International Journal of Scientific Multidisciplinary Research (IJSMR)
Vol. 4, No. 5, 2026: 603 - 618

Socioeconomic Determinants of Income Inequality in The Kedungsepur Development Region, Central Java Province

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A R T I C L E I N F O

Keywords: Income Inequality, Socioeconomic Factors, Open Unemployment Rate, Per Capita Income, District/City Minimum Wage

Received : 09, March
Revised : 19, April
Accepted: 29, May

A B S T R A C T

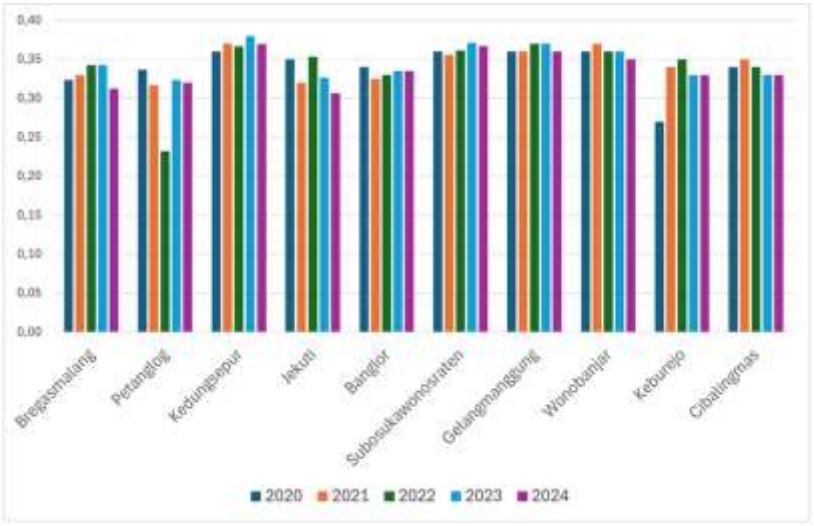
Income inequality remains a persistent challenge in regional economic development, where high economic growth does not always translate into equitable distribution, a limitation reflected in the trickle-down effect concept. This study examines the influence of socioeconomic factors on income inequality in the Kedungsepur Development Region, Central Java Province. The independent variables include the Open Unemployment Rate (OUR), per capita income, and district/city minimum wages. Employing panel data regression with a fixed effect model across six districts/cities over the period 2015–2024, the findings reveal that all three variables open unemployment rate, per capita income, and minimum wage exert a positive and significant effect on income inequality. These results suggest that economic expansion without equitable employment opportunity and income distribution tends to widen the inequality gap, underscoring the need for more inclusive development policies in the region.

INTRODUCTION

Income inequality is a persistent challenge in economic development, particularly in regions where growth-oriented policies dominate development planning. High economic growth is often assumed to generate a trickle-down effect, whereby the benefits of development gradually flow from higher-income groups to lower-income groups (Widodo et al., 2022). In practice, however, this mechanism does not always function as expected. Growth tends to accumulate benefits among upper-income groups, while lower-income populations receive disproportionately fewer gains, sustaining inequality across social strata (Badriah, 2019). This condition is further compounded by structural differences in factor endowments, including natural resources and demographic conditions across regions, which create unequal starting points for development (Sukmawati & Robertus, 2023). Consequently, economic growth and equitable distribution must be pursued simultaneously, as prioritizing one without the other risks either slowing growth or widening the income gap, a trade-off that remains central to regional development discourse.

