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The Role of Domestic Investment: A Case Study in Surakarta Karesidenan, Indonesia

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Abstract : The research aims to identify the factors that influence Domestic Investment (PMDN) in the Surakarta Karesidenan region. The research considers several aspects of variables as influencing factors, namely Road Length, Water Distribution, Labor, and Gross Regional Domestic Product. The data collection method is in the form of secondary data sources from the Central Bureau of Statistics, DPMPTSP Central Java. Observation of panel data time dimension research data in 2013-2018, covering the area used, including 7 (seven) districts/cities included in the Surakarta ex-Karesidenan, the number of observation data samples amounted to 42 samples. This study did not include the 2019-2024 period in the analysis because the global economic crisis due to the COVID-19 pandemic caused the PMDN economy to shift its priorities. In this case, companies will focus more on crisis management and divert already scarce financial resources to address the health and economic consequences of the COVID-19 pandemic, so companies will likely delay many of their investments and policies. The estimation method used is using panel data in individual effect (fixed effect) models. The results showed that partial analysis showed that road infrastructure does not affect domestic investment. Water infrastructure does not affect Domestic Investment. However, the research findings show that labor has a significant negative effect on domestic investment, and gross regional domestic product has a significant positive effect on domestic investment in the Surakarta Karesidenan region.

Keywords : Infrastructure, Karesidenan, GRDP, PMDN.

INTRODUCTION

Indonesia currently has problems and challenges regarding increasing economic growth. The presence of investment is an instrument to drive economic growth in the face of competition in the era of globalization (A'yun & Khasanah, 2022). However, as a developing country, the government has limitations in providing funds for economic acceleration and equitable development. Therefore, as one aspect of government policy, it is necessary to obtain more funds (capital) for development (Haenssgen et al., 2021). The Indonesian state on the issue of poverty is still a problem that has not found the best solution in overcoming it,

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inseparable because as a developing country and archipelago country, especially for poor households have a level of vulnerability to food access crises in terms of the ability to buy commodities so that poverty alleviation efforts often do not occur evenly throughout Indonesia (Yuniarti et al., 2022). Poverty is a deprived living condition where per capita expenditure in one month is not able to meet the minimum standard of living (Wibowo & Khoirudin, 2019).

Investment development is instrumental for the host country, where the role of investment brings technology, managerial skills, and employment, along with capital inflows (Kwablah, 2023). The acceleration of development requires the collective role of various parties, including the community, domestic private sector, and foreign investors, to accelerate the economy and equitable development. Uneven facilities and infrastructure on the side of limited land access are important in urban development activities in terms of providing housing for residents, urban activity centers, basic facilities and infrastructure, infrastructure networks, and the development of new activity centers (Khoirudin et al., 2020). Investment is a fundamental part of sustainable economic development. Investment fluctuations' dynamics can potentially influence a country's economic growth rate (Abebe et al., 2022). Income is allocated to capital and stored to increase future returns and income, causing a conglomeration of capital. The conglomeration of capital is then used to purchase authentic capital goods, either to establish new factories or expand existing ones to increase the stock of productive capital both physically in an area and aimed at achieving increased yields.

The condition of acceleration for increased investment, of course, will be in line with economic growth and the improvement of people's welfare (Danju et al., 2014). Projected acceleration to improve the standard of living of the community at large, investment is a necessity to be realized. Strengthening the capacity of national income sources will have an impact on the ability of the economy to produce commodities (Naim et al., 2021). State efforts require an equitable allocation of investment inflows aimed at increasing economic growth that can be achieved. The investment instrument plays an important role as a context for national and regional development to increase economic growth (Kurniawan & A'yun, 2022). In developing countries, corruption is a source of problems that undermine governance and increase the gap between the rich and the poor (Guritno et al., 2021). Poverty reduction efforts can be done by improving human resources (HR) as investment capital to increase the income of the poor (Suripto et al., 2020).

