Education, Health, Fiscal Decentralization & Poverty: Evidence in One of The Areas in Indonesia

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ABSTRACT

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This study analyzes the impact of education and health on poverty by including the role of fiscal decentralization. Education and health have a negative impact on poverty for the region by implementing effective fiscal decentralization from the government. The new contribution of this study concerns the relationship between literature on education, health and separate fiscal decentralization on poverty. To our knowledge, this is the first study to analyze the direct relationship between education, health, fiscal decentralization regarding poverty. In our study, fiscal decentralization was measured using two approaches, namely local government income and expenditure. We use time-series data from 2012 to 2017 in one of the regions in Indonesia, namely Ciamis. For hypothesis testing we use Moderated Regression Analysis (MRA) for estimation of results. The study results show that education has a significant effect on poverty, while health does not have a significant effect on poverty. Other results show that fiscal decentralization represented by government revenues and expenditures can strengthen the effects of education on poverty, while the healthy relationship with poverty does not strengthen. The results of our analysis found a significant positive relationship between expenditure and poverty, this condition indicated that the Ciamis regional government did not focus on poverty alleviation programs in using its budget. The results of this study provide a reference for various local governments to carry out fiscal decentralization effectively through income and expenditure

with a focus on increasing access to education for the community so as not to be ensnared by the problem of poverty.

Keywords: *education, health, fiscal decentralization, poverty.*

INTRODUCTION

The main objective of economic development is not just GDP growth (Venetoklis, 2012; Permana & Arianti, 2012; Fadlillah, Sukiman & Dewi, 2016; Hue & Tram, 2019), but also one of them is how to get people out of poverty (Pentzaropoulos, 2014 ; Santos, 2009; Rao, 2000). The statement means that the success of a country's economy is no longer only measured by increasing GDP, but through the success of a country in overcoming poverty. Poverty can be interpreted as the inability to meet minimum living standards (Ştefănescu & Pop, 2016; Tirado-alcaraz, 2014; Paraschivescu, 2011).

Poverty today is often associated with economic factors, because it is easy to measure and compare (Drucza, 2015; Martinez-Vazquez & McNab, 2003; Palenewen, Walewangko, & Sumual, 2018; Retno, 2011). Though there are still many factors that cause poverty such as education and health (Oum, 2019; Gounder & Xing, 2012; Gustafsson & Li, 2004). Examining various factors that cause poverty is very important to formulate policies to tackle the problem. One of the policies taken by the government is the allocation of government spending for public services (Alonge, Delaney, & Codd, 2017; Sjoraida, Husin, & Mariana, 2018; Tahili, 2018; Akbar, 2018; Fisher, 1997; Fitriana, Yanuardi, Yuanjaya, & Dewi, 2018; Dinh, Xuan, & Pham, 2018). Equitable access to public services in an area is one of the government's efforts in overcoming the problem of poverty (Paraschivescu, 2011; Julius & Bawane, 2011; Nursini & Tawakkal, 2019).

In addition, local government revenues will support the implementation of poverty alleviation programs (Fithri & Kaluge, 2017; Permana & Arianti, 2012; Akbar & Dermawan, 2017). The higher the income, the government will be free to increase the budget for poverty alleviation (Udonwa & Praise, 2018; Sasana & Kusuma, 2018; Mehmood & Sadiq, 2010). The allocation of local government revenue and expenditure is one of the implementations of fiscal decentralization policies (Akbar, Brata, Herlina, Prawiranegara, & Prabowo, 2019; Changwony & Paterson, 2019; Kusumaningrum, 2013), hence the implementation of policies to invest in education and health that is strengthened with fiscal decentralization policies will be able to reduce poverty.

