



# The Effect of Balance Funds, Regional Own Revenue, And Size of Local Government on Education Sector Regional Expenditures and the Implications in Regional Expenditures for Outcomes in Education Provincial Governments in Indonesia

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**ABSTRACT:** This research aims to examine the effect of balance funds, the regional revenue and the response of government over the result on an education aspect with regional expenditure in the education sector as mediator. The population the research is 33 provincial Governments in Indonesia between 2017-2020. This study uses secondary data and the data describes about the reports on regional government on local authority revenue expenditure (APBD) and outcome data on education sector in the form of school enrollment rates in Indonesia. Furthermore, the data collection displays through documentation and the method used is multiple linear regressions that use the Eviews program version 12 with panel data assessment. The results of this study represent: (1) The balance funds, regional revenue and the influence of government response on Regional Expenditures Of Education Sector. (2) The balance funds, regional revenue and the influence of government that effect outcomes in the education sector. (3) The effects of Regional Expenditures on educational outcomes sector. (4) The Regional Expenditures on education fully mediates the influence of balance fund in the educational outcomes sector. (5) The Regional Expenditures on education partially mediates the influence of Regional Revenue in the educational outcomes sector. (6) The Regional Expenditures on education partially mediates the influence of government on the educational outcomes sector.

**KEYWORDS:** Balance Funds, Education Sector Regional Expenditures and Education Sector Outcomes, Regional Own Revenue, Size of Local Government.

## PRELIMINARY

Education in a country has a very important role for nation building. According to Law No.20 of 2003 article 2, national education functions to develop the ability and shape the character and civilization of a dignified nation in order to educate the nation's life, aims to develop the potential of students to become human beings who are faithful, noble, healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens. From this statement, the function of education for the state is to shape and develop the character and civilization of the nation and to educate the nation's life. Services in the field of education are stipulated in Article 31 paragraph 4 of the 1945 Constitution which mandates that the state prioritizes an education budget of at least 20% of the APBN and from the APBD to meet the needs of organizing national education. The budget allocation is expected to meet the needs associated with improving the quality of education. The allocation of the education budget is more specifically outlined in article 49 of Law No. 20/2003 article 1, namely that education funds other than educator salaries and official education costs are allocated at least 20% of the State Budget (APBN) in the education sector and at least 20% of the Regional Revenue and Expenditure Budget (APBD). Based on data published by the World Population Review, in 2021 Indonesia is still ranked 54th out of a total of 78 countries included in the world education level ranking. From this data, Indonesia is still outperformed by being in 4th place when compared to fellow countries in the Southeast Asian region such as Singapore in 21st place, Malaysia in 38th place, and Thailand in 46th place (<https://www.goodnewsfromindonesia.id/2022>).

In the book Overview of Indonesian Education Data, the education department has set several indicators of achievement in the education sector. These indicators include input indicators, intermediate output indicators and outcomes indicators. The input indicators are measured by the financing of education, the provision of learning facilities for the community and the quality of human resources including teaching staff. The intermediate output indicators are measured by the grade promotion rate, graduation



rate, UAN average, and percentage of school accreditation, while the outcomes indicators are the long-term results of the entire education process which includes inputs, intermediate outputs and outcomes. Outcomes indicators are measured by the continuation rate (AM), literacy rate, school enrollment rate (APS), net enrollment rate (APM), gross enrollment rate (APK), average length of schooling, and dropout rate (APTS).

The amount of the education budget in Indonesia in 2019, which reached Rp. 492.5 trillion with the realization of 336.2 trillion, has not guaranteed the quality and quality of education. Even though the budget is 20% of the total APBN and APBD, the budget has not been fully absorbed so that education spending has not fully contributed to the quality of education in the form of outcomes in the field of education. Where the outcomes in the field of education in the form of the School Participation Rate (APS) are still below 95%, that in accordance with the indicators and interpretations of the Central Bureau of Statistics (BPS) requires that for the School Participation Rate success in the compulsory education stage can be declared successful if the value of the School Participation Rate is above 95%.

The allocation of the education budget of 20% of the APBN or APBD is still very difficult for the government to do in accordance with the rules that have been set. Currently, not many governments have allocated 20% of the APBD for education in their respective regions. From the data contained in the Regional Education Balance Sheet, which lists a number of education issues in the regions, not many local governments, both provincial and district/city, have allocated 20% of their APBD for education. It is also known that there are still a number of provinces and districts/cities that allocate less than five percent of their education budgets. In fact, some provinces only allocate 1.35 percent of their budget to education. This is the smallest percentage among other provinces. The province of Central Java allocated 2.89 percent of its education budget in 2016 and 13.97 percent in 2017. Similarly, West Sumatra in 2016 recorded a budget allocation of 4.07 percent and in 2017 it was 18.52 percent ([npd.kemdikbud.go.id](http://npd.kemdikbud.go.id)).

