Article Type: Research Paper

Inclusive economic growth and fiscal intervention: could it reduce poverty, inequality, and unemployment in East Java?

Dyah Purwanti

Abstract: Before the COVID-19 pandemic, East Java Province (then abbreviated to East Java) made remarkable achievements in economic growth accompanied by a continuing downward trend in poverty. Then, after the COVID-19 pandemic broke out in 2020, it had a detrimental impact in terms of health, economics and social aspects. Specifically for East Java, the outbreak caused a severe contraction in the economy and significantly increased the number of local unemployed. However, long before COVID-19, East Java was facing wide inequality. Based on these problems, this study evaluates whether inclusive growth and local government fiscal intervention are solutions. These two factors have been recommended by economist as an effective strategies for reducing the triple problem in East Java. Fiscal intervention is interpreted as expenditure policies in economic, education, and health functions. Using panel data regression during 2015-2021, the study documents that economic growth in East Java still needs to be fully inclusive. This is based on the finding that inclusive economic growth does not simultaneously reduce triple problems (poverty, inequality and unemployment). Inclusive growth reduces poverty in East Java, but it has the opposite effect on unemployment and inequality. On the one hand, positive findings are documented in which fiscal intervention in education spending plays a significant role in reducing poverty. Unfortunately, this study failed to find the determining factors that provide a solution to inequality and unemployment in East Java. These evidences certainly have implications for reviewing the quality of inclusive growth and local government expenditure policies.

Keywords: Inclusive Economic Growth; Fiscal Intervention; Local Spending; Poverty; Inequality; Unemployment
JEL Classification: H3; O4

AFFILIATION:
Politeknik Keuangan Negara STAN, Banten, Indonesia

***CORRESPONDENCE**:
dyahpurwanti@pknstan.ac.id

THIS ARTICLE IS AVALILABLE IN:
http://journal.umy.ac.id/index.php/esp

DOI: 10.18196/jesp.v25i1.21694

CITATION:
Purwanti, D. (2024). Inclusive economic growth and fiscal intervention: could it reduce poverty, inequality, and unemployment in East Java? *Jurnal Ekonomi & Studi Pembangunan, 15*(1), 148-166.

ARTICLE HISTORY
Received:
18 Jan 2024
Revised:
22 Apr 2024
Accepted:
30 Apr 2024

Introduction

In the regional scope of Indonesia, East Java has had a consistently increasing economic growth rate in the last decade (Hardjoko et al., 2021). A solid trend followed the remarkable achievement in reducing poverty until 2019. However, the success story in reducing poverty is overshadowed by rising inequality and high levels of unemployment. These two problems have become increasingly critical after the COVID-19 pandemic (Siswantoro, 2022). In the local context of Indonesia, East Java has suffered

severely from the pandemic, with the highest death rate due to COVID-19 in Indonesia[1] (Kompas, 2021).

As we know previously, many countries have surpressed the COVID-19 outbreak by limiting social interactions. The impact of these restrictions causes a slowdown in social and economic activity, which ultimately leads to a triple basic problem of people's lives, including: (1) increasing unemployment, (2) decreasing income earned by the community and (3) certainly triggering an increase in the number of people living in a poverty trap. The Indonesian government is also implementing a similar restriction policy, and specifically East Java, several districts/cities heavily affected areas are proposing a lockdown. This restriction policy has a heavy impact on economies that depend on social interaction, such as East Java, whose economic structure relies on processing, large trade and service industries. Before 2020 the pandemic, East Java's regional economic growth achieved a positive trend of 5.53 percent; conversely, in the second semester of 2020, it fells to minus 2.23 percent. This decline indicates that the East Java economy is experiencing a deep contraction.

The economic slowdown affected production activities and consequently was followed by reduced working hours and the number of employees. The next double effect would be an increase in the number of unemployed people (Dewi & Nursiyono, 2023). The pandemic has significantly affected the supply and demand side of the labor market (Sukanti & Sulistyaningrum, 2022). On the demand side, the economic downturn causes a decrease in the number of working hours and the number of employees. The simultaneous impact on the supply side, many workers suffer from health problems and eventually stop working.

Based on East Java's Gross Regional Domestic Product (GRDP) at the end of 2020, the processing industry, services, and wholesale trade sectors fell into a double-digit decline (to minus) compared to the end of 2019. Thus, the pandemic has a multiplier effect on unemployment and inequality in East Java. Figure 1 visualizes the poverty and inequality in East Java based on Statistic Data (www.jatim.bps.go.id). The figure depicts that the poverty reduction trend was stable until 2019 (10.37 percent), then increased to 11.08 percent and 11.40 percent at the end of 2020 and 2021, respectively. The figure also confirms the poverty level in East Java is higher than the national average.

[1] Since April 2020, the number of deaths from COVID-19 victims in East Java has increased sharply and recorded the highest figure in Indonesia. The highest death toll was from the city of Surabaya (Kompas. 2020). 5 Provinces with the highest Covid-19 Death Cases, East Java number 1. https://www.kompas.com/tren/read/2020/09/21/130400065/5-provinsi-dengan-case-matian-covid-19 -highest-eastern-java-number-1) Kompas (2021). Distribution of 144 Death Cases due to COVID-19, Highest in East Java. https://kmp.im/app6https://nasional.kompas.com/read/2021/09/24/18065351/sebaran-144-case-matitian-akibat-covid-19-tertinggi-di-jawa-timur.

