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INCOME INEQUALITY IN THE DIGITAL ERA: SPATIAL ANALYSIS AND ITS IMPLICATIONS FOR ECONOMIC EQUALITY INCOME INEQUALITY IN DIGITAL ERA

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Abstract

Income inequality in the digital era is increasing in Indonesia. Spatial inequality between regions shows the grouping of regions based on the type of inequality. Income inequality between regions seen from the perspective of gross value added (GRDP) can be calculated using the Jaime Bonet Index. The results of the Jaime Bonet Index calculation show that DKI Jakarta Province has the highest inequality rate, namely 4.44. In the quadrant analysis, it was found that DKI Jakarta Province, West Papua, and Central Papua are provinces with Gini ratios and GDP per capita above the average value of Indonesia. The results of the regression analysis between the Gini ratio in districts/cities in the DKI Jakarta and West Papua Provinces show that the correlation between the Gini ratio variable and the independent variables, namely the mean years of schooling (MYS), electrification ratio, Community Literacy Development Index (CLDI), Unemployment Rate (UR), percentage of self-owned buildings and Human Development Index (HDI) has a positive and very strong correlation, namely 0.932. The results of the ANOVA test show that simultaneously the gini ratio is significantly influenced by independent variables. While partially, the Gini ratio is not influenced by the unemployment rate and electrification ratio. The variables of the percentage of self-owned buildings, the community literacy development index, the human development index and the mean years of schooling partially significantly affect the Gini ratio.

Keywords: income inequality, gini ratio, digital era, spatial analysis

INTRODUCTION

Indonesia is the largest archipelagic country in the world, consisting of 17,000 islands. The greatness of the Republic of Indonesia can have positive and even negative impacts on society. The spread of islands from Sabang to Merauke can provide great added value for the people of Indonesia if all people can enjoy economic growth that continues to grow positively every year. However, on the contrary, the Gini ratio shows an increasingly high value, which means that there is an increasingly wide income gap between the poor and the rich. The Central Statistics Agency noted that throughout 1988 to 2024, Indonesia's economic growth rate showed a figure that always grew positively except in 1998 (monetary crisis) and 2020 (COVID-19). The Gini ratio figure released by BPS in 1988 was 0.32 and continued to fluctuate until 2024, reaching 0.379.

The high Gini ratio indicates the inequality of income enjoyed by the community. Positive economic growth is only enjoyed by a handful of people with a high level of welfare. As a result, people in the lower middle class can only enjoy economic growth of no more than 20 percent. BPS data recorded that 40 percent of the population with the lowest expenditure only consumed 18.41 percent of the total consumption of the population in Indonesia, while 20 percent of the population with the highest expenditure consumed 46.24 percent of the total consumption of the Indonesian population. This means that most (almost half) of the total expenditure on both food and non-food of the Indonesian population comes from the top 20 percent (richest) population group.

The lives of Indonesian people in the digital era, where there has been an industrial transformation from a traditional economy to one centered on information technology, are

increasingly diverse in terms of adjusting to the use of information technology. Faster and wider access to information on the positive side provides positive opportunities related to science, competency development, and better jobs for Indonesian people, especially in areas far from the city center. However, on the other hand, the development of technology and information in the digital era can have a negative impact on people who are unable to adapt, resulting in increasing inequality in information, education, and income. In this phase, there is a very fluctuating economic movement, especially in business fields that utilize information technology such as the information and communication sector, education, services, etc.

Regions experiencing high inequality in Indonesia need to be studied more deeply regarding the root of the problems that occur in the region. Therefore, this study conducted clustering of regions (provinces) in Indonesia. After grouping, provinces with high inequality will be analyzed further regarding the factors causing income inequality in the region. The independent variables used in this study are the Unemployment Rate, Human Development Index, Mean Years of Schooling, electrification ratio, percentage of households with their own building ownership and Community Literacy Development Index.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

Income inequality and poverty have a significant impact on Indonesia's economic growth. Studies show that income inequality and poverty negatively affect economic growth across Indonesian islands (Rahmadi & Parmadi P, 2019). The Gini index has a positive and significant effect on poverty rates, while the Human Development Index and GDP growth can reduce poverty (Akhmad, A. Amir., 2018). Factors influencing Indonesia's Gini ratio include the human development index, population, unemployment rate, poverty percentage, and average hourly wages (Rini, G. A. M. C., Suciptawati, N. L. P., & Utari, I. A. P. A. (2022). The COVID-19 pandemic has altered mobility patterns and affected efforts to reduce regional inequality. The relationship between economic growth and wealth inequality is largely mediated by human movement; during the epidemic, numerous provinces moved to lower Gini ratio categories Siregar, S. I., & Al Rasyid, F. A. (2022). These results demonstrate the intricate relationship that exists in Indonesia between social variables, income disparity, and economic growth.