This condition is also evident in Central Java Province, one of the most populous provinces on the island of Java. Based on Central Java Provincial Regulation No. 6 of 2024 concerning the Regional Long-Term Development Plan (RPJPD) 2025–2045, the provincial government has established a development zone strategy aimed at promoting equitable development, reducing inequality levels, and improving growth performance in lagging areas. This zoning strategy clusters districts and cities based on shared characteristics, inter-regional interaction and mobility patterns, and the principles of economic base theory, which posits that regional growth is driven by the expansion of export activities from within the region. Furthermore, based on Central Java Spatial Planning Regulation No. 16 of 2019 for the period 2029–2039, the province was originally divided into 8 development zones. Under the updated Central Java Regional Spatial Plan 2024–2044, this structure was significantly expanded into 10 development zones, namely: (1) Kedungsepur (Kendal Regency, Demak Regency, Semarang Regency, Semarang City, Salatiga City, and Grobogan Regency); (2) Subosukawonosraten (Surakarta City, Boyolali, Sukoharjo, Karanganyar, Wonogiri, Sragen, and Klaten Regencies); (3) Petanglong (Pekalongan Regency, Batang Regency, and Pekalongan City); (4) Bergasmalang (Brebes, Tegal City, Tegal Regency, and Pemalang Regency); (5) Wanarakuti (Jepara, Kudus, and Pati Regencies); (6) Banglor (Rembang and Blora Regencies); (7) Gelangmanggung (Magelang City, Magelang Regency, and Temanggung Regency); (8) Wonobanjar (Wonosobo and Banjarnegara Regencies); (9) Keburejo (Kebumen and Purworejo Regencies); and (10) Cibalingmas (Cilacap, Purbalingga, and Banyumas Regencies).

To examine income inequality conditions across each development zone during the observation period, the following table presents the Gini ratio data for each development zone in Central Java Province.

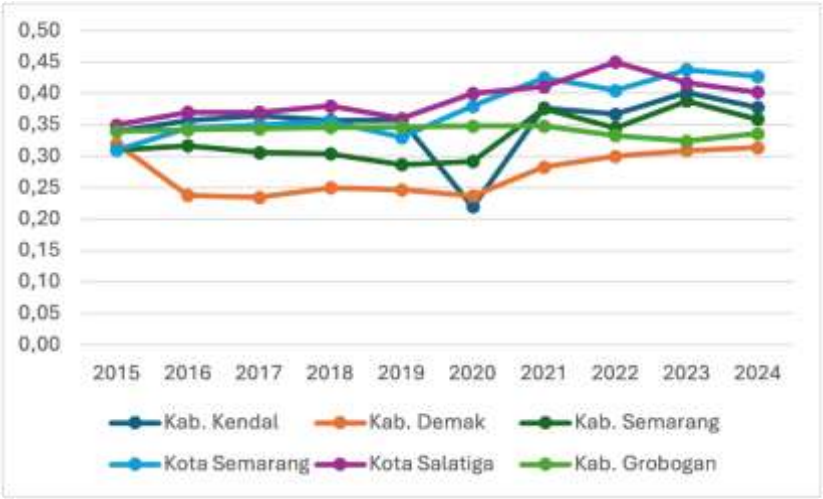


Source: Badan Pusat Stiatistik of Central Java Province (2024)

Figure 1. Gini Rasio of Central Jawa Development Region (2020-2024)

Based on Figure 1, the Kedungsepur Development Region consistently recorded the highest average Gini ratio compared to other development zones in Central Java Province throughout the 2020–2024 period, with values ranging between 0.36 and 0.38. This condition warrants deeper investigation, given that Kedungsepur serves as the primary economic agglomeration center of Central Java Province, yet its high level of economic activity has not been fully accompanied by equitable income distribution.

As a designated National Strategic Area (Kawasan Strategis Nasional), Kedungsepur has demonstrated economic growth rates that persistently exceed the provincial average. Prior to the COVID-19 pandemic, the region recorded steady growth momentum from 2015 to 2019, with economic growth reaching 5.60% in 2015. The pandemic caused a notable contraction in 2020 due to widespread restrictions on economic activity, followed by a sustained recovery from 2021 onward, with growth returning to 5.27% by 2024. Despite this resilience, the benefits of economic expansion have not translated into more equitable income distribution.



Source:Badan Pusat Stiatistik of Central Java Province (2024)

Figure 2. Gini Rasio of Kedungsepur Region (2015-2024)

Based on Figure 2, it can be observed that the widening of the Gini index in the Kedungsepur Development Region has become increasingly pronounced from year to year, particularly following the economic pressures brought about by the COVID-19 pandemic, the impacts of which were more acutely felt in urban areas such as Semarang City and Salatiga City. Notably, despite both cities being the largest contributors to the Gross Regional Domestic Product (GRDP) within the Kedungsepur region, it is precisely in these areas that income inequality is recorded at higher levels compared to the surrounding regencies.

