

THE EFFECT OF REGIONAL FUNDS AND REGIONAL TRANSFERS ON BASIC EDUCATION IN INDONESIA (THE EFFECT OF REGIONAL FUNDS AND REGIONAL TRANSFERS ON BASIC EDUCATION IN INDONESIA)

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Abstract

This study aims to analyze the effect of government budget for education consisting of regional funds and regional transfers on the quality of basic education in Indonesia as measured by the Education Quality Mapping (EQM) score. This study uses a cross-section regression method for 392 districts/cities in Indonesia. Based on the results, for both primary and junior secondary schools, local funds are statistically insignificant in influencing the PMP score. However, regional transfers significantly and positively affect the PMP score. Although not affecting the total PMP score for primary schools, regional funds significantly affect the PMP score through the standard of educators and education personnel (PTK); standard of facilities and infrastructure (sarpras); and standard of financing. As for junior secondary schools, regional funds affect the PMP score through the PTK standard. In addition, for regional transfers, at the primary level, regional transfers affect the PMP score through PTK standards, sarpras standards, management standards, financing standards, content standards and graduate competency standards (SKL). Meanwhile, at the junior high school level, regional transfers affect PMP scores through PTK standards, management standards, financing standards, assessment standards, content standards and SKL standards.

INTRODUCTION

Tampongangoy (2018) stated that quality human resources will determine the effectiveness of successful development in a country. In this regard, the Government of Indonesia has made a major commitment to the education sector through Law No. 20/2003 on the National Education System. The law contains the basis, functions, and

objectives of the education system including mandating the allocation of education funds of at least 20% of the State Budget (APBN) and Regional Budget (APBD). (Bado & Sitti Hasbiah, 2017).. The budget allocated at 20% of the APBN is mostly allocated to local governments through transfers to regions and village funds with an average portion of around 60% per year. The rest is allocated as the central government budget, which is allocated to various ministries/institutions (K/L) that have the authority to organize education affairs and is also allocated as the education financing budget.

Figure 1 shows the source and flow of budget allocations for basic education based on 2021 budget data. In the figure, it can be seen that the budget for education is allocated at 20% of the state budget. Of the 20% budget, 54% is then allocated as transfers to regions and village funds while the remaining 34% is allocated for central government expenditure and 12% is allocated as the education financing budget. Furthermore, the education budget allocated as regional transfers and village funds is mostly transferred to district/city governments to finance the implementation of basic education (Jasmina & Oda, 2018). In carrying out their roles and obligations related to the implementation of nine-year basic education consisting of primary schools (SD), junior secondary schools (SMP) and the equivalent, district/city governments have the authority to organize education using the budget derived from central government transfers and regional funds. The Ministry of Education, Culture, Research and Technology (MoECT) defines regional transfers as the entire education budget sourced from the APBN, while regional funds as the education budget sourced from Regional Original Revenue (PAD).

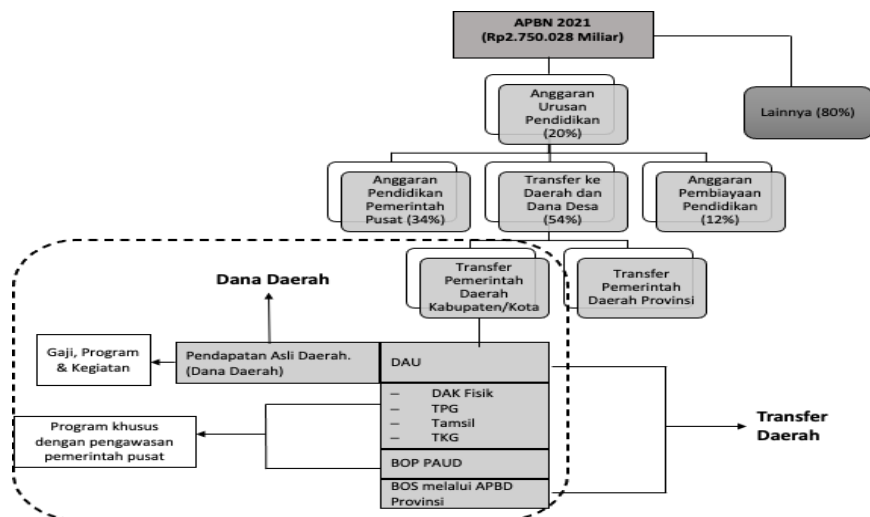


Figure 1: Education Budget for Education Affairs in 2021

Source: Ministry of Finance (processed)

