

EDUCATION OUTCOME IN EASTERN INDONESIA THROUGH EDUCATION EXPENDITURE

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ABSTRACT

There is a very urgent need to invest in education in the human capital of a nation, so the role of government is needed to ensure the capacity and possibility to access education. Therefore, adequate funding should encourage education outcome, as evidenced by the enrollment rate, expected length of schooling and average length of schooling. This study aims to determine the effect of education and health spending, fiscal decentralization, GRDP per capita (control variable) on education outcome. This study uses secondary data with panel data from 16 provinces in eastern Indonesia. The data analysis technique used is the structural equation model (SEM) with Rstudio software. The results of this study indicate that; (1) At the level of primary education and the expected duration of schooling, education expenditure has a positive and significant effect on school performance, while the level of education of the middle, high school and the duration expected schooling have no effect. (2) Health expenditure has a positive and significant effect on education outcome; (3) Fiscal decentralization has a positive and significant impact on school participation rates at primary level, for primary and middle school levels and the average length of schooling is not significant, but different from secondary level it has a negative impact and significant effect, while the expected length of schooling is not significant (4). The GRDP per capita has a positive and significant effect on education outcome, except that the school participation rate at the elementary level is not significant.

Keywords: Education Expenditure, Education Outcome

1. BACKGROUND

The main problem of human development in Indonesia lies entirely in the differential treatment of development which results in a development gap between the western region of Indonesia and the eastern region of Indonesia. Eastern Indonesia includes the eastern provinces of the Republic of Indonesia in Sulawesi, Maluku, East Nusa Tenggara, West Papua and Papua (indonesiatimur.com). Education is one of the main elements necessary to create qualified and competitive human resources. Of course, this cannot be separated from the role of government in facilitating the access of each community to education. Education is not a public good, it is non-rival and non-exclusive (Gruber, 2007), so the role of government is necessary to deliver public services to meet the educational needs of every citizen as a basic need.

One of the achievements of the role of government in solving education problems is through education spending, as stated in the 1945 Constitution in particular Article 31, every citizen has the right to an appropriate education and the Law number 20 of 2003 concerning the national education system regulates the rights and obligations of the government in the field of education, every citizen aged 7 to 15 years is required to follow a basic education (Mulyono, 2016). In addition, the government should prioritize the allocation of the education budget of at least 20% of APBN and APBD excluding educator salaries and official education costs. The education development objectives are set out in Book 1 of RPJM 2015-2019, targeted for SD GER of 114.1, GER for SMP 106.9 and for GER for SMA 91.6 (Ministry of Development Planning national, 2014). The drop in the dropout rate has helped to increase the gross enrollment rate (APK) for middle and high school levels, but has not yet been able

to meet the target of the ministry's latest strategic plan. For the equivalent APK SMA / SMK/MA during the period 2014 - 2019 fluctuated, in 2019 by 83.98%, exceeding the GER of 2014 by 74.3%. Likewise, the GER for the SMP / MTs equivalent increased from 88.6% in 2014 to 90.6% in 2019. During the same period, the average duration of schooling also increased in line with the evolution of the TBS mentioned above. The average length of schooling for residents aged 15 (fifteen) and over made it possible to achieve the objective of the 2015-2019 strategic plan of the Ministry of Education and Culture.

In the eastern provinces of Indonesia, average school participation at each level of education is still low below the national target. However, the provinces of East Kalimantan, North Sulawesi and the Moluccas have reached an average of 9 years of schooling. Followed by the northern Moluccas which started to reach the average length of schooling in 2018-2019 and Southeast Sulawesi in 2019. Unlike Papua, it has the lowest average length of schooling among the other provinces. (Table 1).

The goal of provincial school participation in eastern Indonesia has not yet been met, showing that public access to education at all levels of education is still limited and minimal. This is due to several factors, both on the demand side and the supply side. On the demand side, participation in education is influenced by per capita income, adult literacy rate, number of schools and population urbanization, while supply includes teacher ratio / students, costs of education, public expenditure for the education function (Dreher, *et.al*, 2006).

