRDP across its regions. The Central Statistics Agency (2024) presents data on the GRDP of DKI Jakarta, East Java, West Java, and Central Java, the values of which far exceed those of other provinces in

Indonesia. The GRDP of DKI Jakarta in 2023 was recorded at 3.4 trillion rupiah when the GRDP for areas outside Java had not yet reached 1 trillion.

GRDP demonstrates the ability of people in an area to absorb the results of production activities, thereby having a positive impact on PMDN (Natalie, 2023). High GRDP is an indicator of the community's ability to return the investment capital that has been spent. A high GDP also means that there is an increase in people's income, which will naturally contribute to increased demand for goods and services. Thus, company profits will increase, encouraging companies to invest more (University of Minnesota, 2016). Based on previous theories and research, the hypothesis proposed for this study is that market size affects domestic investment. Understanding the factors that have the potential to cause differences in investment value across regions is crucial for supporting the creation of a sustainable and more equitable investment climate in the country. This study examines the influence of infrastructure development, workforce size, and market size on the value of PMDN in provinces in Indonesia in 2023. The existence of this impact is interpreted based on a linear relationship pattern, allowing for an assessment of whether these three factors will have a significant influence on determining the value of PMDN in each province.

RESEARCH METHOD

This study employs a quantitative method, utilizing a multiple linear regression model approach, to analyze cross-sectional data. This analysis technique also focuses on the causal relationship between variables that are the object of study and is used in the process of testing the hypothesis proposed by the researcher. This study will describe and analyze whether or not there is a causal relationship between infrastructure, workforce, and market size as determinants of domestic investment value. Following the research flow, formulating the problem until the conclusion.

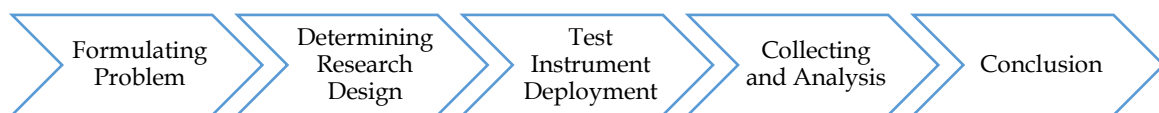


Figure 1. Research flow

The population in this study is based on PMDN data, infrastructure, workforce, and GRDP, which represent the market size of all provinces in Indonesia as of 2023. Sampling follows the availability of data at the Indonesian Central Statistics Agency (BPS) and the Ministry of PUPR (Public Works and Public Housing), considering that the expansion of the region into 38 provinces has not been fully integrated into the existing data division, resulting in observation data for 34 provinces.

The multiple regression analysis method, using the Ordinary Least Squares (OLS) method, is employed for the cross-sectional data obtained. Furthermore, several analysis requirement tests and statistical tests are carried out. The analysis requirement tests carried out are classical assumption tests, including normality tests, multicollinearity tests, and heteroscedasticity tests. After ensuring that the model used meets all classical assumptions, hypothesis testing will be continued in the form of t-tests, F-tests, and R2 tests or coefficients of determination. The regression equation model is shown by the following equation (1).

$$\ln Y_i = \beta_0 + \beta_1 \ln X_{1i} + \beta_2 \ln X_{2i} + \beta_3 \ln X_{3i} + e_i \dots\dots\dots (1)$$

- Y_i = Domestic Investment (PMDN)
 $\beta_0 \beta_1 \beta_2 \beta_3$ = Independent Variable Coefficient
 X_1 = Road Infrastructure (INF)
 X_2 = Labor Force (LA)
 X_3 = Market size (MS)
 i = 34 Provinces in Indonesia
 e = Disturbance error

Based on the literature review in the previous section, several statistical hypotheses are proposed which will later be tested using data analysis techniques. The statistical hypotheses in this study are as follows.

- 1) Hypothesis I
 H_0 : There is no influence of infrastructure on domestic investment.
 H_1 : There is an influence of infrastructure on domestic investment.
- 2) Hypothesis II
 H_0 : There is no influence of the workforce on domestic investment.
 H_1 : There is an influence of the workforce on domestic investment.
- 3) Hypothesis III
 H_0 : There is no influence of market size on domestic investment.
 H_1 : There is an influence of market size on domestic investment.
- 4) Hypothesis IV
 H_0 : There is no simultaneous influence of infrastructure, workforce and market size on domestic investment..
 H_1 : There is a simultaneous influence of infrastructure, workforce, and market size on domestic investment.