Although the existence of an education budget sourced from APBN and APBD funds is a source of development in the education sector, the reality is that a large education expenditure budget does not guarantee quality in the form of outcomes in the education sector, this is due to the lack of absorption of education spending, causing outcomes in the form of poor School Participation Rates. Based on an overview of education statistics in Indonesia in 2016-2020 there was a decrease in the School Participation Rate where the provinces of Papua, West Papua, West Sulawesi and Gorontalo successively in 2016 showed the School Participation Rate (APS) aged 16-18 at the lowest level, namely 73.96, 80.28, 69.12 and 67.34 percent. Since the last four years, starting from 2016 to 2019, the School Participation Rate (APS) aged 16-18 has remained around the same level. This School Participation Rate is spread across several provinces in Indonesia, consecutively in 2016 to 2020 showing the percentage of School Participation Rates that tend to still range on average below 90 percent.

The phenomenon of outcomes in education in the form of high school dropout rates and then followed by low School Participation Rates shows that education in several Indonesian Provinces is something that is still difficult to reach for the wider community. Economic reasons as well as the lack of educational facilities are one of the main reasons for the high dropout rate. It is very unfortunate that the world of education in several Indonesian provinces looks fine but in fact it is very ironic with the high number of children dropping out of school. There are several factors that are used by the community because of this incident, related to children dropping out of school, one of which the community argues because of economic factors. However, this reason is not entirely true, because the government has disbursed a budget every year for education costs (<https://jendela.kemdikbud.go.id>).

Regional expenditure in the education sector is one of the factors that most influence outcomes in the education sector where research conducted by Obi et al. (2016) found that there is an influence of the amount of government spending in the education sector on outcomes in the education sector, namely the School Participation Rate. The results showed that the greater the regional expenditure spent, the greater the School Participation Rate in the area. Similarly, the results of research by Amelia et al. (2019) state that there is a very close relationship between regional expenditure in the education sector and outcomes in the education sector.

The Balance Fund, which includes the Tax Revenue Sharing Fund, Natural Resource Revenue Sharing Fund, General Allocation Fund (DAU), and Special Allocation Fund (DAK), is a factor that influences outcomes in the education sector because it participates in contributing its budget allocation in the regional expenditure post in the education sector. With the percentage of realization of the education budget from the balance fund post, the accessibility of public services in the education sector can be realized properly. This is in line with research by Amelia et al. (2019) which concluded that there is a positive and significant



influence between revenue sharing funds, general allocation funds, special allocation funds and regional own-source revenues on regional spending in the education sector.

Education expenditure is strongly influenced by the condition of the allocation of transfer funds from the central government in the form of balancing funds and local revenue. Where the balancing funds and local revenue are one of the factors that influence expenditures and outcomes in the education sector. Febriani & Asmara (2018) in their research concluded that to meet public needs in the field of education, the government does not always have to wait for DAU, DAK and DBH which come from government transfers. Local Original Revenue is also a source of funding for local governments to improve public services. Regional Original Revenue is a very important source of revenue for the government in meeting regional expenditures and determining the ability of the region to carry out regional activities and programs for regional development. The greater the PAD obtained by the Province, the higher the independence of the regional government, including in the purpose of allocating education funds sourced from PAD. This is reinforced by research by Amelia et al. (2019) which examines the population objects of all provinces in Indonesia stating that Regional Own Revenue (PAD) has a positive effect on regional expenditure in the field of education.

The size of a large local government will also support operations and also provide smoothness in obtaining local revenue (Tama & Adi, 2018). The size of local government as seen from the demographic aspect or population is an important factor in allocating resources to local governments and an important factor in the DAU determination formula. The population aspect is also a determinant of sectoral spending that is directly related to public services, including allocations for education spending (Wati et al., 2017; Abdullah et al., 2019). The larger the size of the local government indirectly affects local revenue, and transfer funds from the government, if the government is able to utilize the sources of regional potential and is able to manage all the potential of the region which will ultimately have an impact on improving the results of local government performance and improving community welfare, including in the field of education Mulyani et al. (2017).

## THEORETICAL BASIS

### Education Outcomes

Outcomes describe the level of achievement of a program in the form of participant responses to services provided in a program (Margaret et al., 2002). outcomes in the field of education in the Indonesian Provincial government are proxied by the School Participation Rate (APS) which is an indicator of outcomes in the field of education. In this study, the School Participation Rate (APS) data used is the proportion of the population of a certain age group who are currently attending school (regardless of the level of education attended) to the population of the corresponding school age group in the Provincial Government in Indonesia in 2017-2020.

