



Does Fiscal Decentralization Affect Poverty? An Empirical Study

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Article Information Abstract

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The Poverty percentage in Central Java ranked two throughout Java Island after DI Yogyakarta Province. It surely causes gaps and inequality between regions in Central Java Province. This study attempted to analyze the effects of fiscal decentralization, fiscal balance fund, and economic growth on the poverty in 35 regencies/ cities in Central Java Province within 2016-2020. By using a quantitative approach, this study used a panel analysis with a Fixed Effect Model (FEM) method. Based on the results of panel data regression analysis results, fiscal decentralization and fiscal balance fund had no relationship with the poverty in Central Java. On the other hand, economic growth had positive and significant effects. High economic growth will reduce poverty rate when the economic activities carried out are padat karya which aims at absorbing workforce. High workforce absorption will reduce the poverty rate.

INTRODUCTION

Poverty is a country developmental problem. According to Ragnar Nusrke (Prasetyoningrum, 2018) if poverty is not alleviated, a country will be trapped in a vicious circle of poverty. This circle describes poverty can happen because of low savings, low investment, lack of capital, low productivity, low income which affects low savings, and others (Prasetyoningrum, 2018). Another possibility of poverty is people inability to organize their lives appropriately. Here, development is actually made to achieve welfare and done by developing community economy as an effort to counter social issues such as poverty and unemployment.

The percentage of poor people in Indonesia in 2017 was the lowest, namely 7.49 percent. However, it kept increasing in the next year until 9.99 in 2020 (Statistics Indonesia, 2022). Central Java was a province with a fairly high poor people percentage or rank 2 after DI Yogyakarta. In 2017 to 2019, the percentage of poor in Central Java happened to decrease from 12.62% in 2017 to 10.80% in 2019, but increased critically to 11.41% in 2020 (Statistics Indonesia, 2022). The first year of COVID-19 pandemic greatly affected Central Java employment and unemployment by having an increase in the poverty percentage as much as 1.72 percent in 2020 with which previously was 1.5 percent in 2019 (Statistics Indonesia, 2022).

A possible effort to reduce poverty is by optimizing fiscal decentralization (Daforsa & Handra, 2019). The financial statistical data of Central Java regency/ city government indicate that the realization of fiscal balance fund receipt from 2016 to 2020 increased, although it inclined in 2019. Thoroughly, the receipts from 2016 to 2018 were 2.2 trillion rupiahs, 8.017 trillion rupiahs, 11.067 rupiah respectively, but in 2019 there was a downturn to 10.9 trillion in 2019 followed by an increase in 2020 by 11.7 trillion (Statistics Indonesia, 2022).

Similar situation existed in Central Java economy which showed a positive trend from 2016 to 2019, but significant downturn in 2020 due to COVID-19 pandemic. In details, the

percentages in 2016 until 2019 were 5.25%, 5.26%, 5.3%, and 5.36% respectively, but in 2020 the amount decreased to -2.65% (Statistics Indonesia, 2022).

In its implementation, the fiscal decentralization in Central Java still met some problems proved by the increase in fiscal balance fund allocation every year. However, this increase was not in line with the poverty alleviation rate. By having regional autonomy supported by transfer fund from the government, economic growth and poverty reduction are expected to happen stably in each region. Fiscal decentralization holds an important role in regional autonomy because it is a medium provided by local governments to foster community welfare independently based on regional potential. However, there found some constraints regarding the management of regional net revenue, corruption, central government monitoring, and lack of community participation (Christia, 2019).

The fiscal decentralization initially designed to reduce poverty needs to be investigated further because the previous studies regarding this issue have resulted different findings. Some previous studies state fiscal balance fund has significant impact of poverty (Fitryanti & Handayani, 2020; Manek & Badrudin, 2017; Ningsih & Noviaty, 2019; Vitara Agatha & Uliansyah, 2021). A study by Maulana & Masbar (2018) shows that fiscal decentralization has a positive and significant effect on poverty. Different results were found by (Syamsul, 2020), namely fiscal decentralization has a negative and insignificant effect on the poverty level of the people in Indonesia.

Other studies explain fiscal balance fund contributes significant impact on poverty (Gumelar & Khairina, 2021; Manek & Badrudin, 2017; Paulus, Koleangan, & Engka, 2019). Oppositely, some other studies conclude fiscal balance fund has nothing to do with poverty (Vitara Agatha & Uliansyah, 2021). According to Agyemang-Duah et al. (2018), the relationship between fiscal decentralization and poverty reduction is still a matter of debate because study findings are more specific based on time and

country. Furthermore, Szarowska (2018) argues that fiscal decentralization which has a positive impact on a country within a certain period cannot be used as a benchmark that intergovernmental public financial transfers will also have a positive impact at the same time in other regions. Moreover, Martinez-Vazquez & McNab (2001) mention that there is no definite answer (uncertainty) to questions related to decentralization, so it can be concluded that further research is needed.