The intricate connection between economic inequality, financialization, and digital technology is the subject of recent studies. According to Guellec, D., & Paunov, C. (2017), "winner-take-all" market dynamics brought about by digital innovation result in higher market rents that disproportionately benefit the wealthiest segments of society. Similarly, digital technology and financialization both increase the income inequality gap, according to Mohd Daud et al. (2021). A more nuanced perspective is offered by Nguyen, V. B. (2022), who contends that the effects of digitalization on inequality vary across developed and developing nations. According to the study, whereas digitization reduces inequality in industrialized economies, it increases disparity in developing ones. Furthermore, Nguyen, V. B. (2022) notes that as GDP per capita rises, there is a U-shaped correlation between economic growth and income disparity. These results underline the necessity of specific strategies to mitigate the possible harm that digital technology may cause to the distribution of income, especially in developing nations.

Fahma, B. A., & Hendarto, R. M. (2024), in their journal, stated that investment variables, agglomeration, unemployment rate, distribution of primary sector GRDP, and road length can together significantly affect regional inequality in DKI Jakarta Province and East Kalimantan Province. This shows that these independent variables can be used as part of the independent variables that affect the Gini ratio. On the other hand, Ariesta, L. C. O. W., Sodik, J., & Nuryadin, D. (2022) conducted research related to inequality in income distribution between regions, which showed that the Human Development Index and rice harvest area had a positive and significant effect on inequality in income distribution.

Significant differences exist between urban and rural areas, as well as between the western and eastern parts of Indonesia, according to research on regional inequality. Inequality is greater in western Indonesia than in eastern Indonesia, and factors like investment and power distribution are important in lowering gaps (Nugraha & Prayitno, 2020). Eastern Indonesian expansion regions have twice the income inequality of parent areas in the same region, according to the J-Bonet Index (Panjawa et al., 2023). According to Wahyuningsih et al. (2019), income distribution inequality is categorized as medium to high across islands, with Kalimantan having the lowest and Java having the most. Inequality is more prevalent in urban regions than in rural ones, and it has been worse since regional autonomy (Wahyuningsih et al., 2019). Inequality is more prevalent in urban regions than in rural ones, and it has been worse since regional autonomy (Wahyuningsih et al., 2019). Significantly, systematic inequality does not exist between ethnic groups, but it does exist between urban and rural areas, indicating that programs aimed at rural development may be the most successful in lowering inequality in general (Suryadarma et al., 2006).

In this study, the hypothesis used is that income inequality is influenced by the unemployment rate, electrification ratio, percentage of self-owned buildings, community literacy development index, human development index and mean years of schooling.

RESEARCH METHODS

The methods used in this study include quadrant analysis, ordinary least squares analysis, and the Jaime Bonet index. In the quadrant analysis, provinces will be grouped into quadrants I, II, III, and IV, with the cut-off point being Indonesia's Gini ratio and Indonesia's GDP per capita. Provinces included in quadrant I, namely those with a Gini ratio and GDP per capita above the Indonesian average, are then further analyzed regarding the causes of income inequality in the region. Provinces included in quadrants II, III, and IV are not further analyzed. Quadrant II, namely provinces with a Gini ratio above Indonesia but a GRDP per capita below Indonesia. Quadrant III, namely provinces with a Gini ratio and GRDP per capita below Indonesia. Quadrant IV, namely provinces with a Gini ratio below Indonesia but a GRDP per capita above Indonesia.

In the OLS analysis conducted on provinces included in quadrant I, several independent variables were used, namely the Unemployment Rate, Human Development Index, Mean Years of Schooling, electrification ratio, percentage of households with their own building ownership and the Community Literacy Development Index. The data is sourced from data from the Central Statistics Agency. The analysis method used is the ordinary least squares (OLS) method using the SPSS 26 application.