The allocation of education expenditure is one of the elements that influence the improvement of education outcome. Faguet and Sanchez (2008), explain that the amount of public expenditure allocated to education

Table 1 Outcomes Education Eastern Provinces Of Indonesia, Year 2018 – 2020

Provinces	Year	Outcomes Education				
		PSE	JHSE	HSE	OSH	ALS
	2018	99.43	97.72	76.89	13.47	7.03
West Nusa Tenggara	2019	99.46	97.92	77.51	13.48	7.27
	2020	99.52	98.32	77.64	13.70	7.31
East Nusa Tenggara	2018	98.28	94.95	74.83	13.10	7.30
	2019	98.47	95.11	75.36	13.15	7.55
West Kalimantan	2020	98.57	95.25	75.52	13.18	7.63
	2018	98.43	92.84	68.35	12.55	7.12
Central Kalimantan	2019	98.52	92.85	68.37	12.58	7.31
	2020	98.60	92.90	68.96	12.60	7.37
South Kalimantan	2018	99.66	93.87	66.95	12.55	8.37
	2019	99.66	94.09	66.95	12.57	8.51
East Kalimantan	2020	99.49	94.86	66.92	12.66	8.59
	2018	99.64	92.43	68.66	12.50	8.00
North Sulawesi	2019	99.53	92.83	69.19	12.52	8.20
	2020	99.48	93.04	69.38	12.68	8.29
Central Sulawesi	2018	99.76	98.89	81.55	13.67	9.48
	2019	99.68	98.83	81.81	13.69	9.70
South Sulawesi	2020	99.73	99.07	81.88	13.72	9.77
	2018	99.36	95.00	73.67	12.68	9.24
Southeast Sulawesi	2019	99.39	95.18	74.04	12.73	9.43
	2020	99.59	95.27	74.12	12.85	9.49
Gorontalo	2018	98.24	92.74	75.05	13.13	8.52
	2019	98.40	93.01	75.73	13.14	8.75
West Sulawesi	2020	98.38	93.13	75.89	13.17	8.83
	2018	99.25	93.13	70.81	13.34	8.02
Maluku	2019	99.23	93.22	70.85	13.36	8.26
	2020	99.25	93.34	70.89	13.45	8.38
North Maluku	2018	99.28	94.29	73.47	13.53	8.69
	2019	99.13	94.78	74.03	13.55	8.91
West Papua	2020	99.10	94.98	74.50	13.65	9.04
	2018	98.76	91.38	70.75	13.03	7.46
Papua	2019	98.96	91.64	71.44	13.06	7.69
	2020	98.92	91.80	71.43	13.08	7.82
North Maluku	2018	98.25	89.95	68.69	12.59	7.50
	2019	98.34	89.92	69.31	12.62	7.73
West Papua	2020	98.33	90.07	69.84	12.77	7.89
	2018	99.71	97.05	79.12	13.92	9.58
Papua	2019	99.61	97.29	79.65	13.94	9.81
	2020	99.50	97.43	79.87	13.96	9.93
West Papua	2018	99.08	97.47	76.36	13.62	8.72
	2019	98.97	96.97	76.41	13.63	9.00
Papua	2020	99.04	97.15	76.83	13.67	9.04
	2018	97.31	97.08	80.81	12.53	7.27
West Papua	2019	97.68	96.58	81.49	12.72	7.44
	2020	97.89	96.87	81.51	12.91	7.60
Papua	2018	82.43	80.00	63.48	10.83	6.52
	2019	82.67	80.13	63.50	11.05	6.65
	2020	82.99	80.48	64.83	11.09	6.69

Source: Central Bureau of Statistics, year 2021

affects school results in terms of gross enrollment rate, in accordance with Ebi and Ubi (2017), Obi, et.al (2016), Anyanwu and Erhijakpor (2007), Krueger (2003), Greenwald, Hedges and Laine (1996), and Card and Krueger (1996) support the efficiency of public spending on education. This proves that the greater the public expenditure for the education sector or the allocation of the education budget, the higher the level of education in the region will be. The education budget is the cost or funds incurred in the administration of education, both direct costs and indirect costs. The costs incurred come in the form of purchases of school construction, purchase of school supplies, tuition and costs to support the implementation of the educational process (Todaro and Smith, 2015). But it is different from (Hanushek, 1986, 1997, 2003; Al-Samarrai, 2006) doubt the conclusions of the above researchers. As shown in Figure 1, the evolution of the education budget allocation from 2016 to 2020 has increased each year, which is also followed by an increase in the number of students at each level of education. The uneven evolution of public expenditure in the education sector will have an impact on the quality of the human resources produced. This is one of the problems faced by Indonesia where the quality of education is still low.