The island of Java is still the main investment center in Indonesia, a condition that expands inequality and does not harmonize with regions outside Java. Various investors have decided to build investment centers on the island of Java. According to national data, the highest investment distribution is in West Java at 17.4%, consisting of domestic investment (PMDN) worth IDR 20.5 trillion and foreign investment (PMA) worth IDR 48.2 trillion. Furthermore, the distribution of investment was in DKI Jakarta at 13.8%, consisting of PMDN investment of Rp 26.6 trillion, PMA of Rp 27.8 trillion, and Central Java Province at 9.1% of national investment distribution. East Java 8.1% with a total investment value of PMDN and PMA amounting to Rp 36.2 trillion and Rp 32 trillion, respectively. Then, the investment value in Banten Province amounted to 6.2% or Rp 24.6 trillion. Government spending as a financing budget for each work program or policy carried out should have a positive impact on society or reduce poverty, strengthening the source of Regional Original Revenue (PAD) is a source of regional income derived from the economic activities of the region itself (Khoirudin et al., 2018).

Central Java Province is categorized as an area that attracts the attention of foreign and domestic investors. It is considered promising enough to invest in due to its conduciveness and the many facilities the local government provides. Among them is implementing one-stop licensing services with PP No.24 of 2018 concerning electronic-based integrated business licensing services based on OSS (online single submission), strengthening bargaining power for investors. According to (Nareswari et al., 2023), the problem of revamping investment licensing in Indonesia is a big problem that has never been solved well. Based on this phenomenon, the researcher considers it essential to conduct a further research study related to the analysis of the ability of domestic investment in Surakarta Prefecture in the form of several aspects approach, such as the potential influence of Public Infrastructure in the form of road and water facilities, the potential influence of labor availability and the potential influence of Gross Regional Domestic Product in Surakarta Prefecture.

This research assumes that there needs to be a new insight related to the potential influence of other aspects outside the technical process of investment growth. There are fundamental differences from previous studies, which become the novelty of our research, including the specific determination of the research location carried out in the post-pandemic Surakarta Prefecture area and the novelty of the research variable aspect in the form of the dependent variable, namely domestic investment and the independent variables applied in the

form of road and water public infrastructure, labor availability and gross regional domestic product.

RESEARCH METHODS

The research applies the analytical survey method as the basis for analysis to determine whether or not the variables applied have an effect. The operational definition of this research variable explains the use of terms related to the application of the research concepts used in detail, as well as the limitations of the operational terms of the variables, namely.

Table 1. Operational Definition of Research Variables

No	Variable	Definition	Unit
Dependent Variable			
1.	Domestic Investment (PMDN)	Value of domestic investment realized	Million Rupiah (Rp)
Independent Variable			
1.	Road Length	Size public road facilities either as national, provincial, district/city road categories with excellent or decent conditions	Kilometers (km)
2.	Water Distribution	Total water distribution of Regional Drinking Water Company (PDAM)	Volume (m3)
3.	Labor	Total labor	Life
4.	Gross Regional Domestic Product	Total economic growth value of GRDP based on constant prices	Million Rupiah (Rp)

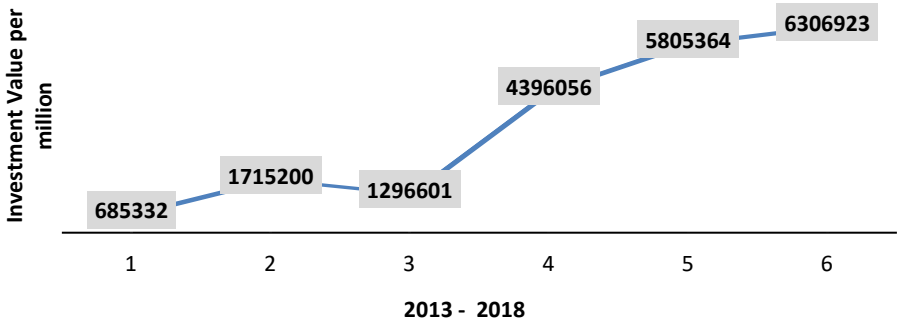
The data collection process pays attention to analyzing the suitability of the data with reasonableness and accountability. Data collection techniques in the form of secondary data were obtained from desk research sites of the Central Bureau of Statistics, Investment Coordinating Board, One-Stop Investment and Integrated Services Office, and other institutions. Based on the time dimension, the research uses panel data from time series and cross-section data. The research data collection technique applies a purposive sampling nonprobability sampling model as a characteristic of the research's particular observation data, namely cross data in the form of 7 districts and cities in the Surakarta Karesidenan area in the time series set for the six years 2013-2018, the research observation period data is considered sufficient by excluding the period 2020 onwards to reduce the uncertainty of the Covid-19 pandemic global economic crisis, it is hoped that the stabilization of economic data will be prioritized before the Covid-19 pandemic. The Covid-19 pandemic has caused the economy to contract (Yuniarti & Sukarniati, 2021) (Nasir et al., 2022).