Previous studies have proved that economic growth and poverty have a significant relationship (Ardian, Yulmardi, & Bhakti, 2021; Rusdarti & Sebayang, 2013; Safuridar, 2017; Zahroh, Muniarty, & Julaiha, 2020). Unfortunately, other studies indicate that economic growth has no significant effect on poverty (Nurhidayah, Hendikawati, & Articles, 2018). Due to these debatable findings, the present study intended to fill the gap regarding the effects of fiscal decentralization, fiscal balance fund, and economic growth on poverty.

RESEARCH METHODS

This study used a quantitative approach by analyzing secondary data in form of panel data sourced from the combination of time series and cross-sectional data of 35 regencies/ cities in Central Java taken from Statistics Indonesia and the Directorate General of Fiscal Balance, Ministry of Finance of the Republic of Indonesia. Moreover, the population in this study was the realization report of regencies / cities in Central Java, economic growth, and poverty rate within the period of 2016-2020.

In analyzing the data, the researchers employed a panel data regression model (panel pooled data) which is the combination of time series and cross section. It aims at modeling independent variables and dependent variables in a certain time period (Gujarati, Porter, & Mardanugraha, 2013). The analytical model specifications in determining regression function model were based on the function model of Fiscal Decentralization Degree variable, Special Allocation Funds, General Allocation Funds,

Revenue Sharing Funds, Economic Growth. It was intended to determine whether those variables have a significant effect on Poverty. In details, the model equation was as follows:

$$Y_{it} = \beta_0 + \beta_1 DDF_{it} + \beta_2 DBH_{it} + \beta_3 DAU_{it} + \beta_4 DAK_{it} + \beta_5 GROWTH_{it} + \mu_{it} \dots (1)$$

Where, Y represents Poverty; DDF illustrates Degree of Fiscal Decentralization; DBH is Profit Sharing Fund; DAU is General Allocation Fund; DAK is Special Allocation Fund; and GROWTH is Economic Growth. β_0 is a constant (the amount of the dependent variable if the independent variable is considered constant), 1... 5 is the value of the variable coefficient, μ is the residual value (confounding factor) outside the model, i is the cross section, and t is the time series.

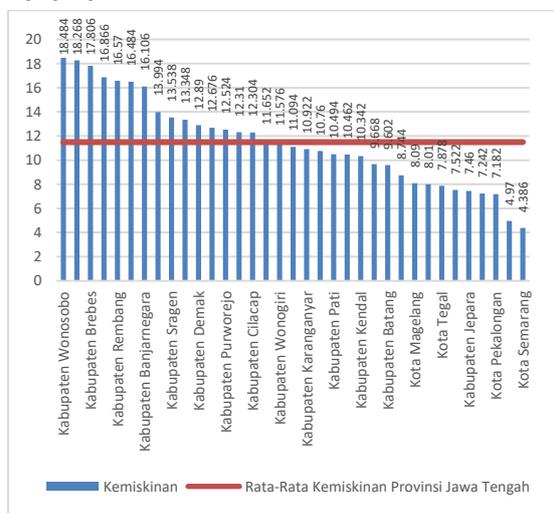
Model testing was performed to determine the best model to estimate the panel data regression. It tested Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM) using Chow test, Hausman test, and LM test. In terms of a classical assumption test in linear regression, OLS estimation method was included, covering normality, autocorrelation, multicollinearity, and heteroscedasticity test. Statistically, this analysis can be measured by a series of tests, consisting of a coefficient of determination (R^2) and a simultaneous significance test (F statistic test) (Kuncoro, 2011).

RESULTS AND DISCUSSION

During 2016-2020, there were 17 regencies/ cities in Central Java Province having worrisome poverty rate, namely Wonosobo Regency (18,484), Kebumen Regency (18,268), Brebes Regency (17,806), Purbalingga Regency (16,866), Rembang Regency (16,57), Pemalang Regency (16,484), Banjarnegara Regency (16,106), Banyumas Regency (13,994), Sragen Regency (13,538), Klaten Regency (13,348), Demak Regency (12,89), Grobogan Regency (12,676), Purworejo Regency (12,524), Blora Regency (12,31), Cilacap Regency (12,304),

Magelang Regency (11,652), and Wonogiri Regency (11,576).