### Regional Expenditure on Education

According to Law (UU) No. 23/2014 on Regional Government, "regional expenditures are all regional obligations that are recognized as a reduction in net worth in the relevant fiscal year period". Regarding funding for education, the central government has determined through Article 31 paragraph 4 of the 1945 Constitution, the 4th Amendment that the state prioritizes an education budget of at least 20% of the APBN and from the APBD to meet the needs of organizing national education. In this study, the measurement of regional expenditure in the education sector is the comparison of the realization of regional expenditure in the education sector with total regional expenditure.

### Balance Fund

According to Abdullah (2018: 59), balancing funds or transfer funds are funds sourced from APBN revenues allocated to regions. The purpose of balancing funds or transfers is to fund regional needs in the context of implementing decentralization with the intention of reducing inequality in funding sources and creating a financial balance between the central government and local governments and between local governments. In this study, the measurement of balancing funds is the total of the General Allocation Fund, Special Allocation Fund, and Revenue Sharing Fund. The balance fund in this study is the ratio of the realization of the balance fund of the provincial government in Indonesia to the total revenue realization.

### Local Own Revenue

Regional Original Revenue is a manifestation of extracting resources or potential owned by a region (Ramadhan, 2019). Based on the explanation of Law number 23 of 2014 concerning Regional Government, Regional Original Revenue (PAD) is



revenue obtained through Regional Regulations (Perda). In this study, the measurement of Regional Original Revenue is the comparison of the realization of Regional Original Revenue of the Provincial Government in Indonesia with the total revenue realization.

### Size of Local Government

The size of local government is an important factor in making development policies and public services in government, including local government. The size of the local government illustrates how much responsibility the local government has to carry out to provide services to the community and carry out government functions (Abdullah et al., 2019). In this study, the measurement of local government size is the ratio of the total population of the Provincial government in Indonesia to the total population of all provinces in Indonesia.

### RESEARCH METHODS

This type of research is quantitative descriptive research with the aim of knowing the implications of outcomes in the field of education as the dependent variable which is influenced by equalization funds, regional own-source revenues, and government size which are independent variables and also see the effect of regional spending on education in this case as a mediating variable. The population in this study uses panel data on 34 provinces in Indonesia for the 2017-2020 budget period and data on outcomes in the education sector for the 2017-2020 period. Because the population is only 34 provinces, this study uses all members of the population as research objects or in other words, this type of research is census research. This study uses secondary data, in the form of data from the Directorate General of Fiscal Balance in the form of APBD Realization Reports in the Indonesian Provincial Government for 2017-2020 which includes Balancing Funds, Regional Original Revenue, and regional expenditures in the field of Education, the size of the government in the form of population obtained from data from the Central Bureau of Statistics of the Province of Indonesia and outcomes data in the field of Education in the form of the number of School Participation Rates in 2017-2020 population obtained from data from the Central Bureau of Statistics of the Province of Indonesia. This research data will be analyzed with quantitative analysis methods using the help of the Eviews 12 statistical test tool program.

### RESEARCH RESULTS

#### Descriptive Statistical Analysis

Table 1. Descriptive Statistics Results

	OBP	DP	PAD	UPD	BDBP
Mean	74.59227	0.616735	0.359182	0.029583	0.357379
Median	74.08000	0.636500	0.361500	0.015500	0.354000
Maximum	88.99000	1.113000	0.682000	0.189000	0.781000
Minimum	63.35000	0.265000	0.063000	0.002000	0.134000
Std. Dev.	6.016285	0.165157	0.152427	0.042567	0.101044
Skewness	0.336063	0.152887	0.100949	2.594976	0.375549
Kurtosis	2.253139	2.880316	2.247231	8.682215	4.581074
Jarque-Bera	5.552556	0.593023	3.340832	325.7274	16.85169
Probability	0.062270	0.743407	0.188169	0.000000	0.000219
Sum	9846.180	81.40900	47.41200	3.905000	47.17400
Sum Sq. Dev.	4741.635	3.573266	3.043656	0.237366	1.337487
Observations	132	132	132	132	132

Source: Eviews output, 2023

#### Model Selection Results

The panel data regression model uses three types of estimation approaches, namely the Common Effect Model (CEM), Fixed Effect Model (FEM) and Random Effect Model (REM). The following are the estimation results of the three regression models from substructure I and substructure II of the effect of Balancing Funds, Regional Own Revenue, and Local Government Size on Outcomes in the field of Education through regional expenditure in the field of Education in the Province of Indonesia.