Nationally, Indonesia has not yet achieved the nine-year compulsory education target as mandated in Law number 20 of 2003. In 2021, the average years of schooling

in Indonesia only reached 8.54 years. This indicates that the policies that have been carried out by the government, including in allocating budgets in the education sector, have not been able to produce results according to the set targets. This condition is also reflected in the results of the PISA *Score* measurement by the *Organization for Economic Cooperation and Development* (OECD) which shows that Indonesia's PISA *Score* in 2018 has decreased when compared to 2015. In line with this, Nasution & Surbakti (2020) also stated that at the basic education level, the average national exam scores in the period 2015 to 2018 showed a downward trend for the junior high school level. In 2015, the average score of the junior high school national exam reached 61.8 then successively until 2018 it decreased to 58.6 in 2016, 54.25 in 2017 and 51.1 in 2018 (MoECT). In addition, referring to the Ministry of Research and Technology's Performance Report, for the primary school level, the average School Examination scores did not reach the targets set for 2018 and 2019. These conditions reflect the quality and quantity of education *output* in Indonesia. However, these *outputs* cannot be used as an overall picture of the quality of the education system in Indonesia.

Based on Minister of Education, Culture, Research and Technology's Law No 63 of 2009, a quality education system can be achieved with national education standards (SNP) in the implementation of the National Education System. These standards are regulated in Government Regulation No 57 of 2021 on National Education Standards. SNP are minimum criteria about the education system which includes inputs, processes, and outputs in the education system which includes eight components, namely (1) graduate competency standards (SKL), (2) content standards, (3) process standards, (4) education assessment standards, (5) education personnel (PTK) standards, (6) facilities and infrastructure (sarpras) standards, (7) management standards, and (8) financing standards. Successful achievement of the eight SNP components is measured to obtain an Education Quality Mapping (EQM) score that ranges from 0-7 and is divided into five categories, with the category towards EQM 1 for the lowest EQM score and the EQM category for the highest EQM score.

The non-achievement of targets and the relatively low *output of* basic education both in quantity and quality are inseparable from the condition of inputs and processes in the basic education system in Indonesia. When referring to the PMP score, which reflects the overall quality of education in Indonesia, there is an increasing trend in the average PMP score of basic education at the national level from 2018 to 2019. However, the quality of basic education is not yet optimal because based on the achievement of the 2019 basic education PMP score, at the district/city level in Indonesia, for the primary level only one district obtained a PMP score in the SNP category, namely Kepulauan Seribu. Meanwhile, for the junior high school level, there were only seven districts/cities that managed to meet the SNP category. The small number of districts/municipalities that can fit into the SNP category indicates that the quality of education in Indonesia still needs to be improved.

Several previous studies have been conducted in order to measure the relationship between education budget and education *output*, both in quality and quantity. In terms of the relationship between education budget and education output, some studies found that there is no relationship between the education budget spent by the government and the *output* in the education sector (Jasmina & Oda, 2018; Kyriakides et al., 2019; R & Yulhendri, 2020; and Tikollah & Hasyim, 2021). However,

on the other hand, there are studies that corroborate the existence of a significant relationship between the size of the budget in the education sector and the *output* of the Education sector (French et al., 2015; Bado & Sitti Hasbiah, 2017; Ebi & Ubi, 2017; and Margaretha & Simanjuntak, 2020).. However, if a conclusion is to be drawn regarding the effect of the budget on performance in the field of education, refer to Jasmina & Oda (2018) the measurement of the effect of the budget on *output* cannot reflect the overall condition of the performance of the education system because the *output* in the education sector is basically unable to be used as a measurement of the overall quality of education.

So far, not many studies have been conducted to measure the relationship between education budget and education performance in Indonesia. Previous research conducted by Yatun et al., (2021) found that the quality of education spending is positively related to education performance. In addition, Fadillah et al. (2015) also found that an increase in education costs, which reflects the budget spent on education, can improve the quality of education at the junior high school level in one of the schools in Sukasada Village. However, there are no studies that measure the effect of budget on education quality specifically at the national level.

In connection with this, in this study, the author intends to analyze the effect of the education budget consisting of regional funds allocated by district/city governments and regional transfers sourced from the central government on the quality of education in basic education, namely elementary and junior high schools. The quality of education is proxied by the PMP score. This is a novelty from previous studies which generally used the Gross Participation Rate (APK), Pure Participation Rate (APM), Average Years of Schooling (RLS) and national exam scores (UN) as a measure of the quality of the education system.