This paradox aligns with broader observations in developing economies, where growth tends to be capital-intensive, concentrating gains among a limited segment of the population and leaving income distribution increasingly skewed (Fauzia & Suseno, 2017). Inequality measurement in this study follows the expenditure-based approach adopted by Statistics Indonesia (BPS), as household expenditure data more accurately reflects actual consumption capacity and is less susceptible to underreporting than direct income data (Chayyani, 2021).

Several factors have been identified in the literature as key determinants of regional income inequality. Per capita income, as conceptualized by Kuznets, is the most widely used indicator for assessing the economic welfare of a population, and its increase is a primary objective of regional development efforts. However, rising per capita income does not automatically ensure equitable welfare distribution, particularly when income growth remains concentrated among higher-income households, a pattern commonly observed in urbanized regions such as Kedungsepur. This dynamic aligns with the Kuznets inverted-U hypothesis, which suggests that inequality tends to widen in the early stages of development before eventually declining as economies mature (Todaro & Smith, 2020).

Rapid economic growth often exacerbates income inequality when it is not accompanied by proportional adjustments in population growth and economic structural transformation. When unemployment remains high, the number of individuals without stable income increases significantly, widening the gap between high- and low-income groups (Hariani, 2019). In the Kedungsepur Development Region, the Open Unemployment Rate (OUR) serves as a critical indicator of labor absorption capacity, as concentrated economic benefits among formal sector workers tend to reinforce existing income disparities. Expanding employment opportunities is therefore regarded as an essential measure in mitigating income distribution gaps across the region.

Income inequality is also shaped by minimum wage policy, which influences wage distribution through two channels: a direct effect, where wages below the minimum threshold are adjusted upward, and an indirect effect, where wages slightly above the floor are also realigned (Campolieti, 2015). In the Kedungsepur Development Region, where minimum wages vary considerably across its six constituent areas, these mechanisms carry significant implications. While higher minimum wages may compress the lower end of the wage distribution, they may simultaneously induce labor substitution or informalization, potentially excluding lower-skilled workers from formal employment and thereby widening overall income disparities.

Despite the growing body of literature on income inequality in Indonesia, empirical studies focused specifically on the Kedungsepur Development Region remain limited. Most existing studies adopt a provincial or national level of analysis, leaving sub-provincial dynamics particularly in strategic agglomeration zones insufficiently examined. This study addresses that gap by analyzing the effect of open unemployment rate, per capita income, and minimum wage on income inequality across six districts/cities in the Kedungsepur Development Region over the period 2015–2024, using multiple linear regression analysis. The findings are expected to contribute to the empirical literature on regional inequality in Indonesia and to provide evidence-based recommendations for more inclusive regional development policy.

THEORETICAL REVIEW

Income Inequality: Kuznets Hypothesis (1955)

The theoretical foundation of income inequality in this study draws on Simon Kuznets' seminal work in the 1950s, which examined the relationship between economic development and income distribution across countries. Kuznets observed a structural transformation process in which economies shift from agricultural dominance in rural areas toward industrialization concentrated in urban centers. Based on this dynamic, Kuznets formulated the inverted U-curve hypothesis, which posits that in the early stages of economic development, income inequality tends to widen as growth benefits are unevenly distributed.

However, once a country surpasses a certain income threshold, inequality gradually declines as the fruits of development are more broadly shared across society (Todaro & Smith, 2020). In the short run, rising economic activity tends to coincide with widening income disparities. Over time, aggregate income growth is accompanied by improvements in distributional equity, reflecting the eventual diffusion of development benefits to broader segments of the population. Economists generally acknowledge income inequality as a near-universal phenomenon; however, policy attention should be directed primarily at extreme income inequality, which generates economic inefficiency, undermines social cohesion, and violates principles of social justice. As philosopher John Rawls argued through his veil of ignorance thought experiment, individuals cannot choose the economic circumstances of their birth a moral basis for preferring societies with lower levels of inequality (Todaro & Smith, 2020).