RESULTS AND DISCUSSION

Results

In this study, it is important to test several classical assumption requirements that must be met, as shown in Table 1 below. The presence or absence of normality problems in OLS regression is examined in the residuals using the Shapiro-Wilk Normality Test technique (King & Eckersley, 2019). The multicollinearity test is conducted by examining the Variance Inflation Factor (VIF) and tolerance values to ensure that the estimator operates efficiently (Arum et al., 2023). The heteroscedasticity test is conducted using the Breusch-Pagan-Godfrey Test to ensure that there is no inequality of variance among the residuals of each observation (Juliandi et al., 2014). Suppose the classical assumption test has been carried out, and the results indicate that this study is free from classical assumption problems. In that case, the study can proceed with a hypothesis test, yielding more accurate results and reducing bias.

Table 1. Classical assumption test

Classical Assumption Test	Indicator	Results	Criteria	Decision
Normality Test	Prob>Z residual	0.39791	< 0.05	Passed
Multicollinearity Test	VIF Value	lnINF = 1.56 lnAK = 4.27 lnMS = 3.77	< 10	Passed
	Tolerance value	lnINF = 0.64 lnAK = 0.27 lnMS = 0.23	> 0,10	
Heteroscedasticity Test	Prob > chi2	0.4339	> 0.05	Passed

Source: Data processed by researchers, 2024

Based on Table 1, this research model has passed all classical assumption tests; therefore, it can be said that this research is likely to provide good results. Furthermore, the regression estimation process is used to examine the relationship between variables. The results of the regression coefficients in this study are integrated into equation (1), which was explained previously, producing equation (2) as follows.

$$\ln \text{PMDN}_i = -7,1717 + 2,1101 \ln \text{INF}_i - 0,2929 \ln \text{AK}_i + 0,9068 \ln \text{MS}_i + e_i \dots (2)$$

$\ln \text{PMDN}$ = Natural Logarithm of Domestic Investment (PMDN)

$\ln \text{INF}$ = Natural Logarithm of Road Infrastructure

$\ln \text{AK}$ = Natural Logarithm of Labor Force

$\ln \text{MS}$ = Natural Logarithm of Market Size

i = 34 Province in Indonesia

e = Disturbance error

The variables used in this study are natural logarithms. According to Gujarati (2003), the interpretation of the regression model using the log-log model involves interpreting the coefficient value as a percentage change in Y due to a percentage change in X. Based on this, equation (2) can be interpreted as follows.

- 1) The constant value produces the number -7.171669 which implies that if Road Infrastructure (X1), Workforce (X2), and Market size (X3) have a value of 1 unit each based on $\ln(1) = 0$, then the estimated value of PMDN (Y) is the antilogarithm ($e^{\ln Y}$) of the constant value obtained of -7.171669, namely $e^{-7.171669}$ or around 0.000768 billion rupiah, worth 0.768 million rupiah.
- 2) In the Road Infrastructure variable (X1), the coefficient value obtained is 2.110106. This shows that with conditions where the road stability infrastructure is superior by 1%, the PMDN value will also be superior by 2.11%. So simply put, increasing the quality of road stability will have a positive effect on PMDN.
- 3) In the Labor Force variable (X2), the coefficient value shows a negative number, which is -0.2929558. This number indicates that if the workforce is 1% more, the PMDN value will actually be smaller by around 0.29%. Based on these results, it is understood that the high number of the workforce will have a negative effect on the PMDN value.

- 4) The Market size variable (X3) produces a coefficient value of 0.906763. It can be concluded that if the market size indicated by the GRDP value is superior by 1%, the PMDN value will also be higher by 0.9%. The increase in GRDP is in line with the increase in PMDN. Therefore, GRDP or market size has a positive influence on domestic investment.