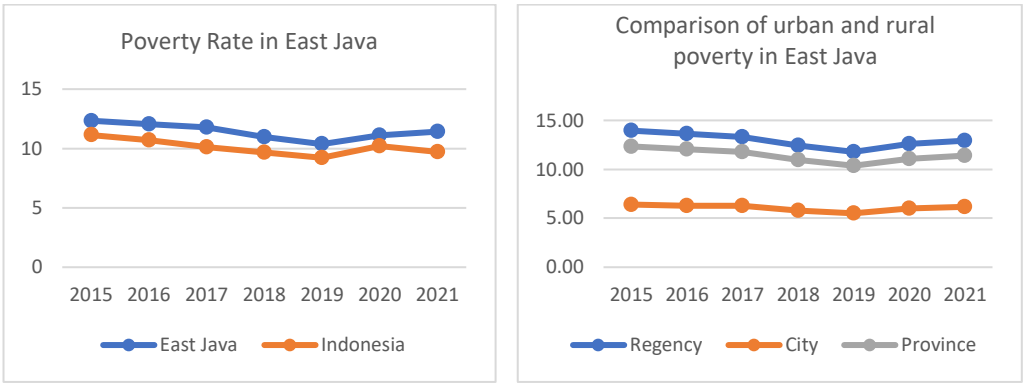


Figure 1 Comparison of Poverty and Inequality Trends Between Regions

As explained in the previous paragraph, East Java faces quite wide welfare disparities. The province faces three disparities, consisting of rural and urban inequality, inter-regency inequality, and inequality between regencies and cities. Figure 1 shows relatively high disparities between the poor population living in rural areas (11-13 percent) and those in urban areas (5-6 percent). In the context of inequality of prosperity, three regencies in Madura Island (Sumenep, Bangkalan, and Sampang) have poverty above 20 percent, in contrast to Malang City and Batu City have below 5 percent. The prosperity disparities were explained by Dartanto (2015) that 60 percent of poor households in East Java earn their living from the agricultural sector. On the other hand, only 10 percent of the wealthiest households earn income from the service sector. The dominance of the highest income group causes the income ratio between the richest and poorest groups is 75 percent versus 25 percent. The disparity in welfare between regions in East Java represents not only poverty but also inequality between regions.

The emergence of the wide disparity is likely due to the dominance of the contribution of the non-agricultural sector in East Java. Based on data analysis from the BPS - Statistics Indonesia, only five of the 38 districts/cities contribute significantly to East Java's GRDP. The five regions are Surabaya, Sidoarjo, Pasuruan, Gresik, and Kediri (BPS - Statistics Indonesia, 2019). These areas are processing industry centers, and service and large trade centers in East Java. Long before the pandemic, , the services sector and large trade output steadily rose while agricultural production declined. This low growth in the farm sector is not beneficial for the poor population who still depend on the agricultural industry (Putra, 2022).

Figure 2 shows that poverty and unemployment rates soared at the end of 2020, and inequality between regions in East Java widened. The growth contraction hit the economy and caused many family groups previously not considered poor, just above the poverty line, to fall into the inferior group. The decreased working hours and layoffs resulted in this group's income reduction (see Figure 4). Another impact of the pandemic is that the open unemployment rate soared in 2020 and will continue to rise in 2021. This problem is crucial and urgent to be addressed, considering that many low-income families in East Java depend on the agricultural industry.

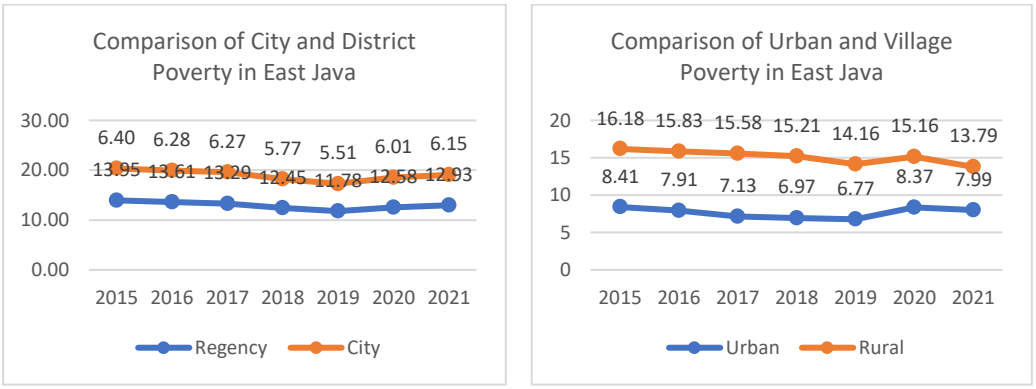


Figure 2 Comparison of Poverty in East Java Province

In repsonse to the problems in East Java, economists have recommended that stable economic growth is the best way out (Michálek & Výbošťok, 2018). Many scholars have discussed the strategic role of economic growth in development, especially from the perspective of the Sustainable Development Goals (SDGs) (Veiga et al., 2018). Furthermore, the leading scientists (Moore & Donaldson, 2016) prescribe that each country needs to grow to eradicate poverty. However, it should be noted that what is meant by growth in this context is growth that goes beyond merely increasing output or income in the economy. For this reason, we need economic growth that opens up opportunities for all individuals in society to participate and improve welfare equally. Growth's "trickle-down effect" is expected to reach poor populations in each region (Young, 2019).