According to this technique, the number of data observations was as much as 42. The research analysis uses panel data regression using views 10 analysis tools. Regarding the determination of the amount of observation data in this study, according to (Neuman, 2014), the use of the amount of observation data for normal distribution has a minimum data limit of 30 observations. Research testing applies panel data regression analysis; according to (Ryan, 2013) and (Baltagi, 2021), it is necessary to use a reasonable and appropriate method to estimate the model in the form of Pooling Least Square (PLS) or Common Effect Model (CEM) random effect approach or called Random Effect and fixed effect approach or called Fixed Effect. This study applies the statistical criteria test to test the model's accuracy. The research analysis was reaffirmed by applying a multiple regression analysis of the ordinary least square method via views ten software. The level of accuracy/confidence is tied to the available sources of funds, time, and energy; the more significant the error rate, the smaller the number of observations needed, and vice versa; the smaller the error rate will have an impact on the greater the amount of observation data needed or required. This research requires a 95% confidence level of observation data or an error rate/alpha of 5%.

RESULTS AND DISCUSSION

The table 2 above illustrates the investment growth statistics in the Surakarta Residency region, Indonesia, from 2013 to 2018. During this period, the investment value demonstrated a significant upward trend, reflecting an increased attractiveness for regional investment. In 2013, the investment value was recorded at 685,332 million, gradually rising yearly.

Table 2. Investment growth



In 2014, there was a substantial increase, with the investment reaching 1,715,200 million. Subsequently, in 2015, the investment grew to 1,296,601 million, maintaining a positive growth trajectory. In 2016, the investment experienced a significant spike, reaching

4,396,056 million, and continued to rise in 2017, reaching 5,803,364 million. The peak occurred in 2018, with the investment value reaching 6,306,923 million.

This consistent investment growth indicates that the Surakarta Residency has successfully enhanced its capacity to attract domestic investment. The positive trend is likely attributed to various factors, including supportive government policies, infrastructure improvements, and the development of strategic economic sectors in the region. Overall, this data shows that the Surakarta Residency has experienced a significant increase in its domestic investment capacity, which could serve as an important indicator for planning future economic policies and development initiatives. The following are the study's results in the form of descriptive statistical data: Table 3. These results show general information on the data applied in detail regarding the mean, median, highest value, and minimum value of all research variables.

Table 3. Descriptive Data Statistics

Variable	Mean	Median	Maximum	Minimum
PMDN	49.298	241.055	2.441.479	1.769
Road Length	472,41	470,78	782,58	121,28
Water Distribution	9.499.499	8.244.043	18.852.067	5.422,5
Labor	484.236	483.218	644.722	271.375
Gross Regional Domestic Product	22.181.422	21.415.396	33.506.222	15.303.280

According to Table 3, showing the findings of domestic investment variables in Surakarta Prefecture in seven districts and cities in 2013-2018, the lowest number of domestic investments was Rp1,769 million, with the highest number of domestic Investment was Rp2,441,479 million. The average number of domestic investments is Rp49,298 million, and the figure reveals a significant gap in domestic investment growth between districts and cities. The lowest variable number of road length is 121.28 kilometers, with the highest number of road length of 782.58 kilometers, and the average road length is 472.41 kilometers, indicating that the feasibility of public road length facilities still needs to be fulfilled.

The lowest water distribution variable number is 5,422.5 volume m3, with the highest water distribution number of 18,852,067 volume m3, and the average water distribution number is 9,499,499 volume m3; the water distribution number is still uneven for the adequacy of the needs of districts and cities with PDAM distribution. The lowest number of labor variables is 271,375 people, the highest number of labor is 644,722 people, and the average is 484,236 people. The absorption of labor between districts and cities of Surakarta Prefecture is relatively high. The lowest GRDP variable number is Rp15,303,280 million,

with the highest GRDP number of Rp33,506,222 million, and the average GRDP number is Rp22,181,422 million; the GRDP number shows the ability between regencies and cities is not the same in accelerating their economic growth.