To test whether the influence of each independent variable on the dependent variable is significant at a 5% significance level, a hypothesis test is conducted using a t-test, F-test, and coefficient of determination. The t-test is used to determine the significance of the influence of each independent variable on the dependent variable, either partially or individually. In contrast, the F-test is used to test the simultaneous influence of multiple factors. The results of the hypothesis test are presented in Table 2 below.

Table 2. Hypothesis testing

Hypothesis Testing	Indicator	Results	Criteria	Keputusan
T test	$P > t $	lnINF	0,029	<0,05
		lnAK	0,154	<0,05
		lnMS	0,039	<0,05
				Significant
F test	Prob > F	0,0000	<0,05	Significant
Koefisien Determinasi	Adjusted R squared	0,7246	-	-

Source: Data processed by researchers, 2024

According to the t-test results presented in Table 2, the significant variables influencing domestic investment were road stability infrastructure (lnINF) and the market size variable (lnMS). Meanwhile, the influence of the workforce variable (lnAK) was not statistically significant. This decision was based on the t-test criteria, which involved examining the probability value of the t-statistic. If the value of P is smaller than 0.05 at a significance level of 5%, it indicates a significant influence of the independent variable on the dependent variable in the research model (Ghozali, 2018). The results of the t-test in Table 2 show the probability values of the t-statistic for the lnINF variable (0.029) and the lnMS variable (0.039), indicating significance. The link variable has a probability value of 0.154, which is greater than 0.05, so it is declared not to have a significant effect.

The influence of independent variables on dependent variables can also be seen simultaneously. The influence of independent variables can be determined by examining the Probability F-statistic value. Suppose the Probability F-statistic value is known to be below 0.05 according to the 5% significance level. In that case, there is a significant influence of all independent variables together on the dependent variable. In other words, there is at least one of the independent variables that has a significant effect on the independent variable. Table 2 shows the Prob > F value of 0.0000, which is less than 0.05. It can be concluded that the F-test provides evidence that infrastructure, workforce, and market size simultaneously affect domestic investment.

Table 2 also shows the Adjusted R-squared value as a coefficient of determination. According to Santoso (Togar et al., 2015), the Adjusted R-squared value is more accurate than the R-squared value for determining the suitability of regression models with more than two independent variables. In this research model, the Adjusted R-squared value reached 0.7246. Thus, it can be interpreted that the variation in the dependent variable

can be explained by the independent variables used in this research model in the high category (Chin & Marcoulides, 1998), which is 72.46%. At the same time, variables outside the model explain the remaining 27.54%.

Discussion

The stability of roads at the national and provincial levels, used as an infrastructure indicator in this study, has a significant positive influence on domestic investment. This means that the higher the stability of road infrastructure, the higher the value of domestic investment. These results are consistent with the theory presented by Dunning (1988) regarding investment, namely the eclectic theory. This theory explains the existence of locational advantages that contribute to increasing the investment attractiveness of a region, which can be in the form of infrastructure that supports the transportation system, including road infrastructure. Blakely's theory also states that for investors, choosing an area with adequate physical infrastructure development will be more beneficial in terms of operational speed.

The positive influence of infrastructure is also explained by Budiono and Purba (2023) in their research, with water and electricity infrastructure as indicators. Water and electricity infrastructure contribute positively to Foreign Direct Investment (FDI), and their influence is significant (Budiono & Purba, 2023). Likewise, it also found that infrastructure in the manufacturing and service sectors is crucial in supporting the proper utilization of FDI and can lead to increased domestic investment (Shah et al., 2020). Research that is not in line with these results includes that by Stéphane (2021), which found that transportation infrastructure has no significant impact on investment in both long-term and short-term contexts, whereas electricity infrastructure significantly reduces investment attractiveness. According to the research by Pratiwi and Triani (2019), road infrastructure has no impact on FDI, whereas electricity infrastructure and telecommunications infrastructure have a positive impact on FDI.

The results of this study did not find any significant effect of the number of workers on domestic investment. This means that the high or low number of workers in a province does not substantially affect the value of PMDN. Although the regression coefficient is negative, indicating an inverse relationship, the effect of this variable remains insignificant at the 5% confidence level. There are empirical studies that support the results of this study. The results of this study, which indicate no significant effect of the workforce on the level of investment, differ from those obtained in studies examining short-term and long-term effects (Jeon et al., 2023; Utma & Rakhman, 2019; Zeb et al., 2014).