Trickle Down Effect Theory: Hirschman (1958)

The trickle-down effect theory, introduced by Albert Otto Hirschman in 1958, constitutes an important lens for understanding the relationship between economic growth and income distribution in developing economies. This theory emphasizes the role of incentives and facilitation for high-income groups and capital owners in stimulating overall economic growth, with the expectation that growth benefits will eventually "trickle down" to lower-income groups through job creation and expanded economic activity, a process associated with spillover effect. In practice, however, the trickle-down mechanism has been widely criticized for overlooking distributional dynamics. Economic gains tend to

concentrate among capital owners and high-income groups, resulting in the accumulation of assets and resources among the upper strata while lower-income groups remain comparatively marginalized. Consequently, economic growth does not automatically translate into more equitable income distribution. This dynamic may contribute to a rising Gini coefficient, reflecting a widening gap between income groups (Saputra, 2021).

Open Unemployment and Income Inequality: Circular and Cumulative Causation Theory (Myrdal, 1957)

Myrdal (1957), through the concept of circular and cumulative causation, explains that unemployment is not merely a cyclical economic problem but is fundamentally structural in nature, whereby the poor and unemployed tend to be trapped in a poverty cycle that cumulatively worsens income inequality over time. Myrdal emphasizes that economic development does not proceed in a balanced manner but rather generates persistently widening gaps between advanced and lagging regions, as any initial advantage a region possesses is continuously reinforced through cumulative processes. This framework introduces two opposing mechanisms: backwash effects, which refer to the negative consequences imposed on lagging regions through the continuous drain of skilled labor, investment, and productive resources toward growth centers via trade, migration, and capital movement; and spread effects, which represent the positive spillovers of economic expansion toward surrounding areas through increased demand for agricultural products and small industry goods though in practice these remain highly limited due to weak linkages between large and small enterprises. Myrdal argues that backwash effects far outweigh spread effects, making the vicious circle of widening inequality between advanced and lagging regions difficult to avoid, and asserts that development analysis must extend beyond purely economic factors to encompass institutional, historical, social, and cultural dimensions that persistently shape inequality patterns (Arsyad, 2019).

Per Capita Income and Income Inequality: Kuznets Framework

The relationship between per capita income and income inequality is theorized through the Kuznets inverted U-curve, wherein inequality initially increases as per capita income rises reflecting the early stages of structural transformation before declining at higher income levels. In a development region such as Kedungsepur, where urbanization and industrialization are ongoing, per capita income growth may still be associated with widening disparities, as the benefits of growth remain concentrated among capital-owning and skilled-labor households (Todaro & Smith, 2020).

Minimum Wage and Income Inequality: Neoclassical Competitive Market Theory

The neoclassical framework views wages as determined by the interaction of labor supply and demand in competitive markets. In this context, minimum wage policies function as a price floor that can serve as a redistributive instrument by elevating the earnings of low-wage workers. When effectively

enforced, minimum wage increases reduce the wage gap between high- and low-income earners, contributing to lower inequality. However, neoclassical theory also warns that if minimum wages are set above the market-clearing equilibrium, they may generate unemployment among low-skilled workers, potentially offsetting their equalizing effect and complicating the relationship between minimum wage and income distribution (Brožová, 2018).

METHODOLOGY

This study employs a descriptive quantitative approach, utilizing numerical data processed through econometric analysis using EViews 12 software. The analytical outputs are interpreted descriptively and evaluated against relevant theoretical frameworks to determine whether the findings are consistent with or contrary to existing theory. The data used in this study is panel data, combining time series data covering the annual observation period from 2015 to 2024, and cross-sectional data consisting of six districts and cities within the Kedungsepur Development Region of Central Java Province namely Kendal Regency, Demak Regency, Semarang Regency, Semarang City, Salatiga City, and Grobogan Regency. This region was selected as the unit of analysis given its strategic position as the primary economic growth center of Central Java. The dependent variable in this study is income inequality, measured using the Gini Ratio, while the independent variables comprise the Open Unemployment Rate (OUR), per capita income, and district/city minimum wages. To determine the most appropriate estimation model, three panel data regression models were considered the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM) with model selection conducted through the Chow Test, Hausman Test, and Lagrange Multiplier Test. Based on the selection procedure, the Fixed Effect Model was identified as the most suitable specification for this study.