Based on the results of the model estimation test applied to this research panel data, including Table 4 showing the results of the Chow test, where the Prob-F value of 0.0000 is smaller than the alpha significance level of 5%, the null hypothesis can be rejected, so the results can be concluded that the good model estimation applied is the fixed effect model.

Table 4. Chow test result

Effect Test	Statistic	d.f.	Prob.
Cross-section F	10.454990	(7.23)	0.0000
Cross-section Chi-square	51.883667	7	0.0000

Table 5 shows the results of the Hausman Test with a Prob-Chi-Sq value of 0.0021, smaller than the alpha significance level of 5%; it can be decided that the null hypothesis is rejected, and it is concluded that the Fixed Effect model estimation is better so that it can be decided not to need to do langgrange multiplier (LM) testing.

Table 5. Hausman test result

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	16.781001	4	0.0021

Based on the Chow and Hausman tests, research testing decided to apply the proper method to estimate this research model through the Fixed Effect Model approach. The following statistical test results of the regression model are based on findings from using all the following independent and dependent variables:

Table 6. Multiple regression resut

Variables	Coefficient	t-Statistic	Prob.
C	106.3536	0.929773	0.3599
Road Length	0.074257	0.093305	0.9263
Water Distribution	-0.300271	-0.585351	0.5627
Labor	-21.41513	-2.523465	0.0172
Gross Regional Domestic Product	11.22274	5.206420	0.0000

Table 6 Multiple regression results show the sum of the coefficient values of road length in the form of a sum of probability values of 0.9263, which is more significant than the alpha significance level of 5%, so it does not have a significant effect on domestic investment. Similarly, the water distribution variable shows a probability value of 0.5627, more significant than the alpha significance level of 5%, so the same has no significant effect on domestic investment. Even though the variable characteristics individually or simultaneously

applied are not significant, the constant value still shows a significant influence. However, different findings of labor variable coefficient value of -21.41513, t-statistic value of -2.523465 and probability value of 0.0172 and coefficient value of GRDP variable of 11.22274, t-statistic value of 2.155557 and probability value of GRDP variable of 0.0000, the test results of labor and GRDP variables reveal the conclusion of the findings that labor and GRDP variables have a significant and positive effect on GRDP variables, negative labor variables on domestic investment in the Surakarta Karesidenan region.

The application of research findings in a practical approach, the findings of the amount of GRDP has a significant and positive effect on domestic investment with a coefficient of 11.22274; there is a meaning if the amount of GRDP has increased or added 1 million rupiahs of GRDP growth affects increasing domestic investment by 11.22274%. While the practical application of the variable labor remains significant, and although it hurts domestic investment with a coefficient of -21.41513, the meaning is if the amount of labor there is an increase or addition of 1 number of people has an effect on the decline in domestic investment by -21.41513%.

The potential aspect of the effect of road length on domestic investment in the Surakarta Karesidenan region, although the findings show no significant impact, is in line with the findings of several previous studies (Hern & Martinez-cobas, 2024) and (Meng, 2022). The finding of the insignificant effect of road infrastructure on PMDN can be caused by several conditions, including investors in the distribution of production goods need to pay more attention to the condition of public roads or even prefer to use toll roads, considered safer and faster. The existence of road construction and improvement is considered to be in line with the potential for increased tax costs as a consideration for investors to avoid unexpected expenses, and investors pay more attention to the environmental conditions around companies whose goods distribution activities are affordable or close to consumers.

The availability of proper road infrastructure facilities certainly has a vital role in supporting the activities and mobility of economic activities to minimize additional costs so that the production and distribution process becomes more efficient, supported by research findings (Volner & Čamaj, 2024) and (Yu et al., 2023), the availability of road infrastructure is considered as another alternative for support, especially the ease of road access, consideration of investor interest in investing capital.

The provision of clean water infrastructure facilities built, in principle, is an effort to provide equitable and fair access to the community to obtain clean water to support economic

activities. According to (Joshi et al., 2022) and (Ramos-Salgado et al., 2022), the adequacy of water distribution as a public infrastructure facility is considered in line with the needs of investors as decision-makers. Although the findings of this study indicate an insignificant impact on domestic investment, this is supported by research (Nguyen et al., 2023) and (Brouwer et al., 2023), showing that aspects of water distribution infrastructure provision, are considered insignificant to economic growth, including the perceived availability of individual and natural water distribution, there are no recorded companies that use water sources independently and have not accessed water distribution such as PDAM companies.