The equation model used in this study is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \ldots + \beta_i X_i + \varepsilon$$

Where:

Y = income inequality (gini ratio)

β_0= constanta

β_i = regression coefficient of independent variables

X1 - Xi = independent variables

ε = error

In addition, this study also conducted a calculation of the Jaime Bonet Index (IJB) to determine income inequality between provinces using the provincial GRDP per capita figures compared to Indonesia's GRDP per capita figures. The following is the formula for calculating the Jaime Bonet Index:

$$IJB\ Prov_i = \left| \frac{GRDP\ Per\ Capita\ Prov_i}{GDP\ Per\ Capita\ Indonesia} - 1 \right|$$

The data used in this study comes from Badan Pusat Statistik, the results of the National Socio-Economic Survey (Susenas) and the National Labor Force Survey (Sakernas). The scope of the data used is all provinces in Indonesia in 2024. The data used are income inequality, unemployment rate, electrification ratio, percentage of self-owned buildings, community literacy development index, human development index and mean years of schooling, GRDP per capita.

RESULTS AND DISCUSSION

Income inequality measured by the Gini ratio when ranked across all provinces in Indonesia shows that the DI. Yogyakarta Province occupies the highest position in 2024, namely 0.44. After the DI. Yogyakarta Province, there are DKI Jakarta, West Java, Gorontalo, South Papua, West Papua, and Central Papua Provinces, which have Gini ratios above the Indonesian average. In general, the Gini ratio in urban areas is higher than in rural areas. The Gini ratio shows a measure of income inequality whose value ranges from 0 (zero) to 1 (one). The higher the Gini ratio, the higher the income inequality between regions; conversely, the closer it is to 0, the more even the distribution of income among residents. The following Figure 1 shows the Gini ratio figures differentiated according to urban and rural areas in Indonesia.

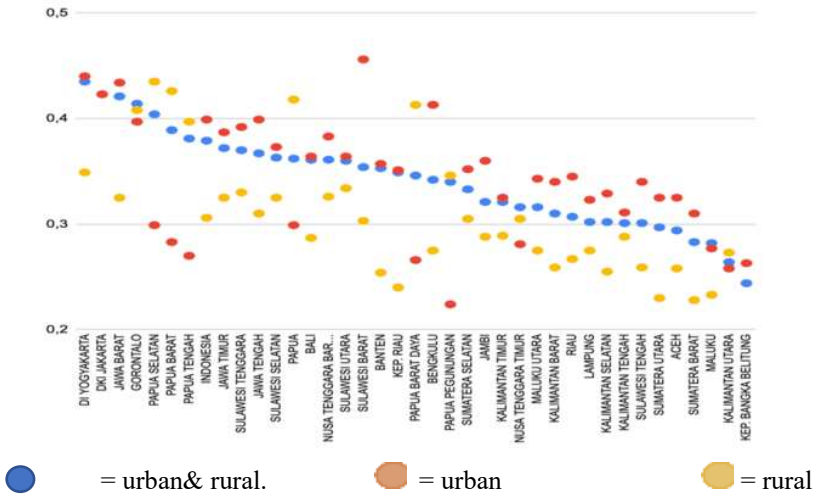

Figure 1. Gini Ratio of Urban and Rural Areas by Province in Indonesia, 2024 (BPS)

The picture of income inequality between regions seen from the perspective of gross value added (GRDP) can be calculated through the Jaime Bonet Index, which shows the figure of provincial income inequality seen from the gross value added generated in the region without looking at who the economic actors are, whether local residents (residents) or residents who do not live in the region (non-residents). The results of the Jaime Bonet Index calculation show that DKI Jakarta Province has the highest inequality figure, namely 4.44.

In mapping spatial income inequality, clustering of regions with similar characteristics was carried out. Quadrant analysis was carried out using the Gini ratio cut-off point and Indonesia's GDP per capita. The following Figure 2 shows a four-quadrant graph.