Decentralization, which is defined as the devolution of authority granted by the central government to the regions, must be able to be utilized by local

governments to independently manage existing potential to support development in various fields (Akbar et al., 2019; Sujarwoto, 2017; Sari, Garvera, & Sihabudin , 2018), one of which is the economy to reduce poverty. Local governments must be able to make their own policies in favor of the people in the area, the most important thing is to provide welfare for them (Mettler & Soss, 2004; Wicki, Huber, & Bernauer, 2019; Fachrudin, 2015). One area in Indonesia where poverty rates continue to increase is Ciamis.

We conducted this study in Ciamis, which is one of the districts in Indonesia which is in the area of West Java Province. Based on our data, the number of poor people in Ciamis in 2017 reached up to 219,819 (BPS of West Java Province, 2018) out of 1,328,223 residents (BPS of Ciamis Regency, 2018), or as many as 16.55% of people in the area were entangled with poverty problems. A significant increase in the number of poor people in Ciamis from 2012 reached 99.87% until 2017. We obtained this information from the data of the poor in 2012 which amounted to 296 and increased in 2017 to 219,819 (BPS of West Java Province, 2013 & 2018).

Several studies on the relationship of education, health, and poverty have been carried out (eg, Permana & Arianti, 2012; Sari, 2018; Palenewen, Walewangko, & Sumual, 2018; Widodo, Waridin, & Maria, 2011; Oum, 2019; Gounder & Xing , 2012), overall the results explain that the level of education and the availability of health facilities and infrastructure can affect poverty rates. Meanwhile studies on the relationship between fiscal decentralization and poverty were conducted by several authors (eg, Suci & Asmara, 2014; Sudewi & Wiranthi, 2013; Nurulita, Arifulsyah, & Yefni, 2018; Sanogo, 2019; Martinez-Vazquez & McNab, 2003), overall the results show that effective fiscal decentralization can reduce poverty, because the government is committed to using its budget to increase economic growth that has an impact on poverty reduction.

The new contribution of this study concerns the literature of combining the relationship between education, poverty and separate fiscal decentralization regarding poverty. Merging some of the literature was built through Moderated Regression Analysis to answer our main hypothesis. To our knowledge, this is the first study to document the effect of education and health on poverty which is strengthened by fiscal decentralization. We built a 6-year time-series data from the Ciamis regional government financial report.

This paper continues as follows. In the next section, we describe the development of hypotheses on which our studies are based. The third section identifies data sources, explains each variable and discusses empirical approaches. The fourth section reports the results of our empirical analysis, and the fifth section summarizes the conclusions drawn from this study.

HYPOTHESIS DEVELOPMENT

In this section, we discuss the relationship between education, health, fiscal decentralization, and poverty. Some literature has provided clues as to why implementing effective fiscal decentralization can improve education and health in reducing poverty in an area. This condition began with the adoption of the decentralization policy in Indonesia in 2001, and has given a greater role to the government and regional economic actors in managing their development independently (Sari, Garvera, & Sihabudin, 2018; Akbar, Brata, Herlina, Prawiranegara, & Prabowo, 2019; Sujarwoto, 2017). The policy arises due to demands from the community due to inequality in development in various regions. Therefore, this policy is an opportunity for regions to be able to manage economic development independently, including to optimize their sources of income (Haryanto, 2017; Baskaran, Brender, Blesse, & Reingewertz, 2015; Prakoso, Islami, & Sugiharti, 2019) and allocating public service expenditure so that education and health can be accessed by all people in an effort to reduce poverty (Palenewen et al., 2018; Widodo et al., 2011).

To realize an independent economic development, and effective fiscal decentralization policy is needed (Kurniawan, Militina, & Suharto, 2017; Nurulita et al., 2018; Syamsudin, Cahya, & Dewi, 2015). An effective fiscal decentralization policy can encourage per capita income in the region so that it can reduce the poor (Sudewi & Wiranthi, 2013; Martinez-Vazquez & McNab, 2003; Dao & Edenhofer, 2018; Fadlillah, Sukiman, & Dewi, 2016). The implementation of effective fiscal decentralization will help local governments to provide the needs of the community so that public services will be easily accessed by everyone, including education and health services (Gustafsson & Li, 2004; Fithri & Kaluge, 2017; Permana & Arianti, 2012).