The use of labor production factors is essential in supporting economic production activities in both the service and goods sectors; the research findings show a significant effect even though it is a negative number. The researcher assumes that the increase in the number of workers is relatively not accompanied by an increase in the quality of human resources, both in terms of skills and expertise and not equipped with supporting aspects of education; this allows labor to be less productive and not as expected. According to (Atikasari et al., 2023), (Bom & Erauskin, 2022), and (Jeon et al., 2023), investors believe that an increase in the number of workers without an increase in the quality of human resources will increase the risk of conflict with domestic workers. The increase in investment that is not accompanied by employment phenomenon is considered to be technological advances with robotic systems or automation in the production mechanism, so it does not require a large amount of labor in quantity; incoming investment focuses on tertiary investment or in the financial and service sectors instead of labor-intensive secondary investment.

The level of regional income illustrates the ability of the community to absorb goods and services (Ability to Purchase) that companies in a region produce. The high income of the community shows the ability to return the company's capital (Ability to Pay). The increase in demand shows that the profits earned by the business sector can indicate the achievement of investment targets, encouraging an increase in the value of domestic investment. This study's findings show a significant and positive influence of the gross regional domestic product variable on PMDN in the Surakarta Karesidenan region. According to (Gusev, 2022) and (Sekine, 2022), the GRDP variable indicates good economic growth, and the creation of strengthening people's purchasing power indicates an increase in corporate investment. Economic growth characterized by significant development of GRDP provides positive reinforcement for investment interest. However, if the economic growth rate is low or decreases, it hurts investment activities, which certainly affects the development of

investment performance. Economic growth has a vital role in attracting investors to Surakarta Prefecture. The increase in GRDP indicates that it creates a sense of security for investors, and the high income level increases the community's purchasing power for the demand for goods and services, which will encourage the acceleration of sustainable investment.

CONCLUSION

Further research is needed to analyze the dynamics of domestic investment in the Surakarta Karesidenan region, particularly regarding the limited potential of road infrastructure and water distribution, as well as the significant impact of labor availability and regional GDP. Our findings suggest several practical, theoretical, and policy-related implications. From a policy perspective, the government's expansion discourse lacks urgency in creating a new province. Investment support factors identified in this study are insufficient to serve as strong bargaining points. The local government should prioritize improving infrastructure, especially roads and water distribution, to facilitate economic activities and industrial output access. Regarding labor availability, the government is encouraged to implement programs to enhance human resource quality. These findings highlight the importance of improving supporting factors for domestic investment, not just focusing on economic growth indicators such as regional GDP and labor figures. Strengthening road infrastructure and water distribution facilities is crucial for sustainable investment. Our research contributes to academic theory, particularly in guiding future studies on the realistic supporting factors for domestic investment. We acknowledge the limitations of this research due to time and budget constraints, which restricted the study to the Surakarta Karesidenan region. Future studies expanding the scope of observation could provide a more comprehensive understanding of domestic investment dynamics.

REFERENCES

A'yun, I. Q., & Khasanah, U. (2022). The Impact of Economic Growth and Trade Openness on Environmental Degradation: Evidence from A Panel of ASEAN Countries. *Jurnal Ekonomi & Studi Pembangunan, 23*(1), 81–92. https://doi.org/10.18196/jesp.v23i1.13881

Abebe, G., McMillan, M., & Serafinelli, M. (2022). Foreign direct investment and knowledge diffusion in poor locations. *Journal of Development Economics, 158*(July), 102926. https://doi.org/10.1016/j.jdeveco.2022.102926

Atikasari, N. A., Khoirudin, R., & Saleh, R. (2023). Analysis of the Influence of Gross Regional Domestic Product (GRDP), Minimum Wage, Population, Education, and Unemployment on Labor Force Absorption in Districts/Cities of Central Java Province, 2017-2021. *MULTIPLE: Journal of Global and Multidisciplinary*, *1*(3), 263–270. https://journal.institercom-edu.org/index.php/multiple/article/view/82

Baltagi, B. H. (2021). Econometric Analysis of Panel Data (Springer Texts in Business and Economics) - Sixth Edition. In *Springer*.