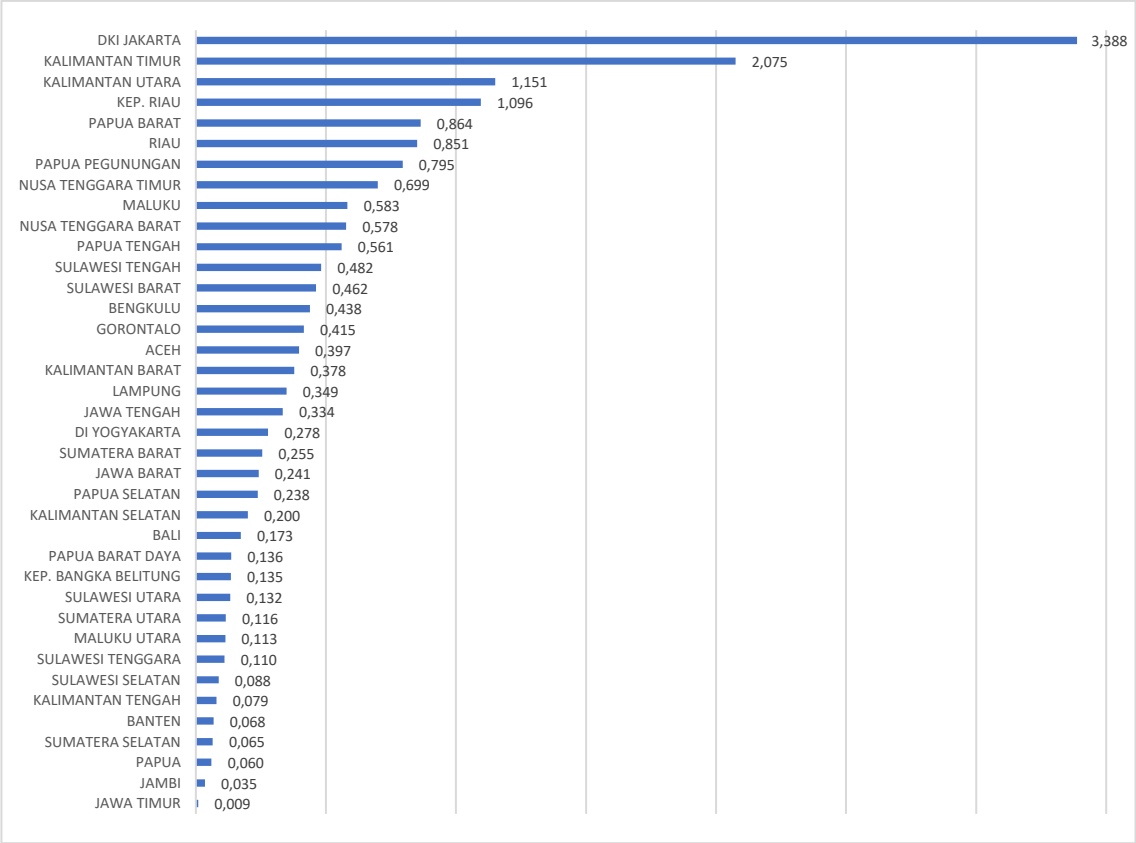

Figure 2. Jaime Bonet Index by Province (processed data)

Figure 2 shows the Jaime Bonet Index figures calculated from the GRDP per capita figures of the province and Indonesia. This figure shows the income inequality between provinces seen from the gross added value generated in the region without looking at the economic actors, whether local residents or residents who do not reside in the region. The results of the Jaime Bonet Index calculation show that DKI Jakarta Province has the highest inequality figure, namely 3.388. In addition, West Papua Province also has a fairly high Jaime Bonet Index figure, namely 0.864, and Central Papua has 0.561 or above the national average of 0.485.

Figure 3. Grouping of Quadrants of Provinces in Indonesia Based on Gini Ratio and GDP Per Capita

Figure 3 shows that the provinces included in quadrant I, or Gini ratio and GRDP per capita above the average of Indonesia, are DKI Jakarta, West Papua, and Papua. From the results of the quadrant analysis and the calculation of the Jaime Bonet index, it shows that the provinces of DKI Jakarta, West Papua, and Central Papua need special attention related to the factors causing high income inequality. In this study, further analysis was carried out with the coverage of the districts/cities in DKI Jakarta Province and West Papua Province. As for Central Papua Province, no further analysis was carried out due to the unavailability of data.