Thus there are at least two sectors that need attention by the government in relation to efforts to overcome the problem of poverty, namely education and health (Widodo et al., 2011; Inglis, McHardy, Sosu, McAteer, & Biggs, 2019; Olopade, Okodua, Oladosun, & Asaleye, 2019). Increasing access to education and health will also increase community productivity, so that they can earn a decent income and get out of poverty (Ogwumike & Ozughalu, 2018; Chamberlain et al., 2016; Tyer-Viola & Cesario, 2010).

Overall, all the statements above explain that the level of education and health can solve the problem of poverty in the regions by implementing effective fiscal decentralization. Thus the hypothesis to be tested is:

Hypothesis: Effective fiscal decentralization can strengthen the effect of education and health levels on poverty.

METHODOLOGY
Research Design
To test the hypothesis, we conducted an analysis using Moderated Regression Analysis (MRA) to find out whether fiscal decentralization was able to strengthen the effect of education and health levels on poverty. This study is based on the assumptions in developing hypotheses, where the implementation of effective fiscal decentralization will be able to increase public access to education and health in reducing the problem of poverty. Conversely, if the implementation of fiscal decentralization does not work effectively, the community will find it difficult to access education and health, so they will be trapped in poverty.

Data
The data we put into the Moderated Regression Analysis (MRA) for hypothesis testing were obtained from important documents, such as the Ciamis Budget Realization Report for the 2012-2017 period for fiscal decentralization data. As for the education, health and poverty data obtained from the BPS of West Java Province in 2013-2018. The use of data in our study has also been used by previous studies, such as fiscal decentralization which is represented by government revenue and expenditure (for example, it has been used by Changwony & Paterson, 2019; Qiao, Ding, & Liu, 2019; Kuai, Yang , Tao, Zhang, & Khan, 2019; Ding, McQuoid, & Karayalcin, 2019). We assume this data, if income is high then the regional government will be free to use the budget to provide maximum services to the community, one of which is spending to strengthen access to education and health for the community as an effort to solve the problem of poverty.

Meanwhile, education, health and poverty data from the Central Statistics Agency were conducted in several studies (eg, Sari, 2018; Permana & Arianti, 2012; Widodo et al., 2011). In this study, data on education is represented by the number of residents with an education level above high school, assuming that if the number of highly educated populations continues to increase each year, more and more productive people will have jobs in strategic positions with high salaries. Data on health is represented by the number of means of distribution of drugs and medical devices, assuming that if the number of drugs and medical devices distributed each year increases, the community will easily get access to health easily.

All of the above assumptions indicate that if the implementation of fiscal decentralization runs effectively, government revenues and expenditures will encourage the level of public education and the amount of health access to expand so that it can solve the problem of poverty in Ciamis. Conversely, if

the implementation of fiscal decentralization does not work effectively, the community will find it difficult to get access to education and health so that poverty will continue to increase. Data sources and variable descriptions can be seen in the following table 1.

Table 1. Data Sources and Description of the Variables

Variable	Definition	Year	Source
education measures EDUCATION	The number of people with an education level above high school every year	2013-2018	Jawa Barat in Figures (BPS of West Java Province)
health measure HEALTH	Total distribution of medicines and medical devices each year	2013-2018	Jawa Barat in Figures (BPS of West Java Province)
fiscal decentralization measures REVENUE EXPENDITURE	Realization of government revenue every year Realization of government spending every year	2012-2017 2012-2017	Ciamis Budget Realization Report Ciamis Budget Realization Report
poverty measures POVERTY	Number of poor people every year	2013-2018	Jawa Barat in Figures (BPS of West Java Province)

Empirical Approach

In this study, we use Moderate Regression Analysis (MRA) to examine the effects of fiscal decentralization in strengthening the effect of education and health on poverty. To enable comparisons with previous studies analyzing the effects of separate fiscal, education and health decentralization on poverty, we run the following 7 models.