In this study, the author used secondary data sourced from data released by the Ministry of Research and Technology and the Central Statistics Agency (BPS). Given that in this study the author intends to look at the effect of the education budget on the quality of basic education in Indonesia, the study covers districts/cities in Indonesia. However, because the financial management of basic education is at the provincial level in DKI Jakarta, all cities in the DKI Jakarta area were excluded from the scope of the study. In addition, because there is some district/city data that has not been released, this study includes analysis of 392 district/cities in Indonesia.

RESEARCH METHODS

Model Specifications

In analyzing the relationship between regional funds and regional transfers to the quality of basic education in Indonesia, researchers used a quantitative *cross section* method with a unit of analysis of districts/cities in Indonesia. By considering the need for time or transmission of the education budget to the quality components of education which include inputs, processes and outputs, a two-year *lag is* used between the quality of education and the education budget. the use of a two-year *lag is* also done by Jasmina & Oda (2018) in measuring the effect of education budget on output in education. The PMP score variable used 2019 data, while the education budget variable and other

control variables used 2017 data. The model specification for the i -th district/city is as follows:

$$SD19PMP_i = \beta_0 + \beta_1 DDSDPM17_i + \beta_2 TDSDPM17_i + \beta_3 P017_i + \beta_4 AHH17_i + \beta_5 Wilayah_i + \beta_6 Daerah_i + \varepsilon_i$$

..... (1)

$$SMP19PMP_i = \beta_0 + \beta_1 DDSMPPM17_i + \beta_2 TDSMPPM17_i + \beta_3 P017_i + \beta_4 AHH17_i + \beta_5 Wilayah_i + \beta_6 Daerah_i + \varepsilon_i$$

..... (2)

where,

- $SD19PMP_i$: PMP score at primary school level in district/city i in 2019
- $SMP19PMP_i$: PMP score at junior high school level in district/city i in 2019
- $DDSDPM17_i$: Local funds for primary education per number of primary school students in district/city i in 2017
- $DDSMPPM17_i$: Local funds for junior high school education per number of junior high school students in district/city i in 2017.
- $TDSDPM17_i$: Regional transfer for primary education per number of primary school students in district/city i in 2017.
- $TDSMPPM17_i$: Regional transfer for junior high school education per number of junior high school students in district/city i in 2017.
- $P017_i$: Poverty rate in district/city i in 2017
- $AHH17_i$: Life Expectancy in district/city i in 2017
- $Wilayah_i$: *Dummy* Variable West of Indonesia (1) and East of Indonesia (0) in district i
- $Daerah_i$: *Dummy* Variable City (1) or Village (0) in district i
- ε_i : Error component

Overview and Operationalization of Variables

This research was conducted using a quantitative *cross section* regression method with a unit of analysis of 392 districts/cities in Indonesia. The data used is secondary data released by Kemendikbudristek and the Central Bureau of Statistics (BPS). Both data related to the PMP score in 2019 and data on regional funds and regional transfers in 2017 were obtained from data released by the Ministry of Education and Research in the Regional Education Balance Sheet (NPD- <https://npd.kemdikbud.go.id/>) for districts/cities. The amount of regional funds and regional transfers is then proportionally transformed into the amount of budget per student for each level of education. Based on the definition used by MoECristek, regional funds are education budget allocations sourced from PAD, while regional transfers are education budget allocations sourced from APBN which include the Physical Special Allocation Fund (DAK), Teacher Professional Allowance (TPG), Additional Income (Tamsil), Teacher Special Allowance (TKG), DAU (GTK PNSD Salary), and BOP (Education Operational Costs) for PAUD. Considering that in the data released by the Ministry of Education and

Culture, the BOS budget for primary and junior high schools is provided through the provincial government, henceforth the BOS budget for primary education is added to the regional transfer component provided to kabupaten/kota governments with the amount as stated in the 2017 BOS technical guidelines.

Furthermore, for socioeconomic characteristics, the author uses data on poverty rates and district/city life expectancy released by BPS. For regional characteristics, the author created a *dummy* variable for western or eastern Indonesia, where districts/cities located in western Indonesia were given code 1, while districts/cities located in eastern Indonesia were given code 0. As for the *dummy* variable for rural or urban areas, the author created a *dummy* variable, where districts/cities categorized as urban were given code 1, while districts/cities categorized as rural were given code 0. The descriptive statistics for primary school level can be seen in Table 1 and for junior high school level can be seen in Table 2.