Bom, P. R. D., & Erauskin, I. (2022). Productive government investment and the labor share. *International Review of Economics and Finance*, *82*(June), 347–363. https://doi.org/10.1016/j.iref.2022.06.017

Brouwer, R., Sharmin, D. F., Elliott, S., Liu, J., & Khan, M. R. (2023). Costs and Benefits Of Improving Water And Sanitation In Slums And Non-Slum Neighborhoods in Dhaka, a fast-growing mega-city. *Ecological Economics*, *207* (June 2022), 107763. https://doi.org/10.1016/j.ecolecon.2023.107763

Danju, I., Maasoglu, Y., & Maasoglu, N. (2014). The East Asian Model of Economic Development and Developing Countries. *Procedia - Social and Behavioral Sciences*, *109*, 1168–1173. https://doi.org/10.1016/j.sbspro.2013.12.606

Davy, L., & Saleh, R. (2024). *Abusers of Land Value Zone Utilization : Study of Special Funds and D. I. Yogyakarta Tourist Visitors*. *3*(1), 44–59. https://doi.org/10.12928/jampe.v3i1.8969

Guritno, D. C., Kurniawan, M. L. A., Mangkunegara, I., & Samudro, B. R. (2021). Is there any relation between Hofstede's cultural dimensions and corruption in developing countries? *Journal of Financial Crime*, *28*(1), 204–213. https://doi.org/10.1108/JFC-06-2020-0115

Gusev, A. (2022). Analytical assessment of efficiency parameters of investment processes in the national economy of the region. *Transportation Research Procedia*, *63*, 92–98. https://doi.org/10.1016/j.trpro.2022.05.011

Haenssgen, M. J., Savage, J., Yeboah, G., Charoenboon, N., & Srenh, S. (2021). In a network of lines that intersect: The socio-economic development impact of marine resource management and conservation in Southeast Asia. *World Development*, *146*, 105576. https://doi.org/10.1016/j.worlddev.2021.105576

Hern, G., & Martinez-cobas, X. (2024). *The impact of transportation investment , road transportation and telecommunications on FDI in Latin America 2008-2021*.

2(February), 45–57. https://doi.org/10.1016/j.team.2024.01.002

Jeon, H., Cui, X., & Zhang, C. (2023). The effects of labor choice on investment and output dynamics. *Journal of Corporate Finance*, *83*(January), 102497. https://doi.org/10.1016/j.jcorpfin.2023.102497

Joshi, N., Lopus, S., Hannah, C., Ernst, K. C., Kilungo, A. P., Opiyo, R., Ngayu, M., Davies, J., & Evans, T. (2022). COVID-19 lockdowns: Employment and business disruptions, water access and hygiene practices in Nairobi's informal settlements. *Social Science and Medicine*, *308*(July), 115191. https://doi.org/10.1016/j.socscimed.2022.115191

Khoirudin, R., & Khasanah, U. (2018). Valuasi Ekonomi Objek Wisata Pantai Parangtritis, Bantul Yogyakarta. *Jurnal Ekonomi Dan Pembangunan Indonesia*, *18*(2), 152–166. https://doi.org/10.21002/jepi.2018.09

Khoirudin, R., Wahyuni, S., & Budi Nugraha, C. (2020). *Distribution of Optimized Public Assets Utilization in Yogyakarta Province.* (pp. 48–62). Jurnal Analisis Bisnis Ekonomi. https://doi.org/10.31603/bisnisekonomi.v19i1.3757

Kurniawan, M. L. A., & A'yun, I. Q. (2022). Dynamic Analysis On Export, FDI and Growth in Indonesia: An Autoregressive Distributed Lag (ARDL) Model. *Journal of Economics, Business, & Accountancy Ventura*, *24*(3), 350–362. https://doi.org/10.14414/jebav.v24i3.2717

Kwablah, E. (2023). Foreign direct investment, gross domestic product and carbon dioxide emission in sub-Saharan Africa: A disaggregated analysis. *Transnational Corporations Review*, *15*(4), 59–68. https://doi.org/10.1016/j.tncr.2023.01.001

Meng, L. (2022). Political economy and cycling infrastructure investment. *Transportation Research Interdisciplinary Perspectives*, *14*(April), 100618. https://doi.org/10.1016/j.trip.2022.100618

Naim, A., Darmawan, I. M. D. H., & Wulandari, N. (2021). Herding Behavior: Mengeksplorasi Sisi Analisis Broker Summary. *Media Riset Akuntansi, Auditing & Informasi*, *21*(2), 207–226. https://doi.org/10.25105/mraai.v21i2.9502