The following districts/cities are covered by the study: Seribu Islands, South Jakarta, East Jakarta, Central Jakarta, West Jakarta, North Jakarta, Raja Ampat, Sorong, South Sorong, Maybrat, Tambraw, and Sorong City. The dependent variable used in the study is the Gini ratio, while the independent variables used in the study include the Open Unemployment Rate, Human Development Index, Mean Years of Schooling, Electrification Ratio, Percentage of Households with Owned Buildings, and Community Literacy Development Index.

The results of the classical assumption test show that the assumption of the average residual value of zero is met, the assumption of constant residual variance (homoscedasticity) is met, and the residuals are normally distributed. The following table shows the results of the classical assumption test.

Table 1. Descriptive Statistics of Residual Values

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Unstandardized Residual	12	-.05428	.04626	.0000000	.02911269
Valid N (listwise)	12				

Table 1 shows the descriptive statistics of the residuals, which show a mean of zero (assumption met).

Table 2. Correlation values between independent variables (Homoscedasticity Test)

Correlations

		Unemployment Rate	Electrification Ratio	OwnBuilding	CommunityLiteracyDevelopmentIndex	HDI	MeanYearsofSchooling	ABSRES
UnemploymentRate	Pearson Correlation	1	.667*	-.552	.712**	.631*	.782**	.061
	Sig. (2-tailed)		.018	.063	.009	.028	.003	.850
	N	12	12	12	12	12	12	12
ElectrificationRatio	Pearson Correlation	.667*	1	-.675*	.651*	.677*	.640*	.136
	Sig. (2-tailed)	.018		.016	.022	.016	.025	.674
	N	12	12	12	12	12	12	12
OwnBuilding	Pearson Correlation	-.552	-.675*	1	-.796**	-.915**	-.875**	-.106
	Sig. (2-tailed)	.063	.016		.002	.000	.000	.742
	N	12	12	12	12	12	12	12
CommunityLiteracyDevelopmentIndex	Pearson Correlation	.712**	.651*	-.796**	1	.927**	.766**	-.095
	Sig. (2-tailed)	.009	.022	.002		.000	.004	.770
	N	12	12	12	12	12	12	12
HDI	Pearson Correlation	.631*	.677*	-.915**	.927**	1	.865**	.030
	Sig. (2-tailed)	.028	.016	.000	.000		.000	.926
	N	12	12	12	12	12	12	12
MeanYearsofSchooling	Pearson Correlation	.782**	.640*	-.875**	.766**	.865**	1	.080
	Sig. (2-tailed)	.003	.025	.000	.004	.000		.804
	N	12	12	12	12	12	12	12
ABSRES	Pearson Correlation	.061	.136	-.106	-.095	.030	.080	1
	Sig. (2-tailed)	.850	.674	.742	.770	.926	.804	
	N	12	12	12	12	12	12	12

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

The homoscedasticity test is conducted to determine the similarity of variance between independent variables where the hypothesis used is:

H_0: There are no symptoms of heteroscedasticity
H_1: There are symptoms of heteroscedasticity
H_0 is accepted if the p-value or significance> α. The α value used in this study is 0.05.
The test results show that the absolute significance value of the residual with the independent variable is more than 0.05, so it can be concluded that there are no symptoms of heteroscedasticity, or the assumption is accepted that the constant residual variance is accepted.

Table 3. Results of Residual Normality Test

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
GiniRatio	.194	12	.200*	.931	12	.390

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Testing the assumption of normally distributed residuals using the following hypotheses:
H_0: Residuals are normally distributed
H_1: Residuals are not normally distributed
If the Sig. (p-value) > α (0.05), then H0 is accepted.
The test results show a significance value of 0.200 or > 0.05, so it can be concluded that the residuals are normally distributed or the normality assumption is met.

In the OLS analysis test between the Gini ratio variable and the Unemployment Rate, Human Development Index, Mean Years of Schooling, electrification ratio, percentage of households with their own building ownership, and Community Literacy Development Index in the Seribu Islands, South Jakarta, East Jakarta, Central Jakarta, West Jakarta, North Jakarta, Raja Ampat, Sorong, South Sorong, Maybrat, Tambraw, and Sorong City areas, the results show that the correlation between the Gini ratio variable and the independent variables (mean years of schooling, electrification ratio, community literacy development index, unemployment rate, percentage of own buildings, and HDI) has a positive and very strong correlation, namely 0.932. A positive correlation indicates that the increase in the mean years of schooling, electrification ratio, community literacy development Index, unemployment rate, percentage of self-owned buildings and human development index will be in line with the increase in the Gini ratio. The independent variables are able to explain the dependent variable (Gini ratio) by 86.8 percent, while the remaining 13.2 percent is influenced by other variables not included in this study. The following Table 4 shows a summary of the model.