Figure 1. Poverty in Central Java Province in 2016-2021



Source: Central Java Statistics Indonesia, 2022

Once the mapping has been done, the next step was to perform model selection test to determine the best model among CEM, FEM, and REM through Chow, Hausman, and LM tests. In Chow test, the F-statistical value (0.0000) was smaller than the p-value of 5 percent, so the best model in the Chow test was the FEM model. In the Hausman test, the F-statistic value was 0.0000 so that H0 was rejected and H1 was accepted. Therefore, the best model for Hausman test was the FEM model. Two tests that have been conducted have chosen FEM as the best model, so the most suitable regression model in this study was FEM (Fixed Effect Model).

Table 1. The Results of Selection of Regression Model

Test	F-Stat Value	Hypothesis and Result
Chow Test	0.0161	H0: CEM turned out to be the best model (p-value > 5%) H1: FEM turned out to be the best model (p-value < 5%) Result: H0 was rejected, FEM was chosen.

Test	F-Stat Value	Hypothesis and Result
Hausman Test	0.0000	H0: REM turned out to be the best model (p-value > 5%) H1: FEM turned out to be the best model (p-value < 5%) Result: H0 was rejected, FEM was chosen
Conclusion	Two tests chose FEM, so the best model was FEM	

Source: Processed Data, 2022

A variable is said to be significant in the model if it has a t value less than 5 percent alpha. The model in this study explained the effects of DDF, DBH, DAU, and DAK, growth of Central Java Province on poverty in which poverty was the dependent variable, while some others were the independent ones.

Table 2. The Results of Data Estimation Using Fixed Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11,811	4,981	2,371	0,019
DDF	0,052	0,061	0,848	0,398
DBH	0,005	0,004	1,270	0,206
DAU	0,378	0,558	0,678	0,499
DAK	-0,778	0,524	-1,483	0,141
GROWTH	0,064	0,030	2,117	0,036

Source: Processed Data, 2022

Based on the results of the regression, there obtained the following equation:

$$\text{Poverty} = 11.811 + 0.052\text{DDF} + 0.004\text{DBH} + 0.378\text{DAU} - 0.777\text{DAK} + 0.064\text{PDRB} + \mu\text{it}$$

The R squared test was performed to know the extent to which the independent variables affected the dependent variable. Since the model R-squared value was 0.929987, DDF, DBH, DAU, DAK, and growth had an effect of 92.9 percent on the poverty rate, while the remaining 8.1 percent was explained by other variables outside this model.

Table 3. The Results of R2 Test

R -Square Test	
R-squared	0.929987
Adjusted R-squared	0.909762

Source: Processed Data, 2022

A variable is said to be significant in the model if it has a probability value of t statistic less than 5 percent alpha. Due to the greater value obtained, the model in this study was considered able to explain the effect of DDF, DBH, DAU, DAK and growth on poverty in Central Java. Table 2 indicated that DDF, DBH, DAU and DAK had no effect on poverty in Central Java Province. This was proved by the values of t-statistic which was greater than 5 percent alpha, namely 0.3982; 0.2062; 0.4989; and 0.1405. Meanwhile, growth had a significant effect with a probability value of 0.0361 or less than 5 percent alpha. Here, it is understandable that good economic growth will lead to poverty reduction in Central Java Province.

In terms of panel data regression analysis, fiscal decentralization had no effect on the poverty in Central Java Province indicated by the t-value of 0.3982 and a coefficient value of 0.052089. It turned out so because high fiscal capacity is surely expected to reduce the poverty in a particular region. However, the fact was the opposite. The findings of this study are in line with a previous study that the fiscal decentralization degree will not have significant impact on poverty (Maryanti and Endrawati, 2010). Another study explains high fiscal decentralization means high income by the government to increase employment and reduce poverty (Jolianis, 2014; Dewi et al., 2018).

The fiscal balance fund had no effect on the poverty in Central Java indicated by t-values of 0.2062; 0.4989; and 0.1405 with a coefficient value of 0.004879; 0.378306; and -0.777638 . This happened because of the lack of effectiveness, less optimum, and inappropriate target of budget allocations in balancing funds (Anwar, Palar, & Sumual, 2016). Actually, the allocation of this fund was given to leading sectors to reduce poverty. Unfortunately, the present DAU allocation is more focused on regional routine expenditures, such as personnel expenditures, education, health and others. Meanwhile, DAK was more intended for physical expenditures that cannot reduce poverty quickly. Especially with the COVID-19

pandemic in 2020, there was a policy of changing the budget structure, where the priority of its use was more focused on handling the pandemic and its impact. The findings of this study are in accordance with a study by Vitara Agatha and Uliansyah (2021) which concludes that the balance fund has nothing to do with poverty. However, other studies describe different findings (Anwar, 2016, Jolianis, 2014). Supposedly, the increase in DAU, DAK, and DBH can support the government to reduce poverty because balance fund actually has a significant role in regional development, especially those with high dependence of this fund (Ferdiansyah, Risma Deviyanti, & Pattisahusiwa, 2018). In addition, another study argues balance fund can give positive effects on economy because high availability of funds is logically able to encourage the economy (Paat et al., 2019).