$$POVERTY = a + bEDUCATION + e \tag{1}$$
$$POVERTY = a + bHEALTH + e \tag{2}$$
$$POVERTY = a + b1EDUCATION + b2HEALTH + e \tag{3}$$

The first step in hypothesis testing is done with a simple regression test, to determine the partial relationship between education, health, and poverty using models 1 and 2. Second, we explain the simultaneous relationship between education, health, and poverty using multiple regression tests through model 3. If every year the number of poor people increases, it shows that the local government of Ciamis has not been able to deal with the problem of poverty and vice versa. Then, if the number of people educated above high school and the number of distribution of medicines and health equipment every year shows that the Ciamis local government is able to provide

maximum public facilities and services in an effort to overcome the problem of poverty, and vice versa.

$$POVERTY = a + b1EDUCATION + b2REVENUE + b3EDUCATION.REVENUE + e \quad (4)$$

$$POVERTY = a + b1EDUCATION + b2EXPENDITURE + b3EDUCATION.$$
$$EXPENDITURE + e \quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad (5)$$

$$POVERTY = a + b1HEALTH + b2REVENUE + b3HEALTH.REVENUE + e \quad\quad (6)$$

$$POVERTY = a + b1HEALTH + b2EXPENDITURE + b3HEALTH.EXPENDITURE \quad (7)$$

Third, to explain how fiscal decentralization represented by government revenue and expenditure in strengthening the effect of education and health on poverty, we use Moderated Regression Analysis through models 4 to 7. If the realization of income and expenditure increases every year shows that the Ciamis government is trying to provide maximum services to the public through the implementation of effective fiscal decentralization in an effort to deal with the problem of poverty in the region.

FINDINGS AND RESULTS

The results of statistical analysis on education, health, revenue, expenditure, and poverty can be described in the following table 2.

Table 2. Descriptive Statistics

Var	N	Mean	Std. Dev	Min.	Max.
EDUCATION	6	10,591	1946.588	8,703	12,986
HEALTH	6	79.83	3.488	74	85
REVENUE	6	93.4600	1.12966	92.35	95.25
EXPENDITURE	6	98.6450	2.39946	94.44	101.55
POVERTY	6	124,000	97413.020	296	219,819
Valid N (listwise)	6				

Source: data processed (2019)

The level of education has the lowest number of 8.703 and the highest level of 12.986, with an average number of 10,591 and a standard deviation of 1946,588. The average number shows that from 2012 to 2017 there were 10,591 highly educated people in Ciamis. Meanwhile, health has the lowest number of 74 and the highest 85, with an average number of 79.83 and a standard deviation of 3,488. The average number shows that medicines and medical devices from 2012 to 2017 were distributed 79.83 times. Furthermore, fiscal decentralization represented by government revenue has the lowest amount of 92.35 and the highest of 95.25, with an average number of 93.4600 and a standard deviation of 1.12966. The average number shows

that government revenues from 2012 to 2017 were realized at 93.46%. Then the fiscal decentralization represented by government spending has the lowest amount of 94.44 and the highest of 101.55, with an average amount of 98.6450 and standard deviation of 2.39946. The average number shows that government spending from 2012 to 2017 was realized at 98.64%. While poverty has the lowest number of 296 and the highest of 219,819, with an average number of 124,000 and 97413,020 standard deviations. The average number shows that the poor from 2012 to 2017 in Ciamis numbered 124,000 people.

The first step in testing the hypothesis, we do with a simple regression test to partially determine the effect of education and health on poverty. The results of the analysis in this step can be seen in the following tables 3 and 4.

Table 3. Test Results of the Effects of Education on Poverty

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Beta		
(Constant)	636574.359			0.001
EDUCATION	-48.399	-0.967	-7.610	0.002
Adjusted R Square	0.919			

a. Dependent Variable: POVERTY
Source: data processed (2019)

The results of this analysis explain that the level of education is able to reduce the poor significantly. The statement was proven from the beta unstandardized coefficients which were negative at -48.399 with a significance level of 0.002 smaller than $\alpha = 0.05$. The value of Adjusted R Square explains that the level of education has an effect of 91.9% on poverty, while the rest is influenced by other factors not examined. Table 4 below explains the effect of health on poverty.