The multiple linear regression model employed in this study is specified as follows:

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon_{it}$$

Referring to the general model above, the equation used to analyze the influence of the Open Unemployment Rate, per capita income, and district/city minimum wages on income inequality in the Kedungsepur Development Region with the Gini Index as the dependent variable is formulated as follows:

$$Inequality_{it} = \beta_0 + \beta_1 TPT_{it} + \beta_2 PDRB_{it} + \beta_3 UMK_{it} + \varepsilon_{it}$$

Where *Inequality* denotes the Gini Ratio as the measure of income inequality; *TPT* refers to the Open Unemployment Rate; *PDRB* represents per capita income (Gross Regional Domestic Product per capita); *UMK* denotes the district/city minimum wage; β_0 is the intercept; β_1, β_2, β_3 are the regression coefficients; *i* indexes the cross-sectional units (districts/cities); *t* indexes the time period (2015–2024); and ε is the error term. The total number of observations yielded by the panel structure is 60, comprising six cross-sectional units over ten annual time periods.

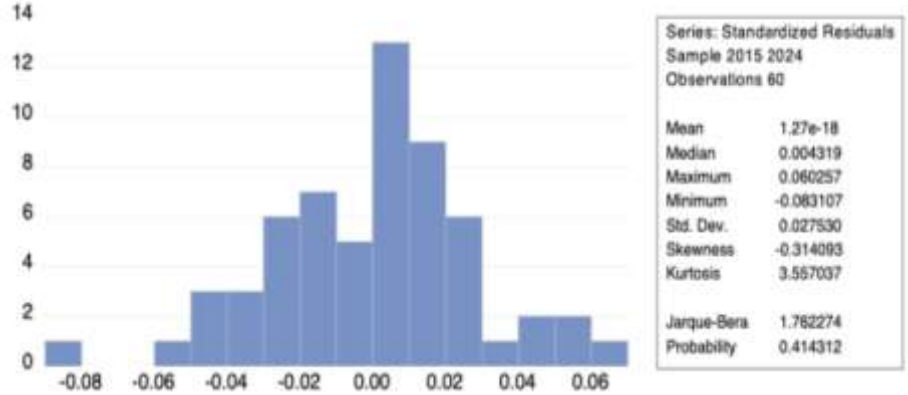
To ensure the validity and reliability of the regression estimates, this study also conducts a series of classical assumption tests. However, given the inherent characteristics and advantages of panel data regression, not all classical

assumption tests are required to the same extent as in ordinary regression models ((Prawoto, 2016)). The classical assumption tests applied in this study include the normality test, to examine whether the residuals are normally distributed, the heteroscedasticity test, to detect non-constant variance in the error terms, and the multicollinearity test, to identify whether high correlations exist among the independent variables (Gujarati, 2012). In addition to these diagnostic tests, several statistical tests are employed to evaluate the overall model performance and the significance of individual variables. The coefficient of determination (R^2) is used to measure the proportion of variation in the dependent variable explained by the independent variables. The F-test is conducted to assess the simultaneous significance of all independent variables in the model, while the t-test is applied to examine the partial significance of each independent variable namely the Open Unemployment Rate, per capita income, and district/city minimum wages in explaining income inequality in the Kedungsepur Development Region.

RESULTS

Classical Assumption Tests

The normality test is conducted to determine whether the residuals of the regression model are normally distributed, as this is one of the fundamental assumptions underlying valid statistical inference.



Source: Processed research data (2025)

Figure 3. Normality Test Results

Based on the results of the normality test, the Jarque-Bera probability value obtained is 0.414312, which exceeds the significance level of 0.05. This indicates that the null hypothesis of normal distribution cannot be rejected, and it can therefore be concluded that the residuals in the model are normally distributed. Accordingly, the regression model employed in this study satisfies the normality assumption.

The multicollinearity test is conducted to detect whether high correlations exist among the independent variables.