Based on the panel data regression analysis, growth had a significant effect on the poverty in Central Java Province with the t-value of 0.0361 and the coefficient value of 0.064023. This positive coefficient value indicated a negative effect on the poverty because economic growth boosted poverty rate due to income gap, limited access, and poor qualities growth. However, poverty rate will only experience a temporary increase because if the economic growth has reached its peak, the poverty will get reduced (Ravallion, 2004). Furthermore, the findings of this study contradict to a classical theory by economists that economic growth will reduce poverty and income gap, although it is in the early stage of growth. Here, the regression analysis results have proved that an increase in economic growth was not followed by a decrease in poverty rate.

Similarly, the results of this study are relevant to the initial phase of Kuznets' hypothesis that economic growth can reduce inequality and poverty in a certain period of time (turning point). The Kuznets' hypothesis concerns about analyzing problems regarding economic endogenous variables, such as technology, population, and institutions (Tietenberg and Lewis, 2015), not to mention to

political stability and political democratization scale increase (the democratization which supports policy changes in redistribution and inequality reduction).

The economic growth in Central Java has triggered the increase in poverty. It was due to the income inequality and limited access for the poor. However, in terms of turning point, the poor has started feel the existence of job vacancies, unemployment reduction, and increase in economic activities with which the inequality will reduce, and the absorption of workforce will increase. The Trickle Down Effects theory further explains that economic growth can only be enjoyed by a certain group of people at first, until in time it will trickle down when people spend the results they get. In this way, new economic growth can be felt by the poor, so that they are finally able to reduce poverty.

Other studies show that high economic growth can lead to large job opportunities as long as the economic activities are based on *padat karya* or a program aimed at preparing human resources to work at jobs created by the government (Diwakar, Lemma, Shepherd, & Willem te Velde, 2019) (Diwakar et al., 2019; Tsaurai, 2021). When employment is high, poverty rate is expected to reduce (Xie & Cao, 2021). However, the fact is the higher economic growth, the higher poverty rate is. It is probably because some economic sectors prefer capital-intensive to labor-intensive. Poverty is a complex problem for every single region. To alleviate it, it is necessary to have an adequate budget. Local governments, especially Central Java, need to increase revenue by exploring existing potentials so that they can increase PAD for poverty alleviation.

The results of panel analysis model indicated the cross-section effects on the poverty rate in Central Java. In addition, regions which were largely affected were Wonosobo Regency (19,176117); Kebumen Regency (19.120311); Purbalingga Regency (17.581505); Banjarnegara Regency (17.022677); and Pemalang Regency (17.146235). It happened due to the low level of

education, poor health quality, limited regional investment, and limited job opportunities.

Furthermore, the other five regencies/cities with low effects on poverty were Semarang City (1.973767); Salatiga City (4.573867); Brebes Regency (5.128843); Kudus Regency (6.886086); and Pekalongan City (7.080863). It was because these five regions were experiencing rapid development in terms of economy, so the economic growth in terms of local revenue, workforce, and investment capital expenditures were also increasing.

CONCLUSION

Regarding the findings, it is known that the model has a simultaneous statistical significance, while partially, fiscal decentralization and balance fund have no effect on poverty. Therefore, it is only the economic growth which does so. Then, the regression analysis results indicate the degree of fiscal decentralization has negative impact, but not significant on poverty. Another result is, the balance funds of DAU, DAK, and DBH have no significant effect on poverty, and again, the regression analysis results explain it is only economic growth which significantly affects poverty reduction.

Some suggestions given are the balance fund from the central to regional government is supposed to be more allocated on poverty in terms of demand, namely providing social programs to empower community as an effort for reducing poverty. Besides, budget diversification needs to be made to alleviate poverty so that the alleviation is not only sourced from balance fund. Also, the regional government is supposed to increase its fiscal capacity through the development of regional learning commodity-based economic activities and extensification of local revenue.

The dependence of local governments on transfer funds from the central government needs to be minimized so that regions can independently manage their own finances. Moreover, regions with small income are necessary to optimize local potential to be the source of revenue. It is because poverty

alleviation needs sufficient financial support in order to absorb a large workforce.

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