Table 1. Descriptive Statistics of Elementary School Level

Variable	Obs	Mean	Std. Dev.	Min	Max
SD PMP Score 2019	392	6.495	.1	5.46	6.65
Regional Funding per Primary School Student 2017	392	3.265	2.292	.039	16.074
Regional Transfer per Primary School Student 2017	392	4.622	1.442	1.195	10.661
Poverty Rate 2017	392	12.423	7.363	1.76	39.33
Life Expectancy 2017	392	68.573	3.33	56.32	77.21
City (1) or Village (0)	392	.189	.392	0	1
West (1) or East (0)	392	.625	.485	0	1

Table 2. Descriptive statistics of junior high school level

Variable	Obs	Mean	Std. Dev.	Min	Max
Junior High PMP Score 2019	392	6.525	.076	6.12	6.71
Regional Funding per Junior High School Student 2017	392	3.265	2.292	.039	16.074
Regional Transfer per Junior High School Student 2017	392	4.822	1.442	1.395	10.861
Poverty Rate 2017	392	12.423	7.363	1.76	39.33
Life Expectancy 2017	392	68.573	3.33	56.32	77.21
City (1) or Village (0)	392	.189	.392	0	1
West (1) or East (0)	392	.625	.485	0	1

RESULTS AND DISCUSSION

Elementary school level

Table 3 shows the estimation results for the primary school level. Based on the *robustness* check results, regression (3) is the best model based on the R^2 value and the consistency of the coefficients of each independent variable and control variable. The R value² shows a figure of 0.255 which indicates that regression (3) is able to explain the influence on the primary school PMP score by 25.5%. Based on the estimation results in regression (3), it is known that local funds are not statistically significant in influencing the PMP score, while local transfers positively and significantly influence the PMP score. An increase in the regional transfer budget per student by IDR 1,000,000 will increase the PMP score by 0.0264 units. When viewed from the average PMP score of 6.495, the influence exerted by an increase in regional transfers per student on the PMP score is 0.41%. Regional transfers consist of the budget components DAK Fisik, TPG, Tamsil, TKG, DAU GTK PNSD Salary, BOP PAUD, BOS and DAU, where all of these budget components, except DAU, are *specific grants*. Government transfers in the form of *specific grants* have allocation designations and implementation guidelines set by the central government, so that they can better improve education output in the regions (Jasmina, 2017).

Table 3. Primary School Level Estimation Results

VARIABLES	Regression (1)	Regression (2)	Regression (3)
Regional Funding per Junior High School Student 2017	-0.00457** (0.00210)	-0.00161 (0.00177)	-0.00237 (0.00173)
Regional Transfer per Primary School Student 2017	0.0264*** (0.00385)	0.0247*** (0.00355)	0.0264*** (0.00380)
Poverty Rate 2017		-0.000712 (0.000953)	-2.07e-06 (0.00102)
Life Expectancy 2017		0.00868*** (0.00165)	0.00642*** (0.00160)
City (1) or Village (0)			0.0429*** (0.0114)
West (1) or East (0)			0.0168* (0.00880)
Constant	6.388*** (0.0192)	5.799*** (0.128)	5.922*** (0.120)
Observations	392	392	392
R-squared	0.130	0.227	0.255
Mean of Dependent Variable	6.495	6.495	6.495

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Then, to see how regional funds and regional transfers affect the overall PMP

score, the author conducts a more in-depth analysis by looking at the effect of regional funds and regional transfers on the eight SNP components that form the PMP score, namely (1) SKL standards, (2) content standards, (3) process standards, (4) education assessment standards, (5) PTK standards, (6) sarpras standards, (7) management standards, and (8) financing standards. Appendix 1 shows the estimation results of regional funds and regional transfers to the eight SNP components. Based on the estimation results, it is known that regional funds negatively significantly affect the PTK standard and financing standard, and positively significantly affect the sarpras standard.

Related to the PTK standard, based on the estimation results, it is known that if there is an increase in the budget allocation of regional funds per student by Rp1,000,000, it will affect the decrease in the PTK standard achievement score by 0.0375. However, when compared to the average PTK standard achievement score of 5.502, the effect of an increase in regional funds per student on the decrease in PTK standard achievement is only around 0.68%.