Table 1. Multicollinearity Test Results

Variable	TPT	PDRBPERKAPITA	UMK
TPT	1.000000000	0.318124229	0.338135250
PDRBPERKAPITA	0.318124229	1.000000000	0.540813058
UMK	0.338135250	0.540813058	1.000000000

Source: Processed research data (2025)

Based on the correlation matrix results, all inter-variable correlation values remain below 0.8, indicating the absence of severe multicollinearity. The model is therefore free from multicollinearity problems.

The heteroscedasticity test aims to detect whether the variance of the regression residuals is constant across observations.

Table 2. Multicollinearity Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob (Nilai-p)
C	0.0140941	0.01517853	0.92855749	0.357103
TPT	0.034503	0.00188994	1.82565695	0.073235
PDRBPERKAPITA	-1.6429415	1.09504554	-1.50034081	0.139143
UMK	0.0033352	0.00774443	0.43065966	0.668368

Source: Processed research data (2025)

The results show that all independent variables yield probability values exceeding the 0.05 significance level specifically, the Open Unemployment Rate (0.073235), per capita income (0.139143), minimum wage (0.668368), and the constant (0.357103). As all values surpass the threshold, the model is free from heteroscedasticity, confirming that the residual variance is constant and the estimates are reliable for further analysis.

Table 3. Multiple Linear Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob (Nilai-p)
C	0.2268754	0.02114698	10.7285028	1.110898
X1	0.0059956	0.00264319	2.26834161	0.027572
X2	8.6627465	2.43499071	3.55760966	0.000819
X3	0.0224747	0.01090564	2.06083746	0.044435

R-squared	: 0.779810
Adjusted R-squared	: 0.745271
F-statistic	: 22.577730
Prob(F-Statistic)	: 0.000000

Source: Processed research data (2025)

Regression Result

Based on the regression results presented in Table 3, the coefficient of determination (R^2) is 0.779810, indicating that approximately 77.98 percent of the variation in income inequality in the Kedungsepur Development Region can be explained by the Open Unemployment Rate, per capita income, and district/city minimum wages, while the remaining 22.02 percent is attributed to other factors outside the model. The Adjusted R^2 value of 0.745271 further confirms the model's explanatory power after accounting for the number of predictors. The F-statistic value of 22.577730 with a probability of 0.000000 indicates that all three independent variables simultaneously exert a significant effect on income inequality, confirming that the model is statistically fit and relevant for analysis. Based on the t-test results, the Open Unemployment Rate (X1) yields a positive coefficient of 0.0059956, with a t-statistic of 2.26834 and a probability of 0.027572, which is below the 0.05 significance level. This indicates that the Open Unemployment Rate has a positive and significant effect on income inequality. Per capita income (X2) shows a positive coefficient of 8.6627465, with a t-statistic of 3.55761 and a probability of 0.000819, confirming a positive and significant effect on income inequality. Similarly, the district/city minimum wage (X3) produces a positive coefficient of 0.0224747, with a t-statistic of 2.06084 and a probability of 0.044435, indicating a positive and significant effect on income inequality in the Kedungsepur Development Region.

DISCUSSION

The findings reveal that the Open Unemployment Rate exerts a positive and significant effect on income inequality in the Kedungsepur Development Region. In the context of the Kedungsepur region, where employment is concentrated in Semarang City as the primary growth center, Myrdal's backwash effect mechanism is particularly evident surrounding districts continuously lose productive labor through migration toward the urban core, while residents left behind face increasingly limited formal employment opportunities, rendering unemployment not merely a labor market problem but a cumulative driver of widening income inequality across the region.

The unemployment dynamics across the Kedungsepur region are notably uneven across its constituent districts and cities. Semarang City, as the primary economic hub of the region, experienced a sharp rise in unemployment during the 2020–2021 pandemic period, driven by mass layoffs and constrained labor absorption a shock that left lasting imprints on the region's income distribution. Meanwhile, Kendal Regency recorded persistently elevated unemployment

accompanied by a relatively high Gini Index, reflecting structural mismatches between labor force growth and available employment opportunities, as well as skill gaps between workers and industry demands. By contrast, Grobogan Regency which recorded the lowest unemployment rate in the region also exhibited the most stable and relatively low Gini Index throughout the observation period, largely attributable to its broad agricultural labor absorption that distributes income more evenly across population groups. Demak Regency similarly demonstrated that a diversified employment structure across services, manufacturing, and agriculture can mitigate income concentration and support more equitable distribution.