Table 4. Test Results of Health Effects on Poverty

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Beta		
(Constant)	-1.479			0.129
HEALTH	20076.479	0.719	2.068	0.107
Adjusted R Square	0.396			

b. Dependent Variable: POVERTY
Source: data processed (2019)

The results of this analysis explain that health through the distribution of medicines and medical devices can reduce the poor, but not significantly. The statement was proven from the beta unstandardized coefficients which were positive at 20076.479 with a significance level of 0.107 greater than α = 0.05. The value of Adjusted R Square explains that the level of education affects only 39.6% of poverty, while the rest is influenced by other factors not examined. The next step is to examine the simultaneous effect of education and health on poverty through the multiple regression test, the results of which can be seen in the following table 5.

Table 5. Simultaneous Effect Test Results Education and Health Against Poverty

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Beta		
(Constant)	384321.869			0.507
EDUCATION	-45.040	-0.900	-4.615	0.019
HEALTH	2714.092	0.097	0.498	0.653
F	23.639			
F Sig.	0.015			
Adjusted R Square	0.901			

c. Dependent Variable: POVERTY
Source: data processed (2019)

The results of this analysis indicate that education and health simultaneously have a significant effect on poverty, as evidenced by the F Sig value of 0.015 smaller than α = 0.05. The value of Adjusted R Square explains that the level of education and health simultaneously affects 90.1% of poverty, while the rest is influenced by other factors not examined.

Our next step is to test the fiscal decentralization represented by government revenue and expenditure in strengthening the effect of education and health in reducing poverty through moderated regression analysis. The results of these tests can be seen in Tables 6 through 9 below.

Table 6. Moderated Regression Analysis Test Results Regarding Education, Revenue and Poverty

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Beta		
(Constant)	-2.399			0.149
REVENUE	31804.003	0.369	2.506	0.087
EDUCATION.REVENUE	-0.533	-0.720	-4.891	0.016
F	32.507			
F Sig.	0.009			
Adjusted R Square	0.926			

d. Dependent Variable: POVERTY
Source: data processed (2019)

The results of this analysis show that model 4 used in our study through moderated regression analysis used in the study was feasible to explain the relationship between fiscal decentralization represented by government income, education, and poverty. This statement is proven by the Sig F value of 0.009 smaller than $\alpha = 0.05$. Other results show that government revenue can strengthen the effect of education relations on poverty because the significance value of 0.016 is smaller than $\alpha = 0.05$. In addition, if you compare Adjusted R Square in the first step (see table 3) with this step (see table 6) the value will increase by 0.007 (0.926-0.919) or increase by 0.7%. These conditions provide strong evidence that after government revenues have further strengthened the relationship between education and poverty. Our next step is to test the relationship between fiscal decentralization represented by government spending, education, and poverty, the results of which can be seen in Table 7 below.

Table 7. Moderated Regression Analysis Test Results Regarding Education, Expenditure, and Poverty

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Beta		
(Constant)	-751412.577			0.102
EXPENDITURE	14575.860	0.359	4.203	0.025
EDUCATION.EXPENDITURE	-0.538	-1.121	-13.119	0.001
F	89.689			
F Sig.	0.002			
Adjusted R Square	0.973			

e. Dependent Variable: POVERTY
Source: data processed (2019)

The results of this analysis show that model 5 used in our study through moderated regression analysis used in the study was appropriate to explain the relationship between fiscal decentralization represented by government spending, education, and poverty. This statement is proven by the Sig F value of 0.002 smaller than α = 0.05. Other results show that government spending can strengthen the effect of education relations on poverty because the significance value of 0.001 is smaller than α = 0.05. In addition, if you compare Adjusted R Square in the second step (see table 3) with this step (see table 7) the value will increase by 0.054 (0.973-0.919) or increase by 5.4%. These conditions provide strong evidence that after government spending has further strengthened the relationship between education and poverty. Our next step is to test the relationship between fiscal decentralization represented by government revenue, health, and poverty, the results of which can be seen in Table 8 below.