It is known that local funds come from local revenue (PAD) which is then used by local governments to finance routine expenditures and expenditures in the context of regional development. In the event that there is a negative relationship between regional funds and achievements in the PTK standard, the author believes that this condition indicates problems in managing the education budget sourced from regional funds. The use of the regional fund budget does not support increasing the availability, competence and quality of educators and education personnel. Most local government expenditure is allocated to local government administration (Schulze & Sjahrir, 2014; Kis-Katos & Sjahrir, 2014; and Sjahrir et al., 2013). This condition may occur due to problems in the capacity and capability of local governments in managing the budget. Several previous studies have also found that accountability mechanisms at the district level are weak and decentralization does not have a significant effect on local government administrative expenditure (Jasmina & Oda, 2022; Schulze & Sjahrir, 2014; Kis-Katos & Sjahrir, 2014; and Sjahrir et al., 2013).

The low achievement of the PTK standard occurred not only in districts/cities with low PMP scores, but also in districts/cities that had relatively high PMP scores. For example, in Jayapura District, which has a relatively low PMP score, and Blitar City, which has a relatively high PMP score, the achievement for the PTK standard is still low as a result of the low fulfillment of indicators of the availability and competence of teachers in accordance with the provisions and the low fulfillment of indicators of the availability and competence of education personnel including administrative staff, laboratory assistants and librarians.

Furthermore, related to the effect of regional funds on the sarpras standard, regional funds positively and significantly affect the achievement of the sarpras standard. This condition is in line with research conducted by Prastiwi et al., (2016) where there is a positive relationship between PAD and capital expenditure, one of which is used to build infrastructure as a form of service to the public. Based on the estimation results, it is known that if there is an increase in the regional fund budget per student of Rp1,000,000, it will affect the increase in the achievement of sarpras standards by 0.0208 units. However, when viewed from the average achievement of the sarpras standard of 4.781, the effect of increasing regional funds per student on increasing the achievement of the sarpras standard is only around 0.435%.

Uchenna Obi et al (2016) state that education spending is a form of government effort to open access to education through the construction of new schools that can eliminate barriers in the form of distance for students. Regarding the positive relationship between local funds and the achievement of sarpras standards, local funds, which are part of the education expenditure budget, are used by local governments to finance routine expenditures and expenditures in the context of regional development. In this regard, local funds have a significant positive effect on the sarpras standard score through their function for regional development, in this case the provision of quality education services. This is in line with Jasmina (2017) who found that in Bogor City, 30% of the education budget was allocated for school repairs and covering salaries for honorary teachers.

Then with regard to the relationship between regional funds and the achievement of financing standards, regional funds negatively and significantly influence the achievement of financing standards. If there is an increase of Rp1,000,000 in the regional fund budget per student, it will affect the decrease in the achievement of financing standards by 0.00307. When viewed from the average amount of achievement of financing standards of 6.955, the effect of an increase in regional funds per student on the decline in financing standards is only 0.044%. Related to the negative relationship between regional funds and the achievement of financing standards, this occurs because of the low management ability, accountability and transparency of the school. This is in line with research by Andriani & Mokhtar (2019) who found that there were indications of a lack of transparency between school principals, teachers and parents in a case study of elementary schools in Makassar City. In this regard, the negative relationship that occurs is the same as the condition of the relationship between regional funds and PTK standards, where the amount of budget allocation provided is not used to improve the qualifications and competencies of educators and education personnel. The qualifications and competencies of educators and education personnel that do not increase will also have implications for the management of financing to be unaccountable and transparent.

Furthermore, related to the effect of regional transfers on the achievement of SNP components, based on the estimation results, it is known that regional transfers positively and significantly affect the achievement of PTK standards, sarpras standards, governance standards, financing standards, content standards and SKL standards. With regard to the effect of regional transfers on the achievement of PTK standards, it is known that in regional transfers there are budget components related to incentives for GTK, namely TPG, Tamsil, and TKG. Referring to Government Regulation No. 41/2009, TPG is given as a form of appreciation for teacher professionalism. The allowance is used for activities to improve teacher competence and welfare. In addition to the Tunjangan, there is also a Tamsil fund given to teachers to increase the work passion and welfare of PNSD teachers, especially for those who do not have certification. Tamsil is also expected to increase teacher motivation and productivity because to be able to disburse the Tamsil funds there are additional conditions where teachers must be present to teach and fulfill their workload as teachers (Permendikbud No. 19 of 2019).