These patterns collectively suggest that a mere reduction in unemployment figures is insufficient to guarantee income equity, particularly when the jobs created fail to absorb workers inclusively across all social strata or to narrow wage gaps between skilled and unskilled labor groups as evident in Salatiga City, where a relatively low unemployment rate coexists with one of the highest Gini Index values in the region. Furthermore, the findings reinforce criticism of the trickle-down effect mechanism, as economic growth concentrated in more advanced areas has not fully translated into employment absorption in surrounding districts, thereby widening opportunity and income disparities across the region. These results are consistent with (Attaqi Bs, 2023), who demonstrated a positive and significant relationship between the open unemployment rate and income inequality, and with (Yoertiara & Feriyanto, 2022), who found a reciprocal relationship between open unemployment and income inequality, noting that population migration toward economically dynamic areas can exacerbate unemployment when destination regions lack sufficient capacity to absorb incoming labor.

The findings demonstrate that per capita income exerts a positive and significant effect on income inequality in the Kedungsepur Development Region, indicating that increases in per capita income tend to be accompanied by a widening of income distribution disparities across the region. This finding is theoretically consistent with the Kuznets inverted-U hypothesis, which posits that income inequality tends to rise during the early stages of economic development, as the benefits of growth are disproportionately captured by groups or regions with greater access to economic activities. Higher-income groups possess a greater capacity for saving and capital accumulation compared to lower-income groups, which progressively amplifies the income share of the wealthy and deepens distributional gaps.

The income distribution patterns observed across the Kedungsepur region reflect this dynamic clearly. Semarang City, which recorded the highest per capita income in the region, also exhibited the highest level of income inequality throughout the observation period. The concentration of formal sector activities particularly industry and services combined with high urbanization rates and unequal access to quality education and employment between long-term residents and migrants, has produced a markedly uneven income distribution. A similar pattern is observed in Salatiga City, where an economy dominated by trade and services generates pronounced income differentials between formal

and informal sector workers. In contrast, Demak and Grobogan Regencies, which recorded considerably lower per capita income figures, demonstrated more equitable income distributions, attributable to their relatively homogeneous economic structures anchored in agriculture, industry, and trade sectors that tend to distribute income more evenly across the workforce.

These findings challenge the validity of the trickle-down effect mechanism in this regional context, as economic growth concentrated in more urbanized and industrialized areas has not translated into broadly shared prosperity. As (Todaro & Smith, 2020) argue, the benefits of economic growth do not automatically flow to all layers of society; when growth is generated predominantly by a narrow segment of the population, its returns tend to accrue disproportionately to that same group, reinforcing rather than reducing inequality. This is further supported by (Aisyah & Sishadiyati, 2024), who found that rising per capita income is associated with worsening income inequality, particularly when economic expansion is concentrated in urban-based industry and services sectors that attract investment and generate higher wages, leaving agriculturally dominant regions with lower but more evenly distributed incomes. (Naufal & Santoso, 2024) similarly conclude that per capita income growth exacerbates inequality in early stages of development when it is not accompanied by equitable employment opportunities, as low-skilled workers remain structurally excluded from higher-wage sectors, perpetuating income stratification across the region.

The findings indicate that the district/city minimum wage exerts a positive and significant effect on income inequality in the Kedungsepur Development Region, suggesting that increases in minimum wage tend to be accompanied by a widening of income distribution disparities rather than a reduction. While minimum wage policy is fundamentally designed as a government instrument to safeguard worker welfare and elevate living standards, its practical implications for income distribution are more complex and context-dependent than its intended purpose suggests.