Table 4. Summary of OLS Analysis Model

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.932[a]	.868	.710	.04318

a. Predictors: (Constant), MeanYearsofSchooling, ElektrifikasiRatio, CommunityLiteracyDevelopmentIndex, UnemploymentRate, OwnBuilding, HDI

The hypothesis used in this test is:
H_0: there is no significant relationship between the dependent and independent variables
H_1: there is a significant relationship between the dependent and independent variables

Reject H0 if the significance value <α. The results of the ANOVA test show that the significance value is 0.041, or less than the value of α = 0.05, so it can be concluded that simultaneously the Gini ratio is significantly influenced by the independent variables (MYS, electrification ratio, IPLM, TPT, percentage of self-owned buildings, and IPM). The following Table 5 shows the simultaneous ANOVA test between the dependent variable and the independent variable.

Table 5. ANOVA Test Results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.061	6	.010	5.481	.041[b]
	Residual	.009	5	.002		
	Total	.071	11			

a. Dependent Variable: GiniRatio

b. Predictors: (Constant), MeanYearsofSchooling, ElektrifikasiRatio, CommunityLiteracyDevelopmentIndex, UnemploymentRate, OwnBuilding, HDI

In partial testing, it shows that the significance value of the independent variables above the value of α = 0.05 is the unemployment rate and the electrification ratio. This shows that partially, the Gini ratio is not affected by the open unemployment rate and the electrification ratio. The variables of the percentage of self-owned buildings, the community literacy development index, the human development index, and the mean years of schooling partially significantly affect the Gini ratio because the significance value is less than the value of α = 0.05. The following Table 6 shows the results of partial testing between the dependent variable and the independent variable.

Table 6. Partial Test Coefficient Values

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.727	.413		4.181	.009
	UnemploymentRate	.033	.017	.974	1.932	.111
	ElektrifikasiRatio	-.002	.001	-.501	-1.746	.141
	OwnBuilding	-.006	.002	-1.510	-2.727	.041
	CommunityLiteracyDevelopmentIndex	-.015	.004	-2.801	-4.182	.009
	HDI	.011	.004	2.504	2.870	.035
	MeanYearsofSchooling	-.069	.027	-1.806	-2.587	.049

a. Dependent Variable: GiniRatio

The partial test results show that the higher the population that owns their own buildings, the higher the community literacy development index, the higher the electrification ratio, and the higher the mean years of schooling, the lower the Gini ratio. Conversely, the higher the HDI and unemployment rates, the higher the Gini ratio.

The model obtained in this study is:

$Y = 1{,}727 + 0{,}33\ X_1 - 0{,}002\ X_2 - 0{,}006\ X_3 - 0{,}015\ X_4 + 0{,}011\ X_5 - 0{,}069\ X_6$

where :

Y= Gini ratio

X_1 = Unemployment rate

X_2= Electrification ratio

X_3= Percentage of self-owned buildings

X_4= Community literacy development index

X_5= Human Development Index

X_6= Mean years of schooling

The modeling results are used in the DKI Jakarta Province and West Papua Province, which have a Gini ratio and per capita income above the national average. If all independent variables are zero, the Gini ratio value is 1.727. Every 1 percent increase in the unemployment rate will increase the Gini ratio by 0.33 points, or in other words, increasing unemployment will worsen income inequality. On the other hand, for every 1 percent increase in the electrification ratio, or the more people who use electricity, the Gini ratio will decrease by 0.002 points, or increasing access to electricity will reduce inequality slightly. For every 1 percent increase in ownership of private buildings, the Gini ratio will decrease by 0.006 points, or more people who own their own homes will reduce inequality. A 1 percent increase in the community literacy development index will decrease the Gini ratio by 0.015 points; this shows that literacy can reduce income distribution. A 1-point increase in the HDI will increase the Gini ratio by 0.011 points; this shows that the increase in the HDI has not been evenly distributed to all groups in society. However, every 1-year increase in the mean years of schooling figure will reduce the Gini ratio by 0.069 points, which means that education plays a major role in reducing inequality. Of the six independent variables used in the study, it was found that the unemployment rate greatly affects the Gini ratio, marked by the largest coefficient compared to other variables. In addition, the mean years of schooling variable is the second variable that greatly affects the Gini ratio. So in terms of reducing income inequality in the DKI Jakarta and West Papua regions, the government can focus on reducing unemployment rates and increasing mean years of schooling in the region.