There had been a paradigm shift from pro-poor growth to inclusive economic growth in the last decade (Adeleye, 2023). This concept of inclusiveness indicates the quality of economic growth where all levels of society enjoy the results of development equally. Thus, economic growth can increase the welfare of low-income people through expanding employment opportunities, ultimately reducing inequality between societal levels (Amponsah et al., 2023). Empirically, there is strong evidence of a significant correlation between inclusive growth and poverty (Farooq & Ahmad, 2020), and opportunity (Corrado & Corrado, 2017). Economic growth is classified to be inclusive when all members of society participate and contribute to the growth process. Participation and contribution are represented in job ownership so that each individual earns income and perceives "functioning" because they have participated in social and economic activities (Ranieri & Ramos, 2013). In an economy that grows inclusively, income distribution runs well in society; thus, economic growth is inclusive if it can reduce poverty and inequality (Lee & Sissons, 2016).

However, as various studies prove, this normative idea is hard to be realized. The reality is that the benefits of growth are relatively small and slow in reducing poverty (Laborde Debucquet & Martin, 2018). The distribution of economic development results in an uneven pattern, leaving poor groups outside the reach of economic expansion and development (Islam & McGillivray, 2020). In other words, the economic development benefits still need to be enjoyed by low-income people. Poverty continues to increase more than the reduction in poverty due to the neutral distribution of growth (Rouzet et

al, 2019). Meanwhile, in the Indonesian context, the desire to realize inclusive economic growth is still challenging, especially at the regional level. Empirical findings in the local context also provide evidence that economic development at the provincial level in Indonesia has not been inclusive; Economic growth only reduces poverty and does not reduce inequality and unemployment (Dartanto, 2015; Ernawati et al., 2021; Herdiyati & Ismail, 2022).

Despite the inconsistency of empirical evidence, the phenomenon of inclusive growth in East Java is interesting to analyze. By utilizing published data from the Statistics Agency of East Java and BAPPENAS, this study has a strong suspicion that poverty reduction is consistently correlated with the trend of inclusive economic growth, which continues to increase until 2019 (see Figure 1 and Figure 3). In addition, the OECD (2015) also emphasized the crucial role of inclusive economic growth in reducing poverty and inequality. These two arguments prompted this study to investigate whether quality economic growth is a solution to the poverty and inequality in East Java after COVID-19.

Apart from economic growth, the empirical track record shows that other factors are crucial in reducing poverty and inequality. As proposed by Sepulveda and Martinez-Vazquez (2011) and Mosley (2014), government fiscal intervention plays a crucial role in eradicating poverty. From the revenue and spending side, the government can intervene by strengthening the demand and supply side. This strengthening takes the form of assistance to poor people to increase their income (Minas et al., 2018) or offering direct assistance programs to poor people (Sudewi & Wirathi, 2013). It is believed that increasing direct regional spending can increase local output, which then impacts increasing individual income (Lubis & Dahraini, 2018).

In the local context, the inclusiveness of economic development is questioned. A few studies that analyze whether inclusive economic development is a solution to the basic problems of state welfare (e.g. poverty, inequality, and unemployment). This study fills the lack of empirical evidence regarding the efficacy of inclusive growth and fiscal policy to improve society's welfare. As previously mentioned, this study deploys East Java as a research locus for the movement of satisfactory economic growth and poverty reduction. Moreover, this study contributes by analyzing whether inclusive growth has an impact on the triangle of prosperity problems at the same time, consisting of poverty, inequality, and unemployment.

Apart from fiscal intervention at the regional level, this study also considers the Village Fund Program as a form of fiscal intervention at the village level. As is known, the government is aggressively promoting this program as an essential effort to accelerate development in rural areas (Alif et al., 2020). The acceleration of growth is expected to create more jobs and business opportunities to increase the income of rural communities and reduce disparities in prosperity between villages and cities, ultimately reducing poverty and inequality (Arham & Hatu, 2020). This positive proposition is strengthened by the fact that East Java Province is the largest recipient of village funds compared to other provinces in Indonesia. This study also expands to other factors recommended by other researchers, such as local government fiscal independence (Manek & Badrudin,

2017) and quality of education (Arsani et al., 2020; Asrol & Ahmad, 2018) as crucial factors in reducing poverty and inequality.

Concurrent with inclusive economic growth, empirical evidence still needs to be more consistent in explaining the effectiveness of village funds (Rimawan & Aryani, 2019) and fiscal intervention in reducing poverty and inequality (Taruno, 2019; Yusuf & Sumner, 2015). Therefore, this study utilizes the East Java phenomenon before and after the COVID-19 pandemic to better explain how economic growth and fiscal intervention, especially village funds, correlate with reducing poverty and inequality. With a health crisis accompanied by a financial crisis during the pandemic, the findings from this study can explain what many other studies still need to prove.