**Table 2.** Estimation of Common Effect Model, Fixed Effect Model and Random Effect Model Substructure I

Variabel	CEM	FEM	REM			
	Coefficient	Pvalue	Coefficient	Pvalue	Coefficient	Pvalue
C	0,1320	0,0046	-0,2110	0,0206	-0,0044	0,9341
DP	0,2406	0,0000	0,9734	0,0003	0,3342	0,0000
PAD	0,2022	0,0028	1,5816	0,0000	0,4468	0,0000
UPD	0,1468	0,0543	-2,0197	0,0000	-0,1630	0,0705

Source: Eviews output, 2023

**Table 3.** Estimation of Common Effect Model, Fixed Effect Model and Random Effect Model Substructure II

Variabel	CEM	FEM	REM			
	Coefficient	Pvalue	Coefficient	Pvalue	Coefficient	Pvalue
C	7,6627	0,0000	6,9100	0,0000	6,9992	0,0000
DP	-3,4585	0,3503	-1,9034	0,0029	0,4396	0,0538
PAD	1,2959	0,7636	7,5231	0,0009	7,7573	0,0004
UPD	-4,7032	0,0023	5,1021	0,0245	7,6518	0,0658
BDBP	2,8669	0,6053	3,5999	0,0000	3,6839	0,0000

Source: Eviews output, 2023

**Panel Data Regression Model Determination Test Results**

After obtaining the results of the three panel data regression models, then the selection of the most appropriate model must be done through several tests.

**1) Chow Test Results**

**Table 4.** Test Results (Chow Test) Substructure I

Table of F Test Results (Chow Test)			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	14,51628	-32,96	0.0000
Cross-section Chi-square	232,916437	32	0.0000

Source: Eviews output, 2023

From the results of the substructure I chow test in Table 4, it can be seen that the F-test result is 14.516 and the Chi-Square is 232.916 with a probability of 0.0000. Between the two CEM and FEM models, the cross-section Chi-square value is obtained with a probability smaller than alpha 5 percent ( $0.0000 < 0.05$ ). Thus, it means that  $H_0$  is rejected and  $H_1$  is accepted, this means that the best model to use is the Fixed Effect Model.

**Table 5.** Test Results (Chow Test) Substructure II

Table of F Test Results (Chow Test)			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	1458,829402	-32,95	0.0000
Cross-section Chi-square	818,305168	32	0.0000

Source: Eviews output, 2023

From the results of the substructure II chow test in Table 5, it can be seen that the F-test result is 1458.829 and the Chi-Square is 818.305 with a probability of 0.0000. Between the two CEM and FEM models, the Cross-section Chi-square value is



obtained with a probability smaller than alpha 5 percent ( $0.0000 < 0.05$ ). Thus, it means that  $H_0$  is rejected and  $H_1$  is accepted, this means that the best model to use is the Fixed Effect Model.

2) Hausman Test Results

Table 6. Hausman Test Results Substructure I

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	23,077266	3	0.0000

Source: Eviews output, 2023.

The results of the Hausman Test for substructure I in Table 6 show a Chi-Square value of 23.077 with a p value (0.0000), then the best model selection is FEM (Fixed Effect Model).

Table 7. Hausman Test Results Substructure II

Tabel Hasil Uji Hausman			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	10,903888	4	0.0277

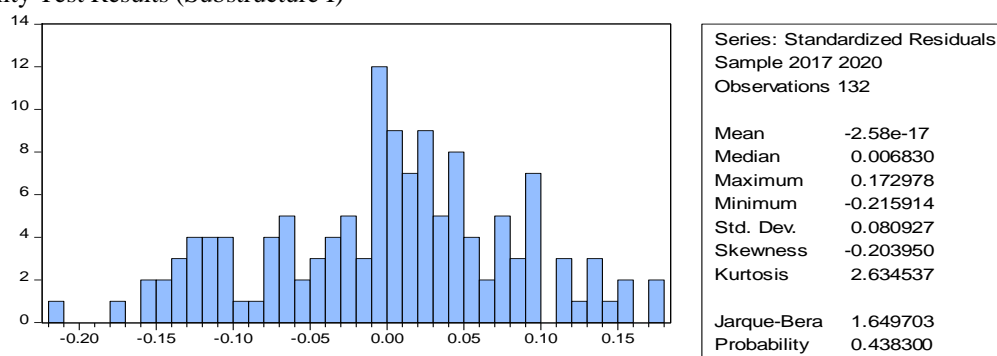
Source: Eviews output, 2023.

The results of the Hausman Test substructure II in Table 7 show a Chi-Square value of 10.903 with a p value (0.0277), then the best model selection is FEM (Fixed Effect Model).