When the results of this study are considered in conjunction with Dunning's eclectic theory and Blakely's theory, the availability of skilled and inexpensive labor is identified as a key aspect of a region's locational advantages in attracting investment. The workforce that investors will consider aligns with the company's needs (Huseynli, 2022). Thus, if the workforce of a region has low skills, the abundance of the workforce will not be able to attract investors, and it may even have a negative impact if followed by high unemployment. This negative impact was also observed in the negative coefficient produced by the workforce in this research model; however, the impact was not statistically significant. In addition, research by Hudaifah (2018) also found a significant negative influence of the workforce on PMDN and PMA.

The market size in this study, which uses Gross Regional Domestic Product (GRDP) as an indicator, has a positive effect on Domestic Investment (PMDN). Provinces with higher GRDP will tend to have higher PMDN values. A large market size will attract investors to make domestic investments in a location. Along with these findings, the eclectic theory by Dunning explains that one of the motives for investors in investing is market seeking, namely that companies will choose a larger market in line with the theory of induced investment, where high national product results will support high induced investment to meet the increase in aggregate demand.

Previous studies that align with this study have found that GRDP indeed contributes significantly to investment (Shah et al., 2020; Utma & Rakhman, 2019; Meidayati, 2017; Khan et al., 2015). However, these results are not in line with Fuadi's (2013) research, which found no significant effect of GRDP on PMDN. The value of a province's GRDP is calculated using several indicators, including people's purchasing power. Thus, the higher the GRDP value, the higher the level of purchasing power in a regional area. Production goods will have a better chance of being absorbed when people's purchasing power is high. This is one of the considerations for investors in choosing PMDN and PMA locations. Therefore, the value of GRDP can have a significant influence on the PMDN value of provinces in Indonesia in 2023.

Together, based on the results of simultaneous tests, infrastructure, workforce, and market size have a significant effect in determining the value of domestic investment. Thus, the value of domestic investment is influenced by the level of infrastructure, workforce, and GRDP (Gross Regional Domestic Product) as a measure of market size. However, not all variables in this study have a significant effect partially. According to the study's results, the workforce does not have a significant impact on determining the value of investment. Essentially, three factors determine investment decisions, as outlined in Dunning's eclectic theory of the OLI paradigm (Ownership, Location, Internalization), which encompasses infrastructure, workforce, and market size within the location aspect.

As seen from the coefficient results, the variable that is the main factor determining domestic investment in this study is infrastructure, which is a consideration for investment with a resource-seeking motive, one of the three investment motives according to Dunning (resource-seeking, market-seeking, and efficiency-seeking). The simultaneous influence of infrastructure, workforce, and market size aligns with the results obtained by Meidayati (2017). However, in this study, the workforce has a significant partial influence (Meidayati, 2017).

CONCLUSION

Fundamental Finding: Based on the research results, the main conclusion obtained is that road stability infrastructure and market size have a significant and positive influence on domestic investment in 34 provinces in Indonesia in 2023, while the workforce does not have a significant influence, although it shows a negative direction. Infrastructure is the most influential variable, followed by GRDP as an indicator of market size. Simultaneously, infrastructure, workforce, and market size collectively influence the value of PMDN (Domestic Investment). **Implication:** The contribution of road stability infrastructure determines the value of PMDN; therefore, the government needs to carry out equalization in the development of road infrastructure across all regions in Indonesia. If land acquisition is required, its urgency must be ensured, along with compensation for

affected communities. To ensure that the development of infrastructure and investment projects does not hurt people's lives, conducting an Environmental Impact Analysis (AMDAL) is crucial. To maintain the market size of a region, community welfare must be supported through various programs. **Limitation:** This study has many limitations, including only using one year of data, namely 2023. **Future Research:** Future research is needed to consider the use of panel data to improve the quality of the results, and this should not be limited to 2023. Additionally, more diverse infrastructure indicators, such as electricity and water, should be included. To increase relevance, the labor force variable can be focused on educated and skilled workers and labor wages can be added as an independent variable.