Table 8. Moderated Regression Analysis Test Results
Regarding Health, Revenue, and Poverty

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Beta		
(Constant)	-4.394			0.416
REVENUE	41853.980	0.485	0.681	0.545
HEALTH.REVENUE	81.195	0.335	0.470	0.670
F	2.569			
F Sig.	0.224			
Adjusted R Square	0.386			

f. Dependent Variable: POVERTY
Source: data processed (2019)

The results of this analysis show that model 6 used in our study through moderated regression analysis used in the study is not feasible to explain the relationship between fiscal decentralization represented by government income, health, and poverty. This statement is proven by the Sig F value of 0.224 which is greater than α = 0.05. Other results show that government revenue cannot strengthen the effect of health relations on poverty, because the significance value of 0.670 is higher than α = 0.05. In addition, if you compare Adjusted R Square in this step (see table 8) with the previous step (see table 4) the value decreases by 0.01 (0.396-0.386) or decreases by 1%. These conditions provide strong evidence that after government revenues have weakened the relationship between health and poverty. Our next step is to test the relationship between fiscal decentralization represented by

government spending, health, and poverty, the results of which can be seen in Table 9 below.

Table 9. Moderated Regression Analysis Test Results Regarding Health, Expenditure, and Poverty

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Beta		
(Constant)	819451.108			0.635
EXPENDITURE	-23012.568	-0.567	-1.296	0.286
HEALTH. EXPENDITURE	199.961	0.801	1.831	0.165
F	1.807			
F Sig.	0.305			
Adjusted R Square	0.244			

g. Dependent Variable: POVERTY
Source: data processed (2019)

The results of this analysis show that the model 7 used in our study through moderated regression analysis used in the study is not feasible to explain the relationship between fiscal decentralization represented by government spending, health, and poverty. This statement is proven by the Sig F value of 0.305 higher than $α = 0.05$. Other results show that government spending cannot strengthen the effect of health relations on poverty, because the significance value of 0.165 is greater than $α = 0.05$. In addition, if you compare Adjusted R Square in this step (see table 9) with the previous step (see table 4) the value decreases by 0.152 (0.396-0.244) or decreases by 15.2%. These conditions provide strong evidence that after government spending has further weakened the relationship between health and poverty.

From the results of the analysis, we conclude that the high level of community education in the Ciamis region is able to reduce the number of poor people in the area. The fiscal decentralization carried out by the Ciamis government through the optimization of its income and expenditure is able to strengthen the effects of education in reducing poverty in the area. However, the level of health through the distribution of medicines and medical devices has not been able to reduce poverty in the Ciamis area, so fiscal decentralization through the optimization of income and expenditure has not been able to strengthen the health effects in reducing poverty.

The results of our study found that in model 5 partially fiscal decentralization represented by government spending has a significant effect because the significance level of 0.025 is lower than $α = 0.05$ (see table 7). Government expenditure has a positive beta unstandardized coefficients value

of 14575.860, showing that in this model an increase in government spending has an impact on increasing poverty. This condition is due to government spending not focused on solving the problem of poverty, but more is used for other programs.