The positive relationship between regional transfers and the PTK standard score is in line with research conducted by Arifah (2018) (2013) who found that there is a

positive relationship between the allowances given to teachers, in this case the certification allowance and professional allowance, and the performance of primary school teachers. Based on the estimation results conducted in this study, it is known that if there is an increase in the regional transfer budget per student of IDR1,000,000, it will affect the increase in the achievement of PTK standards by 0.128 units. Furthermore, when compared to the average PTK standard score of 5.502, the increase in regional transfers per student can increase the achievement of the PTK standard by around 2.326%.

Then, related to the effect of regional transfers on the achievement of sarpras standards, based on the estimation results, an increase in the regional transfer budget per student of Rp1,000,000 will have an effect on increasing the sarpras standard score by 0.0417 units. When viewed from the average sarpras standard score of 4.781, the effect of an increase in regional transfers per student on increasing the achievement of the sarpras standard is 0.872%. The positive effect of regional transfers on the achievement of sarpras standards is obtained because in the sarpras budget there is a physical DAK budget component. Referring to PP No. 141/2018, DAK Fisik is allocated with the aim of realizing the fulfillment of learning facilities and infrastructure standards that refer to SNP. The positive relationship between DAK fisik and the condition of sarpras is in line with research conducted by Auliansah & Aliyyah (2021) who found that there was an increase in the number of damaged classrooms, especially for elementary schools, which occurred along with a decrease in the number of reduced physical DAK allocations in North Sumatra Province.

However, although there is a positive relationship between regional transfers and the sarpras standard score, the achievement of the sarpras standard score is still low compared to other standards for both districts with high and low PMP scores. This indicates the need to increase the role of physical DAK both in terms of capacity and management. Based on data released by the Ministry of Education and Culture (2019), around 19% of existing classrooms at the primary school level were damaged with the categories of moderately damaged, severely damaged and totally damaged. The number of damaged classrooms has increased when compared to data in 2018 which only reached 17% (Kemendikbudristek, 2018).

Furthermore, with regard to the achievement of governance standards, based on the estimation results, an increase in the regional transfer budget of Rp1,000,000 per student will increase the achievement of governance standards by 0.00339 units. When viewed from the average score of the governance standard of 6.889, the effect of an increase in regional transfers per student on increasing the achievement of the governance standard is relatively small, which is around 0.049%. Then, for the financing standard, based on the estimation results, an increase in the regional transfer budget per student of Rp1,000,000 will increase the financing standard score by 0.00770. The effect on regional transfers per student, when viewed from the average financing standard score, has an effect of 0.111%. As for the achievement of content standards, based on the estimation results, an increase in the regional transfer budget of Rp1,000,000 per student will increase the achievement of content standards by 0.0102 units, which when looking at the average content standard score of 6.937, the effect of regional transfers per student on increasing the achievement of content standards is 0.147%.

Both for management standards, financing standards, and content standards,

when viewed from the indicators that measure achievement, the three standards are closely related to the qualifications and competencies of educators and education personnel. Therefore, regional transfers have a positive influence on these three standards through their budget components related to improving the competence of educators and education personnel.

Then related to the SKL standard, based on the estimation results, an increase in the regional transfer budget of Rp1,000,000 per student will increase the achievement of the SKL standard by 0.00238 units. When viewed from the average SKL standard achievement score of 6.974, the effect of regional transfers per student on increasing the achievement of the SKL standard is relatively small compared to other standards, which is around 0.034%. The achievement of the SKL standard is strongly influenced by inputs in education, mainly related to the PTK standard, sarpras standard and content standard. The positive effect of the regional transfer budget on the achievement of the SKL standards is the result of the positive effect of regional transfers on the PTK standard, the sarpras standard and the content standard.

Junior High School (SMP)

Table 4 shows the *robustness check of the* estimation results conducted in stages for the junior secondary school level. Based on the *robustness* check results, regression (3) is the best model based on the R^2 value and the consistency of the coefficient values of each independent variable and control variable. The R value² shows a number of 0.286 which indicates that the regression model in model 3 is able to explain the influence on junior high school PMP scores by 28.6%, while the remaining 71.4% is explained by other variables outside the model.

Based on the estimation results in regression (3), it is known that local funds are not statistically significant in influencing junior high school PMP scores, while local transfers are positively significant in influencing PMP scores. An increase in the regional transfer budget per student by IDR 1,000,000 will increase the PMP score by 0.0222 units. However, when viewed from the average PMP score, the effect provided by regional transfers per student on the increase in PMP score is 0.340%. This effect is relatively smaller when compared to the effect of regional transfers on PMP scores at the primary level. Similar to the primary level, the positive effect of regional transfers on the PMP score is due to the existence of a *specific grant* component of the budget whose purpose and mechanism of use are clear and supervised by the central government.