AUTHOR CONTRIBUTIONS

Rafiqah Nur Izzati: Conceptualization, Methodology, Validation, Formal Analysis, Resources, and Writing - Original Draft; and **Lucky Rachmawati:** Data Curation, Project Administration, and Writing - Original Draft. All authors have read and approved the final version of this manuscript.

DECLARATION OF COMPETING INTEREST

The authors declare no known financial conflicts of interest or personal relationships that could have influenced the work reported in this manuscript.

DECLARATION OF ETHICS

The authors declare that the research and writing of this manuscript adhere to ethical standards of research and publication, in accordance with scientific principles, and are free from plagiarism.

DECLARATION OF ASSISTIVE TECHNOLOGIES IN THE WRITING PROCESS

The authors declare that generative artificial intelligence (Gen AI) and other AI-assisted tools were used judiciously, not excessively, during the research and preparation of this manuscript. Specifically, ChatGPT was used for brainstorming; Grammarly for grammar and style correction. All AI-generated materials have been reviewed to strengthen data accuracy, completeness, and compliance with ethical and scientific standards. The authors are fully responsible for the final content of the manuscript.

REFERENCES

- Agustina, L., Dwi Astuti, R., Bhinadi, A., & Kunci, K. (2021). Analisis faktor-faktor yang mempengaruhi investasi asing langsung di Indonesia. *Buletin Ekonomi: Manajemen, Ekonomi, Pembangunan, Akuntansi*, 19(1), 1–120.
- Arum, K. C., Ugwuowo, F. I., Oranye, H. E., Alakija, T. O., Ugah, T. E., & Asogwa, O. C. (2023). Combating outliers and multicollinearity in linear regression model using robust Kibria-Lukman mixed with principal component estimator, simulation and computation. *Scientific African*, 19, e01566. <https://doi.org/10.1016/j.sciaf.2023.e01566>
- Bakar, N. A., Mat, S. H. C., & Harun, M. (2012). The impact of infrastructure on foreign direct investment: The case of Malaysia. *Procedia - Social and Behavioral Sciences*, 65, 205–211. <https://doi.org/10.1016/j.sbspro.2012.11.112>

- Blakely, E. J., & Leigh, N. G. (2017). *Planning local economic development : theory and practice* (6th ed.). SAGE Publications.
- BPS Indonesia. (2024). *Realisasi investasi penanaman modal dalam negeri menurut provinsi (investasi)*, 2021-2023. <https://www.bps.go.id/id/statistics-table/2/NzkzIzI=/realisasi-investasi-penanaman-modal-dalam-negeri-menurut-provinsi--investasi---milyar-rupiah-.html>
- Budiono, S., & Purba, J. T. (2023). Factors of foreign direct investment flows to Indonesia in the era of COVID-19 pandemic. *Heliyon*, 9(4), e15429. <https://doi.org/10.1016/j.heliyon.2023.e15429>
- Chin, W., & Marcoulides, G. (1998). The partial least squares approach to structural equation modeling. *Modern Methods for Business Research*.
- Dunning, J. H. (1988). The eclectic paradigm of international production: a restatement and some possible extensions. *Journal of International Business Studies*, 19(1), 1–31. <https://doi.org/10.1057/palgrave.jibs.8490372>
- Dunning, J. H. ., & Lundan, S. M. . (1993). *Multinational enterprises and the global economy*. Edward Elgar.
- Ernawan, D., Widodo, P., Sumertha, I. G., & Uksan, A. (2023). Innovative approaches in tni's territorial development to utilize the demographic dividend for the realization of Indonesia's Golden 2045 Vision. *International Journal Of Humanities Education and Social Sciences (IJHESS)*, 3(3). <https://doi.org/10.55227/ijhess.v3i3.790>
- Fuadi, A. (2013). Analisis faktor-faktor yang mempengaruhi penanaman modal dalam negeri (pmdn) di Jawa Tengah periode 1985-2010. *Economics Development Analysis Journal*. <http://journal.unnes.ac.id/sju/index.php/edaj>
- Germaschewski, Y. (2020). Stabilization policy, infrastructure investment, and welfare in a small open economy. *Economic Modelling*, 84, 322–339. <https://doi.org/10.1016/j.econmod.2019.04.023>
- Ghozali, I. (2018). *Aplikasi analisis multivariate dengan program IBM SPSS 25* (9th ed.). Badan Penerbit Universitas Diponegoro.
- Gujarati, D. N. (2003). *Basic econometrics* (4th ed.). The McGraw-Hill Companies.
- Hudaifah, A. (2018). Resiliency of investment climate in east java on labor supply shock and quality of infrastructure. *Journal of Developing Economies*, 3(1), 1. <https://doi.org/10.20473/jde.v3i1.8454>
- Huseynli, I. (2022). *Labor productivity as an important factor of efficiency: ways to increase and calculate* (pp. 444–451). https://doi.org/10.1007/978-3-030-90421-0_37
- Jamaliah. (2016). The effect of investment to value added production, employment absorption, productivity, and employees' economic welfare in manufacturing industry sector in West Kalimantan Province. *Procedia - Social and Behavioral Sciences*, 219, 387–393. <https://doi.org/10.1016/j.sbspro.2016.05.060>
- Jeon, H., Cui, X., & Zhang, C. (2023). The effects of labor choice on investment and output dynamics. *Journal of Corporate Finance*, 83, 102497. <https://doi.org/10.1016/j.jcorpfin.2023.102497>
- Johnson, D. G. (1999). Population and economic development. *China Economic Review*, Elsevier, 10, 1–16.
- Juliandi, A., Irfan, & Manurung, S. (2014). *Metodologi penelitian bisnis: Konsep dan aplikasi*. UMSU Press.