DISCUSSION

Various literature has explained that fiscal decentralization, education, and health are factors that are able to solve the problem of poverty in an area of a country (for example, Tyer-Viola & Cesario, 2010; Adam & Eltayeb, 2016; Hernandez-Trillo, 2016). The assumption is that if the regional government is able to carry out fiscal decentralization effectively, it will be able to optimize the potential available to increase revenue so that it is freer to manage finances, especially the budget to deal with poverty. The effective implementation of fiscal decentralization can also be seen from the regional government expenditure arrangements for various programs, especially those focused on poverty alleviation. Several studies focusing on the relationship between fiscal decentralization and poverty have been carried out (eg, Suci & Asmara, 2014; Widodo et al., 2011; Sudewi & Wiranthi, 2013; Dao & Edenhofer, 2018; Martinez-Vazquez & McNab, 2003; Sanogo , 2019), the overall results show that effective fiscal decentralization is the seriousness of the government in an effort to provide maximum services to the public, one of which is dealing with poverty.

Various programs implemented by local governments through fiscal decentralization can be focused on improving education and health facilities so that people can easily get access. With easy access to education and health, the community will have the opportunity to get high positions in the workplace and have the stock of knowledge to become an entrepreneur so that they will increase their productivity to earn a decent income and avoid poverty. Several studies on education, health, and poverty have been carried out (eg, Chamberlain et al., 2016; Gustafsson & Li, 2004; Gounder & Xing, 2012; Oum, 2019; Permana & Arianti, 2012; Fithri & Kaluge, 2017), as a whole. the overall results show that the ease of access to education and health for the community will increase their productivity so that they will get out of poverty.

There are differences in the results of previous studies with ours, where our study shows that health and fiscal decentralization represented by government revenue do not have a significant effect on reducing corruption. In addition, fiscal decentralization represented by government spending does not have a negative effect on poverty, but on the contrary, it has a significant positive effect, indicating that the regional government does not focus on using its budget to deal with poverty, which is mostly used for other programs.

With the fiscal decentralization policy provided by the central government, the local government should use it to issue policies focused on increasing economic growth that have an impact on increasing people's welfare and reducing poverty.

Our study makes several contributions to the literature. First, we discuss two separate strands of literature on the relationship between fiscal decentralization with poverty and between education and health and poverty. To this end, when put together in one model without conditions of interaction, we prove that fiscal decentralization represented by government revenues and government spending can strengthen the effects of education on poverty. These results are consistent with the findings of previous studies on the effects of fiscal decentralization on poverty (eg, Innocents, 2011; Fadlillah et al., 2016; Dao & Edenhofer, 2018; Silas, Wawire, & Okelo, 2018; Valaris, 2012; Rao, 2000; Sepulveda & Martinez-Vazquez, 2011; Kusumaningrum, 2013; Moche, Monkam, & Aye, 2014; Nursini & Tawakkal, 2019), and education on poverty (eg, Clouds, Malik, Sarwar, & Waqas, 2011; Njong, 2010; Brown & Park, 2002; Engle & Black, 2012; Julius & Bawane, 2011; Aref, 2011; Santos, 2009; Hidalgo & Ormaetxe, 2013).

Second, models 4 and 5 included in the moderated regression analysis in this study provide references to local governments to optimize the implementation of fiscal decentralization through government revenues and expenditures that are focused on improving access to education for the community, so that they have the knowledge, skills and seize opportunities to a high position in the place where he works, so he can earn a decent income and avoid poverty. Third, the results of this study support various social institutions in the world that care about the threat of poverty in various countries, and they are trying to help countries with a large number of poor people.

CONCLUSION

We conclude that the high level of community education in Ciamis can reduce poverty in the area. Furthermore, the role of fiscal decentralization through the optimization of government revenue and expenditure can strengthen the effect of education in reducing corruption. Then the results of our study show that health does not have a significant impact on poverty, and fiscal decentralization through the optimization of government income and expenditure is not able to strengthen the health effects of poverty. So we give references to the Ciamis regional government and other regions so that the public budget is more focused on programs that can increase economic growth and reduce poverty.

This study is only conducted in one region in Indonesia, so this is our limitation. For subsequent research, it can conduct research with the same model in various regions in Indonesia or regions in various countries, or various countries in the world to obtain broader results. In addition, the different characters of leaders in various regions and leaders in various countries will have implications for their commitment to overcoming the problem of poverty in their regions.

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