Normality Test Results

The normality test aims to test whether the standardized residual values in the regression model are normally distributed or not. The following are the results of the normality test for substructure I and II as shown in figures 1 and II :

Figure 1. Normality Test Results (Substructure I)

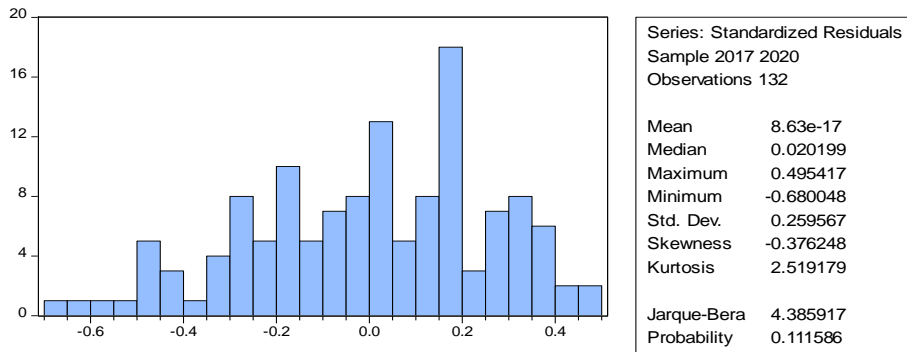


Source: Eviews output, 2023.

Based on Figure 1 the normality test results show that the data is normally distributed because the probability value is  $0.4383 > 0.05$  and the Jarque- Bera value is  $1.6497 > 0.05$ . Therefore, it can be concluded that the data is normally distributed because the data is free from violations of the classical assumption test.



Figure 2. Normality Test Results (Substructure II)



Source: Eviews output, 2023.

Because the probability value is  $0.111 > 0.05$  and the Jarque- Bera value is  $4.385 > 0.05$ . Therefore, it can be concluded that the data is normally distributed because the data is free from violations of the classical assumption test.

**Heteroscedasticity Test Results**

The results of the heteroscedasticity test of substructure I and substructure II can be seen in Table 8 and table 9 which show that the results of the heteroscedasticity test using the Glejser test show that all independent variables have a probability value  $> 0.05$ , then  $H_0$  can be accepted. It can be concluded that the research model of substructure I and substructure II does not occur heteroscedasticity.

Table 8. Heteroscedasticity Test Results Substructure I

	Prob.	Decision
DP	0.0534	No heteroscedaticity
PAD	0.4211	No heteroscedaticity
UPD	0.3217	No heteroscedaticity

Source: Eviews output, 2023.

Table 9. Heteroscedasticity Test Results Substructure II

	Prob.	Decision
DP	0.0920	No heteroscedaticity
PAD	0.3637	No heteroscedaticity
UPD	0.1572	No heteroscedaticity

Source: Eviews output, 2023.

**Multicollinearity Test Results**

The following are the results of the multicollinearity test of substructure I and II as shown in Figures 10 and 11 ;

Table 10. Multicollinearity Test Results Substructure I

Variabel	DP	PAD	UPD	Conclusion
DP	1,000000	-0,370734	-0,401542	No multicollinearity
PAD	-0,370734	1,000000	0,568945	No multicollinearity
UPD	0,401542	0,568945	1,000000	No multicollinearity

Source: Eviews output, 2023.



Table 11. Multicollinearity Test Results Substructure II

Variabel	DP	PAD	UPD	Conclusion
DP	1,000000	-0,370734	-0,401542	No multicollinearity
PAD	-3,70734	1,000000	0,568945	No multicollinearity
UPD	<b>-0,401542</b>	<b>0,568945</b>	<b>1,000000</b>	<b>No multicollinearity</b>

Source: Eviews output, 2023.

Mediation Test Results

Table 12. Mediation Test Results

Regres	DP coefficient	PAD coefficient	UPD coefficient	Note
II	1,341*	13,216*	43,750*	Mediation applies perfectly if the value of the regression coefficient III < regression II
III	-1,903*	7,523*	<b>51,020*</b>	

Source: Eviews output, 2023.

Table 13. The influence of DP, PAD and UPD on BDBP and their implications for OBP

No	Variable	Sig.	Path Coefficient	Influence			Note
				Direct	Indirect	Total	
1	DP on BDBP	0,0003	0,973	0,946	-	0,946	very strong influence
2	PAD on BDBP	0,0000	1,581	2,499	-	2,499	very strong influence
3	UPD on BDBP	0,0000	-2,019	4,076	-	4,076	very strong influence
4	DP on OBP	0,0029	-1,903	3,621	-	3,621	very strong influence
5	PAD on OBP	0,0009	7,523	56,595	-	56,595	very strong influence
6	UPD on OBP	0,0245	51,020	2603,04	-	2603,04	very strong influence
7	BDBP terhadap OBP	0,0000	3,599	12,952	-	12,952	very strong influence
8	DP on OBP with BDBP	-	0,275*	-	2(-1,903 x 3,599 x 0,275)	-3,766	fully mediation
9	PAD on OBP with BDBP	-	0,128*	-	2(7,523 x 3,599 x 0,128)	6,931	partially mediation
10	UPD on OBP with BDBP	-	0,074*	-	2(51,020 x 3,599 x 0,074)	13,587	partially mediation

Source: Eviews output, 2023.