- Kang, S. J., & Lee, H. S. (2007). The determinants of location choice of South Korean FDI in China. *Japan and the World Economy*, 19(4), 441–460. <https://doi.org/10.1016/j.japwor.2006.06.004>
- Kang, Y., Xing, J., & Zhao, S. (2022). *Influencing factors of investment for companies*. <https://doi.org/10.2991/aebmr.k.220307.279>
- Kansil, C. S. T., & Chang, Y. (2024). Analisis dampak penanaman modal dalam negeri terhadap pertumbuhan bisnis di Indonesia. *JLEB: Journal of Law, Education and Business*, 2(1), 189–194. <https://doi.org/10.57235/jleb.v2i1.1603>
- Keynes, J. M. (1936). *The general theory of employment, interest, and money*. Springer International Publishing. <https://doi.org/10.1007/978-3-319-70344-2>
- Khan, M. A., Alshamsi, K. H., & Hussin, M. R. (2015). The impact of inflation and GDP per capita on foreign direct investment: The case of United Arab Emirates. In *Investment Management and Financial Innovations*, 12(3). <https://www.researchgate.net/publication/283178576>
- Kinda, T. (2008). Infrastructures et flux de capitaux privés vers les pays en développement. *Revue Économique*, 59(3), 537–549. <https://doi.org/10.3917/reco.593.0537>
- King, A. P., & Eckersley, R. J. (2019). Inferential statistics IV: Choosing a hypothesis test. in statistics for biomedical engineers and scientists. *Elsevier*, 147–171. <https://doi.org/10.1016/B978-0-08-102939-8.00016-5>
- Meidayati, A. W. (2017). Impact of telecommunication infrastructure, market size, trade openness and labor force on foreign direct investment in ASEAN. *Journal of Developing Economies*, 2(2), 17. <https://doi.org/10.20473/jde.v2i2.6677>
- Mohammad, A., & Gharaibeh, O. (2015). The determinants of foreign direct investment-empirical evidence from Bahrain. *International Journal of Business and Social Science* (Vol. 6, Issue 8). <https://ssrn.com/abstract=4263419>
- Natalie, A. M. (2023). Analisis pengaruh produk domestik regional bruto dan tingkat suku bunga kredit investasi terhadap penanaman modal dalam negeri di provinsi Banten periode 2010-2019. *J-REMA (Jurnal Riset Ekonomi, Manajemen Dan Akuntansi)*, 2(2).
- Prakoso, E. S. (2021). Analisis pengaruh tingkat pendidikan, upah minimum, inflasi dan investasi terhadap tingkat pengangguran di Indonesia periode 2010-2019. *Jurnal Ilmiah Mahasiswa FEB Universitas Brawijaya*, 9(2).
- Pratiwi, S., & Triani, M. (2019). analisis pengaruh infrastruktur ekonomi dan upah terhadap penanaman modal asing di pulau Sumatera. *Jurnal Kajian Ekonomi Dan Pembangunan*, 1(3), 887. <https://doi.org/10.24036/jkep.v1i3.7715>
- Rajagukguk, W. (2022). The demographic and economic features: the nexus with internet use. *Heliyon*, 8(9), e10686. <https://doi.org/10.1016/j.heliyon.2022.e10686>
- Ross, A. G. (2015). An empirical analysis of Chinese outward foreign direct investment in Africa. *Journal of Chinese Economic and Foreign Trade Studies*, 8(1), 4–19. <https://doi.org/10.1108/JCEFTS-12-2014-0025>
- Ross, A. G. (2019). Governance infrastructure and FDI flows in developing countries. *Transnational Corporations Review*, 11(2), 109–119. <https://doi.org/10.1080/19186444.2019.1640572>
- Setiyanto, A. (2023). Foreign and private domestic investments in indonesia: crowding-in or crowding-out? *Buletin Ekonomi Moneter Dan Perbankan*, 25(4), 623–646. <https://doi.org/10.21098/bemp.v25i4.1674>