This article is organized into several parts: introduction, research methods, presentation of the results, and discussion of the results in the Discussion Section. Finally, this article presents conclusions, limitations, and recommendations for future research.

Research Method

The study employs a quantitative approach to analyze the influence of inclusive economic growth on poverty, unemployment, and inequality in East Java. The research period covers 2015-2021. The selection of the period range is intended to adapt to the commencement of the village funding program until the period when the COVID-19 pandemic emerged. The data used is secondary data published by the Statistics Agency of East Java Province (www.jatim.bps.go.id.) and regional government financial data published by the Fiscal Balance Directorate, Ministry of Finance (www.djpk.kemenkeu.go.id). The data covers all 38 districts and cities in East Java, consisting of 29 districts and nine cities. Thus, the data used is the population of district and city governments in East Java.

This research carries out thirty-eight (38) cross-sectional units representing thirty-eight (38) districts/cities in East Java over seven years (2015-2021). Thus, the total observations reach 266 samples. The feature of data has panel characteristics. That is why panel regression is selected to estimate the relationship between inclusive economic growth and local government fiscal intervention with poverty, inequality, and unemployment. Panel data regression has advantages in determining relationships with data that combines features from both cross-sectional and time series data (Gujarati et al., 2014), and it is also used for most poverty studies with a combined data structure (Bah, 2015). Panel data analysis has the advantage of describing variations in data that change over time, such as changes in social conditions, and individual growth in education. In addition, panel data can produce superior estimates in trend analysis, such as the impact of policies over a certain period. That is why panel data analysis is used for policy research.

The research model refers to the model developed by Lee & Sissons (2016) and Sepulveda and Martinez-Vazquez (2011). The dependent variable consists of three components, including (1) the poverty level as measured by the percentage of poor people in each

district/city (headcount index), (2) the level of inequality represented by the Gini ratio, and (3) the open unemployment rate to represent unemployment. The rationale underlying the development of the research model is the inclusive growth index, especially in the period after the COVID-19 pandemic, which is thought to be a benchmark for equal welfare distribution, ultimately reducing poverty, inequality, and unemployment (Anand et al., 2014). Other explanatory variables include local government spending policies as a form of fiscal intervention (Wibowo & Oktivalerina, 2022), degree of fiscal independence (Canare, 2020), village funds (Arham & Hatu, 2020), and school enrollment rates (Murnane & Reardon, 2018). The research model was developed in the following equation.

$$Pov_{it} = \alpha + \beta_1.IGI_{it} + \beta_2.IGI*postCovid + \beta_3.Econ_{it} + \beta_4.Educ_{it} + \beta_5.Health_{it} + \beta_6.VF_{it} + \beta_7.DFI_{it} + \beta_8.APS_{it} + \varepsilon \quad \text{..... (1)}$$

Model 1 above analyzes the influence of inclusive economic development (IGI) and local government fiscal intervention variables such as budget allocations to finance basic social services (such as economics (Econ), education (Educ), health (Health), village funds (VF), degree of fiscal independence (DFI) and school enrollment rate (APS) on poverty (Pov). This model includes interactions between inclusive economic development and the period after the COVID-19 pandemic (IGI*postCovid).

Next, model 1 was developed into models 2 and 3 by adapting the poverty variable to the inequality (INEQ) and unemployment (UNEMP) variables. Models 2 and 3 aim to analyze the influence of independent variables on inequality. The proxy for human capital uses the average school enrollment rate, where this variable is expected to impact the welfare of low-income families directly. Many studies suggest that the higher the level of education, the greater the expected lifetime income (Yang & Qiu, 2016). For urbanites on the island of Java, the return on education is around seventeen percent, higher than in other countries (Wolla & Sullivan, 2017).

$$INEQ_{it} = \alpha + \beta_1.IGI_{it} + \beta_2.IGI*postCovid + \beta_3.Econ_{it} + \beta_4.Educ_{it} + \beta_5.Health_{it} + \beta_6.VF_{it} + \beta_7.DFD_{it} + \beta_8.APS_{it} + \varepsilon \quad \text{..... (2)}$$

$$UNEMP_{it} = \alpha + \beta_1.IGI_{it} + \beta_2.IGI*postCovid + \beta_3.Econ_{it} + \beta_4.Educ_{it} + \beta_5.Health_{it} + \beta_6.VF_{it} + \beta_7.DFD_{it} + \beta_8.APS_{it} + \varepsilon \quad \text{..... (3)}$$

Information:

Pov_{it}	:	The poverty level is measured by the percentage of poor people in each district-city (percentage)
$INEQ_{it}$	:	The level of inequality is measured by the Gini Ratio for each district-city (Gini index)
IGI_{it}	:	Inclusive economic growth index published by BAPPENAS (Index)
PostCovid	:	The dummy variable uses "1" for the period after 2020 and “0” for the period before 2020 (binomial)
IGI*postCovid	:	Interaction between the inclusive economic development index and dummy variables after COVID-19.