In districts and cities where the employment structure is predominantly anchored in the services and industrial sectors such as Semarang City, Kendal Regency, Salatiga City, and Semarang Regency minimum wage policy operates primarily within the formal sector and has a direct bearing on formal workers' earnings. However, given the considerable variation in wage levels, skill requirements, and job types inherent to these sectors, the application of minimum wage tends to benefit certain worker groups while simultaneously widening income gaps between workers of differing skill levels and occupational positions. From a Neo-Classical perspective within a competitive market framework, skilled workers tend to maintain high and stable wages, while unskilled workers benefit only up to the minimum threshold, thereby progressively enlarging the earnings gap between the two groups. In the Kedungsepur context, minimum wage increases that are not matched by improvements in labor force quality risk entrenching rather than narrowing this wage disparity.

In contrast, Demak and Grobogan Regencies where a substantial share of the workforce is engaged in agriculture as casual laborers without formal contractual arrangements minimum wage policy cannot be effectively enforced, leaving a large portion of the workforce outside its protective reach. While this structural condition results in lower overall income levels, it also produces a more homogeneous income distribution, reflected in the comparatively lower Gini Index values of these regencies. This disparity in policy coverage between formal and informal sectors across the region reinforces the uneven distributional outcomes of minimum wage increases. Furthermore, consistent with the Kuznets hypothesis, rising minimum wages in industrializing areas do not necessarily expand employment opportunities, as firms facing higher labor costs tend to substitute labor with technology or reduce headcount, while informal sector workers unprotected by minimum wage provisions face rising costs of living without commensurate income gains, further compressing their real purchasing power. These findings are corroborated by (Istikharoh et al., 2020), who demonstrated that minimum wage increases are positively associated with income inequality, driven by persistent inter-regional wage differentials that produce uneven income distribution across districts and cities. Similarly, (Putri & Aminda, 2024) confirmed that minimum wage increases tend to be followed by rising income inequality, a pattern consistently observed across their study's district and city samples.

CONCLUSIONS AND RECOMMENDATIONS

This study examined the influence of socioeconomic determinants specifically the Open Unemployment Rate, per capita income, and district/city minimum wages — on income inequality in the Kedungsepur Development Region of Central Java Province over the 2015–2024 period. The findings consistently demonstrate that all three variables exert a positive and significant effect on income inequality, indicating that economic expansion in the region has yet to be accompanied by equitable income distribution. Rising unemployment narrows income access for a growing population segment while leaving employed groups comparatively unaffected; per capita income growth concentrated in urbanized areas such as Semarang City and Salatiga City disproportionately benefits higher-income groups, consistent with the Kuznets hypothesis; and minimum wage increases primarily protect formal sector workers while leaving informal and agricultural workers relatively unprotected, widening the earnings gap between the two groups. Based on these findings, local governments are recommended to prioritize industry-aligned labor training and accelerate fiscal spending to broaden employment creation; accompany per capita income growth with fiscal decentralization and expanded access to productive economic activities to ensure inclusive growth; adjust minimum wage policy proportionally in line with regional economic conditions and decent living cost standards; and strengthen infrastructure investment alongside government-business-community synergy to generate broad-based employment opportunities across the region.

FURTHER STUDY

This study is subject to several limitations that open avenues for future research. First, the analysis is confined to three socioeconomic variables the Open Unemployment Rate, per capita income, and district/city minimum wages while income inequality is inherently influenced by a broader set of factors such as human development index, fiscal transfers, infrastructure quality, and poverty rates, which were not accounted for in this model. Second, the study focuses exclusively on the Kedungsepur Development Region, limiting the generalizability of findings to other development zones in Central Java or beyond. Future studies are therefore encouraged to incorporate a wider range of explanatory variables, expand the geographical scope to encompass all ten development zones of Central Java for comparative analysis, and consider employing more advanced panel data techniques such as dynamic panel models or spatial econometrics to better capture inter-regional spillover effects on income inequality.

ACKNOWLEDGMENT

The authors would like to express sincere gratitude to all parties who have contributed to the completion of this research, including supervisors, colleagues, and academic peers who provided valuable input, constructive feedback, and suggestions throughout the research process. Appreciation is also extended to the Central Statistics Agency (BPS) of Central Java Province and the respective districts and cities within the Kedungsepur Development Region for providing the data necessary for this study. This research received no specific financial grant from any funding agency in the public, commercial, or not-for-profit sectors.

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