Table 4. Estimation Results for Junior High School Level

VARIABLES	Regression 1	Regression 2	Regression 3
Regional Funding per Junior High School Student 2017	-0.00172 (0.00219)	0.000542 (0.00208)	-0.000262 (0.00202)
Regional Transfer per Junior High School Student 2017	0.0216*** (0.00287)	0.0200*** (0.00271)	0.0222*** (0.00272)
Poverty Rate 2017		-0.000889 (0.000699)	-0.000514 (0.000740)

Life Expectancy 2017		0.00582*** (0.00132)	0.00450*** (0.00131)
City (1) or Village (0)			0.0410*** (0.00867)
West (1) or East (0)			-0.00473 (0.00723)
Constant	6.426*** (0.0135)	6.038*** (0.0996)	6.111*** (0.0973)
Observations	392	392	392
R-squared	0.158	0.250	0.286
Mean of Dependent Variable	6.525	6.525	6.525

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Then, to see how regional funds and regional transfers affect the overall PMP score, the author conducts a more in-depth analysis by looking at the effect of regional funds and regional transfers on the eight SNP components that form the PMP score. Appendix 2 shows the estimation results of regional funds and regional transfers on the eight SNP components. The estimation results show that regional funds significantly affect only the sarpras standard. If there is an increase in the regional funds budget per student by IDR 1,000,000, it will have an effect on increasing the sarpras standard score by 0.0203 units. By looking at the average sarpras standard score of 5.056, an increase in regional funds per student will have an effect on increasing the sarpras standard score by 0.402%. This effect is relatively smaller than the effect of regional funds on the sarpras standard score for the primary school level.

For the junior secondary school level, the sarpras standard is the standard with the lowest national average achievement compared to other standards. When referring to data released in 2019, around 16.87% of classrooms for junior secondary school in Indonesia were damaged. This condition is getting worse than in 2018, when only around 15.55% of classrooms were damaged. The common causes of the low achievement of sarpras standards are (1) the construction of school buildings that are not professionally designed, implemented and supervised, (2) the design of school construction does not refer to predetermined standards, (3) limited funds for the construction and maintenance of school buildings, and (4) complicated management of construction and maintenance funds (Suarnaya & Karsana, 2019).

Furthermore, for regional transfers, based on the estimation results, regional transfers per student positively and significantly affect the achievement of PTK standards, management standards, financing standards, assessment standards, content standards and SKL standards. The biggest influence is seen in the achievement of PTK standards. If the regional transfer budget per student increases by Rp1,000,000, it will have an effect on increasing the achievement of the PTK standard by 0.121 units. Furthermore, seen from the average value of the PTK standard score, the effect of increasing regional transfers per student on increasing the PTK standard score is 2.24%. This effect is relatively smaller than the effect of regional transfers on the achievement of the PTK standard score at the primary level. Similar to the primary level, the positive

effect of regional transfers on the PTK standard score is through the budget component of regional transfers that are *specific grants* such as TPG, Tamsil, and TKG. This is in line with Anoraga & Djatiprambudi (2015) who found that there was a strong influence between the provision of teacher professional allowances and the performance of junior high school teachers in Trenggalek Regency.

Then, related to the achievement of governance standards, it can be seen that based on the estimation results, if there is an increase in the regional transfer budget of Rp1,000,000, it will affect the increase in the achievement of governance standards by 0.00596. When viewed from the average governance standard score of 6.902, the effect of regional transfers on increasing the sarpras standard score is 0.086%. Meanwhile, in relation to financing standards, based on the estimation results, if there is an increase in the regional transfer budget per student of Rp1,000,000, it will have an effect on increasing the achievement of financing standards by 0.00897 units. When viewed from the average financing standard score of 6.948, the increase in regional transfers per student only increases the financing standard score by 0.129%. The effect of the increase in regional transfers per student on improving management standards and financing standards at the junior high school level is higher when compared to the primary school level.

For both management standards and financing standards, the achievement of standards is highly dependent on the management ability, accountability and transparency of school organizers, in this case the school principal, teachers and education personnel. The ability to manage, accountability and transparency in organizing school activities is closely related to the competence and qualifications of educators and education personnel. So that the positive relationship of regional transfers to the two standards is through the regional transfer budget component related to improving the competence and qualifications of educators and education personnel.