- Shah, S. H., Hasnat, H., Cottrell, S., & Ahmad, M. H. (2020). Sectoral FDI inflows and domestic investments in Pakistan. *Journal of Policy Modeling*, 42(1), 96–111. <https://doi.org/10.1016/j.jpolmod.2019.05.007>
- Stéphane, M. N. (2021). *The impact of infrastructure development on foreign direct investment in Cameroon*.
- Tarigan, C., Rotinsulu, T. O., & Tolosang, K. D. (2021). Analisis faktor-faktor yang mempengaruhi investasi pmdn di provinsi Sulawesi Utara pada tahun 2003-2018. *Jurnal EMBA : Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi s*, 9(2).
- Togar, H., Haryanto, A. M., Manajemen, J., Ekonomika, F., Bisnis, D., Diponegoro, U., & Soedharto, J. (2015). Analisis pengaruh roe, eps, npm dan mva terhadap harga saham (studi kasus pada perusahaan manufaktur go public sektor food dan beverages di bei tahun 2009-2013). *Diponegoro Journal Of Management*, 4, 1–16. <http://ejournal-s1.undip.ac.id/index.php/dbr>
- University of Minnesota. (2016). *Principles of economics*. Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.
- Utma, S., & Rakhman, A. (2019). Pengaruh PDRB, upah minimum provinsi, dan angkatan kerja terhadap investasi asing langsung di indonesia tahun 2013-2016. *Jurnal REP (Riset Ekonomi Pembangunan)*, 4(2), 101–109. <https://doi.org/10.31002/rep.v4i2.1234>
- Wahyudi, H., & Zapita, J. (2022). Efek infrastruktur jalan, listrik, PMDN (Penanaman Modal dalam Negeri) bagi pertumbuhan PDRB di Pulau Sumatera. *Jurnal Studi Pemerintahan Dan Akuntabilitas*, 1(2), 139–149. <https://doi.org/10.35912/jastaka.v1i2.1420>
- Wiratama, B. F., Kurniawan, R., Mulyanto, Isnaeni, M. A., Sumargo, B., & Gio, P. U. (2023). Measuring the physical infrastructure development as poverty reduction program in Kalimantan, Indonesia. *Cities*, 141, 104515. <https://doi.org/10.1016/j.cities.2023.104515>
- Zeb, N., Qiang, F., & Shabbir, M. (2014). Telecommunication Infrastructure and Foreign Direct Investment in Pakistan: An Empirical Study. *Type: Double Blind Peer Reviewed International Research Journal Publisher: Global Journals Inc*, 14.

***Rafiqah Nur Izzati (Corresponding Author)**

Affiliation: Universitas Negeri Surabaya

Address: Jl. Lidah Wetan, Surabaya, Indonesia

Email: rafiqah.21029@mhs.unesa.ac.id

Dr. Lucky Rachmawati, S.E., M.Si.

Affiliation: Universitas Negeri Surabaya

Address: Jl. Lidah Wetan, Surabaya, Indonesia

Email: luckyrachmawati@unesa.ac.id