$Econ_{it}$	:	Economic expenditure is measured by realized economic expenditure divided by total admitted expenditure per district-city (ratio).
$Educ_{it}$	:	Education expenditure is measured by the realization of education expenditure divided by the total realization of expenditure per district city (ratio).
Health	:	Health spending is measured by realized health spending divided by total realized spending per district-city (ratio).
VF_{it}	:	Village Funds, measured by the natural logarithm of village funds (nominal)
DFI_{it}	:	The degree of Fiscal Independence is measured by the ratio between original regional income divided by total regional expenditure (ratio)
APS_{it}	:	School Participation Rate, measured by APS data from Statistics Agency of East Java (jatim.bps.go.id) (percentage)
α	:	Constanta
β_1- β_8	:	Regression coefficient

As explained in the previous section, in the middle of the 2015-2021 period there was an outbreak of COVID-19 which had a crucial impact on unemployment, poverty, and inequality. To separate the influence of COVID-19, this study creates a dummy variable COVID-19, where 2015-2019 is treated as pre-COVID (coded "0") and 2020-2021 is the COVID period (coded "1"). Furthermore, the interaction between post-COVID and the inclusive economic growth index becomes an independent variable representing post-COVID-19 IGI. In the equations of Model 1 and Model 2, the regression coefficients of β_1 and β_2 are expected to be significantly negative (t-table < -1.96, or p-value <0.05).

Result and Discussion

Descriptive Statistic

We first discuss the description of the data processed and the basis for conclusion. The data description is helpful in the initial analysis by presenting the average value and data distribution by comparing the average, minimum, and maximum values (Sugiyono, 2013). Table 1 shows the descriptive analysis. For poverty, the highest figure was 0.2569 or 25.69 percent, which occurred in Sampang Regency in 2015. Until the end of 2021, the poverty rate in Sampang Regency had decreased but remained high at 23.76 percent. The lowest poverty (3.81 percent) was in Batu City in 2019 and increased to 4.09 at the end of 2021. The average district poverty rate in East Java Province during the 2015-2021 period was 12.94 percent, while the average poverty rate in the city reached 6.05 percent. From these two average poverty figures, it can be criticized that the welfare inequality between cities and districts in East Java is still vast. The poverty disparity between districts/cities on Madura Island and other neighborhoods and towns in East Java is also quite significant. Poverty on Madura Island is around 19.87 percent, while in different districts and cities in East Java Province, it was approximately 10.30 percent.

Table 1 The Descriptive Statistics

Variables	Mean	Standard Deviation	Minimum	Maximum
Poverty (Pov) (%)	0.1131	0.0465	0.0381	0.2569
Inequality (INEQ) (index)	0.1895	0.1663	0	0.421
Unemployment (UNEMP) (%)	3.8036	2.2710	0	10.97
Inclusive Growth Index (IGI) (index)	5.6283	0.4469	4.59	6.95
Economy Expenditures (Econ) (ratio)	176143.8	165060.8	0	1316598
Education Expenditures (Educ) (ratio)	765339.9	301012.8	0	2189842
Health Expenditures (Health) (ratio)	469377.5	360728.4	0	2368749
Village Fund (VF) (log)	14.6480	8.1812	0	19.9003
Degree of Fiscal Independency (DFI) (ratio)	0.1805	0.0963	0.0738	0.6524
Average School Participation (ASP) (%)	63.4281	27.6898	0	97.11
Observation (n x year) (unit)	266			

The Gini ratio describes the inequality in East Java, where the maximum figure of 0.421 occurred in Nganjuk Regency in 2019. The average disparity in districts/cities in East Java reaches 33.31 percent. The intermediate district Gini ratio reached 32.71 percent, while the average Gini ratio in urban areas reaches 35.08 percent. Income inequality in urban areas is higher than inequality in districts. In addition, the highest Inclusive Economic Growth Index (IGI) was achieved by Kediri City (6.95) in 2021, followed by Madiun City (6.87) and Blitar City (6.68). The lowest IGI belongs to a group of districts on Madura Island, namely Sampang District (4.63), Sumenep (4.87), Bangkalan (4.59) and Pamekasan (4.81).

The IGI trend in East Java experienced impressive development until the end of 2019. Figure 3 shows a trend with a positive slope in the observation period, namely 2015-2019. In 2015, IGI was at 5.274 points, continuing to rise until 2019 at 5.6024. However, the IGI trend decreased at the end of 2020 to 5.4690, then rose again in 2021 to 5.5962. The increase in IGI in 2021 indicates optimism for improving the economy and welfare in East Java after the COVID-19 pandemic. The economic recovery in East Java is expected to reduce the number of poor people and income inequality among the levels of the society.

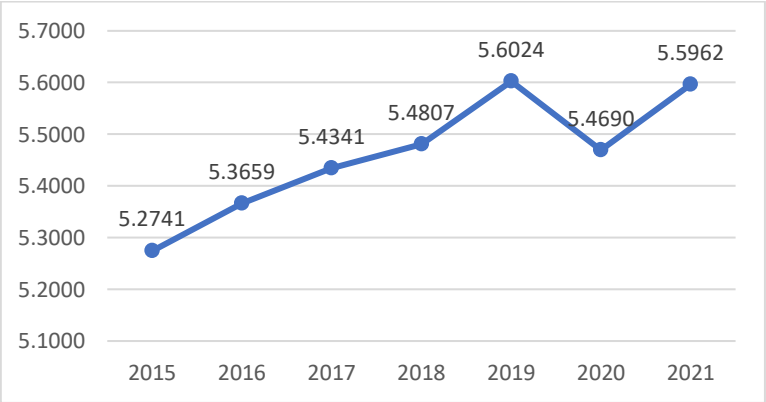


Figure 3 IGI Trends in East Java

Regression Results

The research data processing uses panel data regression, whereas initial analysis used Ordinary Least Squares (OLS) regression. The initial analysis is the basis for determining the validity of the three models using the classical assumption test. Table 2 discloses the classical assumption test results.