## DISCUSSION

### The Effect of Balance Fund on Regional Expenditure on Education

Based on the results of the study, it shows that equalization funds affect regional expenditure in the education sector, which means that H1 is accepted. The test result of the coefficient value of the balance fund variable is 0.973. The coefficient on the relationship between the balance fund and regional expenditure in the education sector is not equal to 0. This means that the balance fund has a positive and significant influence on regional expenditure in the education sector with a coefficient value of 0.973. This means that the greater the equalization fund, the better the regional expenditure on education in provincial governments in Indonesia.

These results indicate that the balancing funds allocated in accordance with the appropriate activities will be able to increase regional expenditure in the education sector. Balancing funds in the form of General Allocation Funds, Special Allocation Funds and Revenue Sharing Funds from the central government play a role in financing the shortcomings of local governments in utilizing Local Original Revenue, which means that their use is left to the regions according to regional priorities and needs to improve services to the community in the context of implementing regional autonomy in education spending.

The results of this study are in accordance with research conducted by Putra & Palupi (2021) with the result that there is a positive and significant influence between revenue sharing funds, general allocation funds, special allocation funds on regional expenditure in the education sector. Then, the results of this study are in line with stewardship theory, when local governments will tend to use central government funds in the form of transfers from the central government to provide services in the field of education for the entire community. Based on the results of the study, it explains that the government uses transfer funds (balancing funds) sourced from the central government to finance local expenditure in the field of education.

### The Effect of Regional Own Revenue on Local Expenditure on Education

Based on the results of the study, it shows that local revenue affects regional spending on education, which means H2 is accepted. The test result of the coefficient value of the Regional Original Income variable is 1.581. The coefficient on the relationship between regional own revenue and regional expenditure in the education sector is not equal to 0. This means that regional own revenue has a positive and significant effect on regional expenditure in the education sector with a coefficient value of 1.581.

The results of this study are in accordance with research conducted by Febriani & Asmara (2018) with the result that there is a positive and significant influence between revenue sharing funds, general allocation funds, special allocation funds, and local revenue on regional expenditure in the field of education. Then, the results of this study are in line with stewardship theory, that the government will tend to use regional own revenue to provide services in the field of education for the entire community. Local governments have a responsibility in managing PAD to finance programs and activities for the needs of a more equitable education sector. Based on the results of the study, it explains that the government uses local revenue as one of the sources for regional financing to finance regional programs and activities to create regional infrastructure and to increase budget allocations that have implications for regional expenditures in the education sector so that educational accessibility is achieved to the entire community.

### The Effect of Size Local Government on Education Expenditure

Based on the results of the study, it shows that the size of the local government affects regional spending on education, which means that H3 is accepted. The test result of the coefficient value of the local government size variable is -2.019. The coefficient on the relationship between the size of local government and regional spending on education is not equal to 0. This means that the size of local government has a negative and significant effect on regional spending on education with a coefficient value of -2.019.

The results of this study are in accordance with research conducted by Liando & Hermanto (2017) show that PAD, DAU, DAK, DBH and the size of local governments in the form of population have a positive effect on regional spending. Then, the results of this study are in line with the stewardship theory which means that the size of the government seen based on the population of a local government provides evidence that the greater the population makes the government's reason to increase local spending on education, with the aim of improving the quality of human resources.

### The Effect of Balancing Funds on Education Outcomes

Based on the results of the study, it shows that equalization funds affect outcomes in the education sector, which means that H4 is accepted. The test result of the coefficient value of the equalization fund variable is -1.903. The coefficient on the



relationship between equalization funds and outcomes in the education sector is not equal to 0. This means that equalization funds have a negative and significant influence on outcomes in the education sector with a coefficient value of -1.903.

Balancing funds are provided by the central government to reduce fiscal disparities between regions so that there is equitable development in each region. Fund transfers from the central government are expected to assist the government in meeting its regional needs so as to improve the degree of health in the area, including to finance education services. However, in practice, the allocation of transfer funds is more specialized for routine financing. The government's call to allocate 20% of the state budget for education in realization is only 8.5% to a maximum of 16%.

The results of this study are in accordance with research conducted by Surya & Abdullah (2016) which found that changes in the Revenue Sharing Fund affect changes in capital expenditure in the fields of education, health, and public works. Amelia and Abdullah (2019) also found that the Special Allocation Fund (DAK) has a significant positive effect on outcomes in the education sector in the province of Indonesia. Likewise, Surya & Abdullah (2015) found that equalization funds, in this case the Special Allocation Fund (DAK), were positively related to regional spending in the education sector. This is in line with the stewardship theory which explains that local governments have a big responsibility in maximizing the budget from the government for regional expenditures in the field of education to realize the quality of education.

### **The Effect of Regional Own Revenue on Education Outcomes**

Based on the results of the study, it shows that local revenue affects outcomes in the education sector, which means that H5 is accepted. The test result of the coefficient value of the Regional Original Income variable is 7.523. The coefficient on the relationship between regional own revenue and education outcomes is not equal to 0. This means that regional own revenue has a positive and significant effect on education outcomes with a coefficient value of 7.523.