Nareswari, N., Tarczyńska-Łuniewska, M., & Hashfi, R. U. Al. (2023). Analysis of Environmental, Social, and Governance Performance in Indonesia: Role of ESG on Corporate Performance. *Procedia Computer Science*, *225*, 1748–1756. https://doi.org/10.1016/j.procs.2023.10.164

Nasir, M. S., A.K., M. L., Andriyani, N., Wibowo, A. R., & Oktaviani, Y. (2022). Credit Guarantee the National Economic Recovery Program (PEN) for MSMEs: A Case

Study of MSMEs for Bank Pembangunan Daerah DIY. *Ekuilibrium : Jurnal Ilmiah Bidang Ilmu Ekonomi*, *17*(2), 158–170. https://doi.org/10.24269/ekuilibrium.v17i2.2022.pp158-170

Neuman, W. L. (2014). Social Research Methods: Qualitative and Quantitative Approaches. In *Teaching Sociology* (Vol. 30, Issue 3). Person Education Limited. https://doi.org/10.2307/3211488

Nguyen, M. T., Vu, Q. H., Truong, V. H., & Nguyen, H. H. (2023). A comprehensive evaluation of private sector investment decisions for sustainable water supply systems using a fuzzy-analytic hierarchy process: A case study of Ha Nam province in Vietnam. *Heliyon*, *9*(9), e19727. https://doi.org/10.1016/j.heliyon.2023.e19727

Ramos-Salgado, C., Muñuzuri, J., Aparicio-Ruiz, P., & Onieva, L. (2022). A Comprehensive Framework To Efficiently Plan Short And Long-Term Investments In Water Supply And Sewer Networks. *Reliability Engineering and System Safety*, *219*. https://doi.org/10.1016/j.ress.2021.108248

Ryan, T. P. (2013). Sample Size Determination and Power. In *Sample Size Determination and Power*. https://doi.org/10.1002/9781118439241

Saleh, R. (2022). Kajian Determinan Nilai Properti Perumahan (studi pada lampung selatan: kecamatan natar dan tanjung bintang). *Manajemen Aset Dan Penilaian*, *2*(2), 92–98. https://doi.org/10.56960/jmap.v2i2.43

Sekine, T. (2022). Looking from Gross Domestic Income: Alternative view of Japan's economy. *Japan and the World Economy*, *64*(May). https://doi.org/10.1016/j.japwor.2022.101159

Suripto, Firmansyah, & Sugiyanto, F. X. (2020). Poverty viewed from the perspective of domestic production in Yogyakarta: The Solow growth model approach. *International Journal of Business and Globalisation*, *24*(2), 174–184. https://doi.org/10.1504/IJBG.2020.105166

Volner, Ľ., & Čamaj, J. (2024). Pricing Adjustments Investment Costs Infrastructure Projects in the Slovak Republic : A Risk Worthy of Attention. *Transportation Research Procedia*, *77*(2023), 128–136. https://doi.org/10.1016/j.trpro.2024.01.017

Wibowo, A. R., & Khoirudin, R. (2019). Analysis of Determinants of Poor Population in Central Java 2008-2017. *Ekuilibrium : Jurnal Ilmiah Bidang Ilmu Ekonomi*, *14*(1), 1. https://doi.org/10.24269/ekuilibrium.v14i1.1482

Yu, L. B., Tran, T. M., & Lee, W. S. (2023). Bridging the gap: Assessing the effects of

railway infrastructure investments in Northwest China. *China Economic Review*, *82*(November), 102076. https://doi.org/10.1016/j.chieco.2023.102076

Yuniarti, D., Purwaningsih, Y., Soesilo, A., & Suryantoro, A. (2022). Food Diversification and Dynamic Food Security: Evidence from Poor Households. *Jurnal Ekonomi Pembangunan: Kajian Masalah Ekonomi Dan Pembangunan*, *23*(1), 43–55. https://doi.org/10.23917/jep.v23i1.16302

Yuniarti, D., & Sukarniati, L. (2021). Penuaan Petani dan Determinan Penambahan Tenaga Kerja di Sektor Pertanian. *Agriekonomika*, *10*(1), 38–50. https://doi.org/10.21107/agriekonomika.v10i1.9789