CONCLUSION

Some conclusions from the research include:

1. Spatial inequality measured through the Gini ratio shows that there are 7 provinces that have a Gini ratio above the Indonesian average, namely the Provinces of DI. Yogyakarta, DKI Jakarta, West Java, Gorontalo, South Papua, West Papua, and Central Papua.
2. The Jaime Bonet index figure, which shows the inequality of spatial development between regions, shows that there are 10 provinces that have a Jaime Bonet index above the average, namely the Provinces of DKI Jakarta, East Kalimantan, North Kalimantan, Riau, Riau Islands, Central Sulawesi, West Papua, Central Papua, Papua Pegunungan, and East Nusa Tenggara.
3. Quadrant analysis between the Gini ratio and GRDP per capita with the cutoff point of the Indonesian average figure shows that the Provinces of Jakarta, West Papua, and Central Papua are included in the quadrant I category, namely provinces with Gini ratios and GRDP per capita above the Indonesian average.
4. The OLS results show that the correlation between the Gini ratio variable and the independent variables, namely the mean years of schooling, electrification ratio, community literacy development Index, unemployment rate, percentage of self-owned buildings and human development index, has a positive and very strong correlation, namely 0.932. The positive correlation shows that the increase in the mean years of schooling, electrification ratio, community literacy development Index, unemployment rate, percentage of self-owned buildings and human development index will be in line with the increase in the Gini ratio. The independent variables are able to explain the dependent variable (Gini ratio) by 86.8 percent, while the remaining 13.2 percent is influenced by other variables not included in this study.
5. The results of the ANOVA test show that simultaneously the Gini ratio is significantly influenced by the independent variables (mean years of schooling, electrification ratio, community literacy development Index, unemployment rate, percentage of self-owned buildings and human development index). While partially, the Gini ratio is not influenced by the open unemployment rate and electrification ratio. The variables of percentage of self-

owned buildings, community literacy development index, human development index, and mean years of schooling partially significantly affect the Gini ratio.

In an effort to reduce spatial inequality, the government needs to collaborate with several parties to increase the Human Development Index, average length of schooling, percentage of the population who own their own buildings, electrification ratio, open unemployment rate, and community literacy development index. Some efforts that can be made include:

1. Education Sector
    - Increasing the average length of schooling for people who have passed the school period can be done through the Package A, B, C catch-up program, which is still carried out in all villages by adding educators who are coordinated centrally by the Ministry of Education.
    - Efforts for residents who are still in the school-age range are the government providing easy access to transportation from home to school as well as free transportation and education costs during study and providing job guarantees if they have completed their education. Job guarantees can be provided through cooperation programs with companies that have partnered with schools.
    - Increasing community literacy can be done through libraries available up to the village/sub-district level. Libraries can be in the form of libraries that provide online reading access so that people can more easily and quickly find out the latest information around the world. Offline libraries also need to be encouraged again so that school-age residents can more easily obtain information and read books, thereby increasing the knowledge they have received at school.
2. Health Sector
    - The quality of public health can increase life expectancy, which is an indicator of development in the Human Development Index. Health must be considered from infancy to the elderly. The integrated health post program starting from the infant, adolescent, and elderly health post must continue to be actively implemented in each RT/RW by health cadres with continued monitoring by the local health office.
    - Efforts to provide free vitamins and immunizations can also improve the quality of public health. In this effort, seriousness is needed in mapping the vitamins and immunizations that are really needed by the community, where each region has different needs.
3. Housing Sector
    - The community that owns a residential building with their own status is still low; therefore, the government can help the community in building habitable houses.
    - In building habitable houses, the government also needs to think about the land for the building to be built on, where it must be ensured that the land is also owned by them. If the land for the building is not yet owned by them, the government can provide cheap land credit assistance so that residents can own land in installments and adjusted to their respective economic capabilities.
    - Equal distribution of electricity networks to remote areas so that all communities have their electricity needs met.
4. Employment Sector
    - The government needs to map the types of jobs and fulfill needs according to human resources who are ready to work.
    - Providing training to the workforce category so that they have special competencies that can provide added value in the world of work
    - Internship programs in collaboration with institutions or companies so that job seekers have work experience and skills.