Table 2 Classical Assumptions Analysis

Analysis	Tool	Indicator	Result	Conclusion
Normality	Skewness/Kurtosis	Prob>Chi2 > 0,05	0.0059	Does not meet the normality
Multicollinearity	Variance Inflation Factor (VIF)	VIF < 5 or 10	1,96	Free from multicollinearity
Homoscedasticity	Breusch-Pagan test	Prob Chi2 >0.05	0.0007	Does not meet homoscedasticity
Autocorrelation	Degree of correlation	>0.80	<0.80	Free from correlation

Based on Table 2, the model experiences problems in fulfilling the principles of normality and heteroscedasticity. For multicollinearity and correlation, the test results show that the three models fulfill both. The model is assumed to be free from symptoms of multicollinearity with a Variance Inflation Factor (VIF) indicator of 1.96, smaller than the required limit of 5.00. Meanwhile, the degree of correlation between independent variables is below 0.80.

As in panel data analysis, the next step is to estimate model parameters using the Pooled Ordinary Least Squares (PLS), Fixed Effects Model (FEM), and Random Effect Model (REM) techniques. Then, from the three models, which model is best used for parameter estimation? Based on the Chow Test, Prob>F produces a score of 0.000, indicating the fixed effect model was selected. Furthermore, analysis of FEM and REM with the Haussman Test produces Prob>Chi2 0.000. Thus, the selected model estimation is FEM. However, due to the normality assumption not being fulfilled and the model experiencing heteroscedasticity problems, the analysis used the Generalized Estimating Equation (GEE) technique. The advantage of the GEE method is that models a linear function between the dependent variable and one or more independent/explanatory variables to estimate model parameters with data that is not normally distributed. GEE is a multivariate generalization of quasi-likelihood for separate responses (Xing et al., 2020).

Table 3 shows regression results for models 1, 2, and 3, where inclusive growth has a dual effect: reducing poverty and the other side, increasing inequality and unemployment in East Java. Likewise, when this variable interacts with the post-Covid-19 dummy, it shows the same direction, although the influence on post-Covid poverty decreases significantly. In addition, the post-Covid inclusive economic index increased the number of unemployed. These findings support previous evidence, which documented that economic development at the regional level needed to be more inclusive (Dartanto, 2015; Wibowo & Oktivalerina, 2022). Using the concept of elasticity, Table 3 (in Appendix 1) supports the regression results in Table 2. In the 2015-2019 period, the elasticity of

poverty to growth is greater than the elasticity of inequality and unemployment to growth. However, poverty elasticity decreased in the 2020-2021 period.

Table 3 Regression Results-Poverty, Inequality, and Unemployment

	Poverty		Inequality		Unemployment	
Variables	**Coefficient t-stat**	**P>|z|**	**Coefficient t-stat**	**P>|z|**	**Coefficient t-stat**	**P>|z|**
Inclusive Growth Index (IGI)	-0.0481 -7.0***	0.000	0.1035 3.40***	0.001	0.2021 0.53	0.599
IGI*Post Covid	-0.0015 -1.70*	0.089	0.0283 6.68***	0.000	0.4058 7.60***	0.000
Economic Expenditures (Econ)	-0.0117 -0.180	0.854	0.1716 0.57	0.572	1.7625 0.46	0.645
Educational Expenditures (Educ)	-0.0990 -3.80***	0.000	-0.1519 -1.23	0.221	6.4685 4.14***	0.000
Health Expenditures (Health)	0.1111 2.74***	0.006	0.6376 3.31***	0.001	4.8088 1.98**	0.047
Village Fund (VF)	0.0693 6.25***	0.000	0.1693 3.21***	0.001	-0.8554 -1.29	-0.198
Degree of Fiscal Independency (DFD)	-0.0665 -3.02***	0.003	-0.1220 -1.17	0.243	7.4530 5.66***	0.000
Average of School Participation (ASP)	-0.0001 -1.72*	0.086	0.0005 1.08	0.278	0.0055 1.03	0.302
Constant	0.3979 10.31	0.000	-0.5866 1.08	0.001	-2.1540 -0.95	3.43
Wald chi2	495.57		164.97		240.47	
Prob > chi2	0.0000		0.0000		0.000	

Note: ***significant level at 0.01; ** significance level at 0.05; *significance level at 0.10