Regional Own Revenue has a significant role in determining the ability of regions to carry out government activities and carry out development programs. With regard to regional autonomy, Regional Own Revenue is also one of the financing to finance regional programs and activities in accordance with the vision and mission of the region. Regional Own Revenue is one of the basic capitals of local governments in obtaining development funds in fulfilling regional expenditures that can be used as infrastructure in the education sector so as to increase high accessibility in the education sector. When the management of regional own revenue for education spending is optimal, the quality of education will also be better.

These results support the results of research conducted by Priyono (2015) which found that local revenue is positively related to education outcomes. Likewise, research conducted by Larasati (2014) which examines outcomes in the field of education before and after decentralization with the object population of all provinces in Indonesia concluded that statistically Regional Own Revenue has a positive effect on outcomes in the field of education so that it can increase the accessibility of education by the government to the entire community. Then, the results of this study are in line with the stewardship theory, when local governments successfully carry out their responsibilities to manage PAD to the maximum, infrastructure in the field of education such as educator training facilities and infrastructure, learning building infrastructure, classrooms, laboratories, the government can facilitate facilities in spending on education for the achievement of good quality education.

### **The Effect of Size Local Government on Education Outcomes**

Based on the results of the study, it shows that the size of local government affects outcomes in the education sector, which means that H6 is accepted. The test results of the coefficient value of the local government size variable is 51.020. The coefficient on the relationship between local government size and education outcomes is not equal to 0. This means that the size of local government has a positive and significant influence on education outcomes with a coefficient value of 51.020.

The results of this study are in accordance with research conducted by Jetter & Parmeter (2017) which states that population urbanization has an impact on the size of the government. The population reflects the amount of responsibility that must be carried out by the government, so that the greater the population, the greater the government spending required to provide services and provide public facilities. Demographic aspects or population are important factors in allocating resources to local governments (Poterba, 1997; Drew, et al., 2014; Wati and Fajar, 2017). In addition to being an important factor in the DAU determination formula, the population aspect also determines sectoral expenditures that are directly related to public services, including allocations for education expenditures. Then, the results of this study are in line with stewardship theory, governments with large populations, provide reasons that local governments can increase the allocation of regional expenditures, especially expenditures in the education



sector with the aim of improving outcomes in the education sector, so as to produce people who have broad insights and have quality resources that are competitive between nations.

### **The Effect of Regional Expenditure on Education Sector Outcomes**

Based on the results of the study, it shows that regional expenditure in the education sector affects outcomes in the education sector, which means that H7 is accepted. The test result of the coefficient value of the regional expenditure variable in the education sector is 3.599. The coefficient on the relationship between regional spending on education and outcomes in the field of education is not equal to 0. This means that regional spending on education has a positive and significant effect on outcomes in the field of education with a coefficient value of 3.599.

The results of this study are in accordance with research conducted by Obi et al. (2016) which shows that education spending affects outcomes in the education sector. The Education Budget is directed and directly related to public services to achieve the priority theme of education, namely increasing access to quality, affordable, relevant and efficient education towards the upliftment of people's welfare, independence and strong national character. This means that regional spending on education functions has an impact on improving the quality of education. The results of this study are in line with the stewardship theory that the responsibility of local governments in the field of education, the more local governments maximize the realization of local expenditure in the field of education to support the education sector, the better the quality of education, school enrollment rates, school continuation rates in the government, so that the outcomes in the field of education are better.

### **The Effect of Balancing Funds on Education Sector Outcomes with Education Sector Regional Expenditure as a Mediator**

Based on the results of the study, it shows that equalization funds affect outcomes in the education sector through regional expenditures in the education sector, which means that H8 is accepted. The criterion for accepting this hypothesis is that the path coefficient value of the effect between equalization funds on regional expenditure in the education sector is not equal to 0 ( $\rho_1 \neq 0$ ) or the path coefficient value of the effect between equalization funds on outcomes in the education sector is not equal to 0 ( $\rho_7 \neq 0$ ). The path coefficient of the effect of equalization funds on regional expenditure on education ( $\rho_1$ ) is 0.973 and the path coefficient of the effect of regional expenditure on education outcomes ( $\rho_7$ ) is 3.599.

The path coefficient of the effect of equalization funds on education outcomes through regional expenditure on education ( $\rho_1 \times \rho_7$ ) is 3.501. The direct path coefficient value of the relationship between equalization funds and education outcomes ( $\rho_4$ ) is -1.903. This indicates that regional expenditure in the education sector mediates perfectly/fully because the value of the indirect relationship path coefficient ( $\rho_1 \times \rho_7$ ) is greater than the direct relationship path coefficient ( $\rho_4$ ), namely  $3.501 > -1.903$ .