As for the assessment standard, referring to PP number 57 of 2021, the assessment standard is defined as the minimum criteria regarding the mechanism for assessing student learning outcomes. Based on the estimation results, it is known that if there is an increase in the regional transfer budget per student of IDR 1,000,000, it will affect the increase in the achievement of the assessment standard by 0.00732. When viewed from the average value of the assessment standard score of 6.979, the effect of increasing regional transfers per student on the achievement of assessment standards is 0.1049%. In general, the cause of the still not optimal achievement of assessment standards is due to frequent changes in regulations related to assessment (Suarnaya & Karsana, 2019). In relation to the regional transfer budget, the measurement of assessment standards consists of several indicators related to the ability or competence of educators, especially in relation to the use of assessment instruments. It is known that education transfers have an influence on the competence and qualifications of educators. Therefore, the link between the regional transfer budget and assessment standards can occur through the competence and qualifications of educators.

For the achievement of content standards, if there is an increase in the regional transfer budget per student of Rp1,000,000, it will affect the increase in the achievement of content standards by 0.00770 units. When viewed from the average content standard score, the effect of an increase in regional transfers per student on the achievement of content standards is 0.111%. The achievement of content standards on a national average

is quite high, however, this achievement can still be improved. The achievement of the content standard score is measured based on several indicators including (1) learning tools according to the formulation of graduate competencies, (2) the education unit level curriculum is developed according to procedures, (3) schools implement the curriculum in accordance with the provisions. The successful achievement of content standards is highly dependent on the ability of school principals and educators to develop the education unit level curriculum (KTSP). Therefore, regional transfers have a positive influence on content standards through their budget components related to improving the competence of educators and education personnel. With principals and teachers who have better competencies and qualifications, their ability to develop a curriculum that is in accordance with the formulation of graduate competencies and procedures will also be better.

Furthermore, in relation to the SKL standard, based on the estimation results, it is known that an increase of Rp1,000,000 in regional transfers per student will increase the achievement of the SKL standard by 0.00626 units. When viewed from the average SKL standard score of 6.978, the effect of an increase in regional transfers per student on the increase in the SKL standard score is 0.089%. This effect is relatively larger than the effect of regional transfers per student on increasing the SKL standard score at the primary level. Similar to the primary level, the achievement of the SKL standards is strongly influenced by inputs in education, mainly related to the PTK standard, sarpras standard and content standard. The positive effect of the regional transfer budget on the achievement of the SKL standards is the result of the positive effect of regional transfers on the PTK standard, the sarpras standard and the content standard.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Using cross section regression, the study found that for both primary and junior secondary levels, local funds have no statistically significant effect on PMP score achievement. Regional transfers, on the other hand, had a significant positive effect on the PMP score. The magnitude of the effect of regional transfers on the PMP score is greater for the primary level than the junior secondary level. Furthermore, when analyzed more deeply, at the primary level, regional funds affect the PMP score through the PTK standard; sarpras standard; and financing standard, with the largest influence given to the PTK standard and the smallest given to the financing standard. Meanwhile, at the junior secondary level, local funds affect the PMP score through the PTK standard. In addition, for regional transfers, at the primary level, regional transfers affect PMP scores through PTK standards, sarpras standards, management standards, financing standards, content standards and SKL standards, with the largest influence given to PTK standards and the smallest influence given to SKL standards. While at the junior high school level, regional transfers affect PMP scores through PTK standards, management standards, financing standards, assessment standards, content standards and SKL standards, with the largest influence given to PTK standards and the smallest to SKL standards.

Advice

Policy recommendations based on the results of this study are as follows:

- 1) Since local funds have no influence on the PMP score, there are indications of problems in the capacity and capability of local governments in managing local budgets for education. A system needs to be developed to monitor the budget planning process and the realization of budgets allocated by district governments to run education affairs.
- 2) In allocating the regional fund budget, for the primary school level, district/city governments need to increase the budget allocation to encourage the improvement of the qualifications and competencies of educators and education personnel as well as to improve the quality of infrastructure. Meanwhile, at the junior secondary level, the government needs to increase the budget allocation of regional funds focused on improving the quality of infrastructure.
- 3) In allocating the regional transfer budget, for the primary school level, it can be more focused on allocating in the form of physical DAK for the purposes of infrastructure and also transfer allocations in order to improve the quality of educators and education personnel. Meanwhile, at the junior high school level, the allocation of the regional transfer budget can be more focused on allocating the budget to improve the quality of educators and education personnel.

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