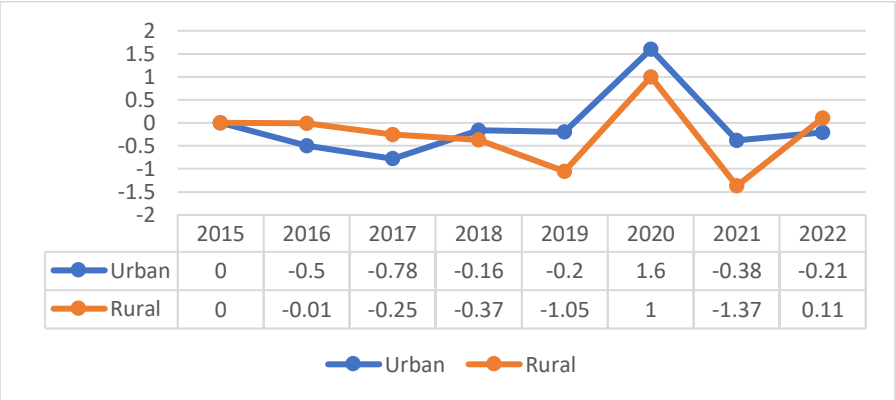
Another finding related to regional government fiscal intervention is that education spending has proven to be a key determinant in getting people out of poverty. On the other hand, in the case of East Java, the allocation of government spending on education cannot reduce the range of inequality and even increase post-Covid-19 unemployment. Economic expenditure does not affect poverty or inequality. On the contrary, spending on health increases the poor population while increasing inequality and significantly reducing poverty in East Java. For control variables, school enrollment rates and the degree of fiscal independence significantly impact poverty reduction. However, these two variables do not correlate significantly with inequality, while the degree of fiscal autonomy increases the number of unemployed.

Analysis of the impact of village funds on the three response variables reveals a positive correlation with poverty and inequality. This finding is the antithesis of the government's claim that village funds reduce poverty. The level of fiscal independence and quality of education significantly reduces poverty, but it has no impact on inequality. Thus, the study provides evidence regarding the determinants of poverty in East Java but needs to find factors that can reduce inequality.

Discussion

The findings of this study strengthen the normative conception that inclusive economic growth is the primary key to poverty alleviation (Lee & Sissons, 2016; Nansadiqa et al., 2019). Even after the COVID-19 pandemic, inclusive growth has become the mainstay for poverty problems, especially in the East Java region. This finding is supported by a visualization of the pattern of poverty reduction in East Java in the 2015-2022 period (Figure 4) and the pattern of inclusive economic growth (Figure 3); the growth index trend continues to rise, and the poverty trend continues to fall until the end of 2019. The rate of poverty reduction in the urban area is more extensive than in the rural area. This fact strengthens the alleged imbalance in economic growth in East Java, which relies more on the processing industry, services, and extensive trade. The contribution of these three sectors dominates the GRDP value of East Java. On the other hand, many poor people live in rural areas and rely on the agricultural industry.

From Figure 4, it can be understood that the pattern of poverty reduction in rural areas decreased consistently in the 2015-2019 range, although the rate of poverty reduction in villages was lower than in cities. As a result of COVID-19, there had been a spike in poverty in both cities and villages, namely, 1.6 percent and 1.00 percent, respectively. However, upon closer inspection, we see a spike in poverty in the city, which occurred in 2018-2020. Moreover, in 2021, the reduction in poverty in cities will be smaller than in villages. On the contrary, from 2021 to 2022, the poverty level in villages would increase. The poverty level in villages, which is still around double digits, has a temporary character (transient poverty). Reducing poverty rates can be accomplished by stabilizing the macroeconomy after a crisis/pandemic. People who fell into poverty during the pandemic can be lifted out of poverty (Dartanto, 2015).



	2015	2016	2017	2018	2019	2020	2021	2022
Urban	0	-0.5	-0.78	-0.16	-0.2	1.6	-0.38	-0.21
Rural	0	-0.01	-0.25	-0.37	-1.05	1	-1.37	0.11

Figure 4 Comparison of Poverty Reduction in East Java Cities and Villages (2015-2022)

These positive findings on poverty contrast the impact of inclusive economic development on inequality and unemployment. The problem of inequality in East Java is critical, both before and after the COVID-19 period. Due to unemployment, the COVID-19 pandemic has caused the number of unemployed people in East Java to soar. The labor market most affected by the pandemic are young workers, women, informal workers, especially those

who are self-employed, have low education and skills, and also semi-permanent contract workers, workers with low wages, and jobs with low productivity levels (Hassink et al., 2020; Schotte et al., 2023). In the model analyzed, none of the predictor variables was proven to be a determinant for reducing inequality and unemployment.

This study undermines the strategic role of government spending in building human capital. Reducing poverty and inequality requires a combination of well-distributed economic growth and investment in human resources (Amakom, 2013). Skills and knowledge increase the chances of earning a better income. As is widely known, education policy in Indonesia is primarily controlled by the central government, especially primary education (nine years) and higher education. At the local government level, local education spending finances preschool education and secondary education (upper secondary). In relation to the findings, local education budget policies benefit low-income families, especially in urban areas. This analysis is supported by the rate of poverty in urban areas, which is greater than the rate of decline in rural areas in East Java (see Figure 4). By strengthening secondary education, education spending plays a role in facilitating poor groups to obtain income that can escape from the poverty trap.