BIBLIOGRAPHY

Akhmad, A. Amir.(2018). The Effect of Economic Growth and Income Inequality on Poverty in Indonesia. IOSR Journal of Economics and Finance (IOSR-JEF), 9(4), 20-26.

Ariesta, L. C. O. W., Sodik, J., & Nuryadin, D. (2022). Determinan Ketimpangan Distribusi Pendapatan Kabupaten/Kota Dan Keterkaitan Spasial:(Studi Kasus: DI Yogyakarta Tahun 2013-2020). SIBATIK JOURNAL: Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, Dan Pendidikan, 1(5), 737-754.

Fahma, B. A., & Hendarto, R. M. (2024). Analisis Faktor-faktor yang Mempengaruhi Ketimpangan Wilayah di Provinsi DKI Jakarta dan Provinsi Kalimantan Timur Tahun 2010-2020. *Diponegoro Journal of Economics*, *11*(2), 76-81.

Guellec, D., & Paunov, C. (2017). Digital innovation and the distribution of income. In Measuring and Accounting for Innovation in the 21st Century. University of Chicago Press.

Hidayat, M. (2023). Ketimpangan Pembangunan Antar Wilayah di Pulau Sumatera, Pendekatan Spasial Ekonomi. Jurnal Akuntansi dan Ekonomika, 13(1), 11-18.

Maipita, I., & Wahyudi, S. T. (2017). Income Distribution and Inequality in Indonesia: Study on Middle Class Household. Jurnal Ekonomi Pembangunan, 18(1), 131-141.

Maipita, I., Hermawan, W., & Rahman, H. (2018). The impact of middle-class towards economic growth and income inequality in Indonesia. Jurnal Ekonomi Malaysia, 52(3), 3-16.

Mohd Daud, S. N., Ahmad, A. H., & Ngah, W. A. S. W. (2021). Financialization, digital technology and income inequality. Applied Economics Letters, 28(16), 1339-1343.

Nguyen, V. B. (2022). Does digitalization widen income inequality? A comparative assessment for advanced and developing economies. South East European Journal of Economics and Business, 17(2), 154-171.

Nugraha, A. T., & Prayitno, G. (2020). Regional disparity in western and eastern Indonesia. International Journal of Economics and Business Administration, 8(4), 101-110.

Panjawa, J. L., Guritno, D. C., Sugiharti, R. R., Kurniawan, M. L. A., & Damayanti, S. A. (2023). Measuring Inequality Using J-Bonet Index: What Can We Learn from Regional Data?. JEJAK: Jurnal Ekonomi dan Kebijakan, 16(1).

Rahmadi, S., & Parmadi, P. (2019). Pengaruh ketimpangan pendapatan dan kemiskinan terhadap pertumbuhan ekonomi antar pulau di Indonesia.

Rini, G. A. M. C., Suciptawati, N. L. P., & Utari, I. A. P. A. (2022). Identifikasi faktor yang memengaruhi gini ratio di Indonesia. E-Jurnal Matematika, 11(3), 160-166.

Siregar, S. I., & Al Rasyid, F. A. (2022). Review of Gini Ratio on Economic Growth with Human Mobility Mediation during Indonesia's Covid-19 Era. AJIRSS: Asian Journal of Innovative Research in Social Science, 1(2), 57-67.

Suryadarma, D., Widyanti, W., Suryahadi, A., & Sumarto, S. (2006). From access to income: Regional and ethnic inequality in Indonesia. Yayasan Pustaka Obor Indonesia.

Thalaha, A., Amara, I. F., & Desmawan, D. (2022). Analisis Ketimpangan Pembangunan dan Klasifikasi Wilayah antar kabupaten/kota Provinsi DKI Jakarta Tahun 2016-2020. Jurnal Manajemen Akuntansi (JUMSI), 2(2), 481-490.

Wahyuningsih, T., Bugis, M., & Bin-Tahir, S. Z. (2019). Analysis of the Inequality on Inter-regional and Inter-time Income Distribution in Indonesia. The Journal of Social Sciences Research, 5(1), 1-8