The results of this study are in accordance with research conducted by Amelia et al. (2019) quantitatively using the variable outcomes in the education sector in the form of the Continuation Rate and regional expenditure in the education sector which resulted in the finding that there is an influence of the amount of regional expenditure in the education sector on outcomes in the education sector. Then Liando & Hermanto (2017) states that if local revenue increases, it will affect all regional expenditures. Then, the results of this study are in line with stewardship theory, related to funding in the field of education, local governments have set provisions that the allocation of funds for the education sector is at least 20%. This means that regional expenditure for the education function has a very large impact in accordance with the allocation of funds in the education sector, which is allocated at 20%, which has a major influence on improving the quality of education in the form of outcomes in the education sector.

### **The Effect of Regional Own Revenue on Education Outcomes with Education Expenditure as a Mediator.**

Based on the results of the study, it shows that regional own revenue affects outcomes in the field of education through regional expenditure in the field of education, which means that H9 is accepted. The criterion for accepting this hypothesis is that the path coefficient value of the effect between regional own revenue on regional expenditure in the education sector is not equal to 0 ( $\rho_2 \neq 0$ ) or the path coefficient value of the effect between regional expenditure in the education sector on outcomes in the education sector is not equal to 0 ( $\rho_7 \neq 0$ ).

The path coefficient of the effect between local revenue on regional expenditure on education ( $\rho_2$ ) is 1.581 and the value of the path coefficient of the effect between regional expenditure on education outcomes ( $\rho_7$ ) is 3.599. The path coefficient value of the effect of local revenue on outcomes in the education sector through local expenditure in the education sector ( $\rho_2 \times \rho_7$ ) is 5.690. The direct path coefficient value of the relationship between local revenue and education outcomes ( $\rho_5$ ) is 7.523. This



indicates that local spending on education partially mediates because the value of the indirect relationship path coefficient ( $\rho_2 \times \rho_7$ ) is smaller than the direct relationship path coefficient ( $\rho_5$ ), namely  $5.690 < 7.523$ .

Some previous studies related to the effect of PAD on outcomes in the field of education with regional expenditure in the field of education as a mediator are still very rarely carried out by other researchers. However, there are studies that may be influential and related, such as the results of research conducted by (Amelia et al., 2019) quantitatively using the variable outcomes in the field of education in the form of the Continuation Rate and education spending which resulted in the finding that there is an influence of the amount of government spending in the field of education on outcomes in the field of education. The results of this study are in line with stewardship theory, local governments are responsible for not depending on transfers from the central government, where PAD must be the largest financial source for local governments to finance local expenditures in the field of education in terms of supporting facilities and infrastructure as well as educational accessibility to schooling in order to realize outcomes in the field of education in the form of high school enrollment rates.

### The Effect of Size Local Government on Education Outcomes with Education Expenditure as a Mediator.

Based on the results of the study, it shows that the size of local government affects outcomes in the field of education through local expenditure in the field of education, which means that H10 is accepted. The criterion for accepting this hypothesis is that the path coefficient value of the effect between the size of local government on local expenditure on education is not equal to 0 ( $\rho_3 \neq 0$ ) or the path coefficient value of the effect between local expenditure on education on outcomes in the field of education is not equal to 0 ( $\rho_7 \neq 0$ ).

The path coefficient of the effect of local government size on local expenditure on education ( $\rho_3$ ) is -2.019 and the path coefficient of the effect of local expenditure on education outcomes ( $\rho_7$ ) is 3.599. The path coefficient of the effect of local government size on education outcomes through local expenditure on education ( $\rho_3 \times \rho_7$ ) is 1.696. The direct path coefficient of the relationship between local government size and education outcomes ( $\rho_6$ ) is 51.020.

This indicates that regional spending on education partially mediates because the value of the indirect relationship path coefficient ( $\rho_3 \times \rho_7$ ) is smaller than the direct relationship path coefficient ( $\rho_6$ ), namely  $1.696 < 51.020$ . The results of this study are in accordance with research conducted by (Abdullah, et al, 2019) quantitatively using the local government size variable which results in the size of the local government in the form of the population of a region or government affecting local expenditure in the field of education. The size of the local government, in addition to being an important factor in the size of the population aspect, is also a determinant in sectoral spending which is directly related to the budget allocation in the education sector to support public infrastructure in the education sector. This is in line with the theory that the more the population, provides a reason that local governments should be able to increase the realization of expenditure in the education sector with the aim of improving outcomes in the education sector by producing a population that has resources and competitiveness. This is also in accordance with the results of Liando & Hermanto (2017) which states that population has an effect on regional spending. This means that the size of the government seen based on population provides evidence that the increasing population makes the government's reason for improving school infrastructure, buildings, and other infrastructure with the aim of improving educational outcomes so as to produce competitive quality human resources.

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