Another anomaly of education spending is its increasing effect on unemployment. This evidence strengthens the alleged mismatch between support for increasing workforce skills funded by local government spending and industrial qualification needs (Sukanti & Sulistyaningrum, 2022). By analyzing the regional economic structure of East Java, the most significant contribution was made by four regions, namely the cities of Surabaya, Sidoarjo, Gresik, and Pasuruan, which are dominated by capital-intensive sectors (processing), services, and extensive trade. These sectors have low sensitivity in absorbing labor (Dartanto, 2015). This fact is reinforced by these four regions' high open unemployment rates.

Besides that COVID-19 has hurt the labor market on both the demand and supply sides. When restrictions on social interactions foster e-commerce, thus e-commerce tends to promote individual entrepreneurship (self-employment), and there is little opportunity for mass employment (Ridhwan et al., 2023). Thus, findings on education spending and school enrollment rates improve the understanding that government investment in human capital development can successfully absorb labor if policymakers understand the economic structure, and ultimately lead to the design of skills programs that suit industry needs (Amakom, 2013).

Another examination related to government spending is health spending. From the data analysis, health spending is proven to increase poverty and unemployment. The finding contradicts the concept that health services can help people, especially people experiencing poverty, achieve prosperity (Peters et al., 2008). However, of course, policymakers must be able to determine the target beneficiaries accurately. The success of a health service program is also determined by the accuracy of determining targets, including mastery of information about public health and how it is funded (Amakom, 2013).

In the context of regional government authority in the health sector, spending in the health sector at the district/city government level is focused on providing basic health services, such as community health center level services, which focus on maternal and child health to alleviate malnutrition and stunting. Thus, the role of district-level health spending has yet to strengthen the health of people with low incomes. In other words, regional government expenditure policies for the health sector still need to be redistributive or pro-poor. The tendency of poor households in developing countries is that when subsidies for social service expenditures such as health and education are provided, the household income set aside to finance these expenditures is saved or to fund other spending (Bourguignon et al., 2003).

Another crucial finding from the study is that the Village Fund, as a government fiscal intervention at the village level, still needs to prove its success in reducing poverty and inequality. The Village Fund does not affect labor absorption in the East Java regional area. Referring to Figure 4, the poverty reduction rate in rural areas is relatively small compared to the rate of poverty in urban areas. The difference in the rate of decline can be explained by analyzing the structure of poverty in villages with development priorities funded using village funds. The poor population in villages depends more on the agricultural sector, and most are small farmers, daily laborers, and land renters. The income level of farming workers is relatively small compared to land owners (Meinzen-Dick et al., 2017). Meanwhile, the agricultural sector has not become a top priority in village development and empowerment. The central government's primary attention to village governments is still focused on infrastructure development in rural areas. Moreover, village governments in East Java are more oriented towards strengthening the service sector (financial services, village tourism, culinary, rental, waste management) and primary processing/industry. The cash-intensive labor program (in Indonesia, well-known as Padat Karya Tunai/PKT), launched to help low-income families earn additional income, has yet to succeed in alleviating poverty in rural areas. As long as the government does not pay attention to the sectors people experiencing poverty rely on, it will be difficult for low-income families to escape the poverty trap.

Other control variables, which are fiscal independence, and school enrollment rates, show a strategic role in reducing poverty in East Java but have no impact on inequality and unemployment. It confirms the significant role of inclusive growth and human capital development in reducing poverty in East Java. For inequality and unemployment, this study has not found determinant factors that overcome inequality and unemployment. These findings reinforce inequality and chronic unemployment in the East Java region.

Based on the findings, the study underlines the strategic role of inclusive growth in reducing the poor population. Therefore, the government should focus on encouraging the realization of inclusive growth that strengthens policies at the micro level, such as improving access to education, increasing financial inclusion, and access to health services. Additionally, increasing the school enrollment rate (APS) can directly increase the stock of skilled human resources. Quality human resources are an essential requirement for achieving sustainable economic growth in the long term.

Conclusion

This study analyzes whether inclusive economic growth reduces poverty, inequality, and unemployment, especially after COVID-19. Taking East Java as a locus, which has an exciting track record in triple inequalities, this study found that economic growth in East Java only reduced poverty rates before and after COVID-19. Our findings also document non-inclusive growth in East Java, where inequality and unemployment have widened after the pandemic. Even with economic growth returning to stability, it has not been able to intervene in these two fundamental social problems. Apart from growth, government support in developing human capital through allocating education spending plays a strategic role in alleviating poverty. On the other hand, education and economic spending, health, and village funds have yet to be proven to play a role in overcoming inequality and unemployment in East Java.

The implications of these findings are a portrait of failure to realize the urgency of inclusive growth by creating equal access to opportunities; in the case of East Java, equal opportunities do not exist due to market, institutional, and government policy failures. The research has several limitations, including limitations in separating poverty data between cities and villages in each district/city so that changes in poverty cannot be known due to government intervention. However, we make assumptions based on the trend of decreasing poverty in cities, which is reduced more than poverty in villages. Recommendations for further research are to explore the economic structure and labor market in East Java in a discussion analysis.

Author Contributions

Conceptualisation, Methodology, Analysis, Original draft preparation, Review and editing, Visualization; DP

Acknowledgement

The authors express gratitude to Politeknik Keuangan Negara STAN for their administrative support. Additionally, the authors acknowledge the invaluable contributions of two anonymous reviewers, whose insightful suggestions substantially improved the quality of the manuscript.

Conflicts of interest

The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.

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