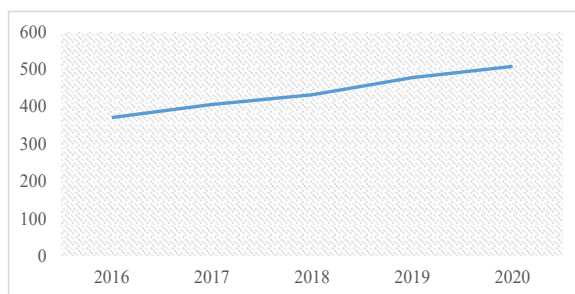


Figure 1. Evolution of the education budget allocation for 2016-2020 (Trilyun/Rp)

Source: <https://www.kemenkeu.go.id/apbn2020>

Thus, education outcome can be achieved if all citizens can easily access education. An indicator of successful management can be observed in school results which are reflected in the achievement of access to education as measured by enrollment rates, expected years of schooling, average length of schooling. By encouraging this, the management of education, the central government of the division of affairs with local governments as stipulated in government regulation number 38 of 2007 which explains the division of government affairs between government, provincial governments and governments regional regency/city in line with Permendikbud Number 103 of 2013, from 2013 in 2014 the government in the area of education to the governor which includes early childhood education programs, basic education and secondary education. Besides the changes in the calculation of the Human Development Index, one of which is the literacy rate. This figure is no longer relevant for measuring education as a whole because it cannot describe the quality of education.

In addition, as the literacy rate in most regions is already high, it is therefore not possible to correctly differentiate the level of education between regions, an indicator of the expected years of schooling and the average duration of schooling. schooling is developed which also reflects the performance of the quality of teaching.

From the above description, the aim of this study is to analyze and determine: 1) the effect of education expenditure on education outcome; 2) the effect of health expenditure on education outcome; 3) the effect of fiscal decentralization on education outcome and 3) the effect of GRDP per capita on education outcome.

2. METHOD

This research is included in the category of explanatory research, that is, research that explains the fortuitous relationship between variables through hypothesis testing. The dependent variable used in this study is the education outcome which is represented by the enrollment rates (primary, middle and secondary levels), the expected years of schooling and the average duration of schooling, while the independent expenditure is the expenditure of provincial and district education municipal governments respectively each province of eastern Indonesia (then ratified by the total regional expenditure of each province) and using the control variables health expenditure, decentralization fiscal and GRDP per capita as an illustration of the average income of the community which also determines the education outcome.

This study uses secondary data with a collection method through documentation from the Central Statistics Agency (BPS), the General Directorate of Budgetary Balance (DPJK) of the Republic of Indonesia and Simreg BAPPENAS. This research is focused on the eastern provinces of Indonesia with the exception of North Kalimantan as it is a new province, as indicated in the National Medium Term Development Plan (RPJMN) 2015- 2019 stipulated by Presidential Regulation No.2 of 2015, namely the islands of Kalimantan, Sulawesi, Maluku, Nusa Tenggara and Papua with a period of 2011-2020.

The research model was developed on the basis of the theory of investment in human capital by Becker (1975), transforming several previous studies (Verhoeven, Gupta and Tiongson, 1999; Ebi and Ubi, 2017; Ihugba, Ukwunna and Obiukwu, 2019; Wardani, Ferianto; dan Arsandi, 2020). The theory of investment in human capital is one of the formal theories underlying the discussion of public spending. This theory explains that there is a relationship between income, expenditure and the development of human capital. Income is seen as a resource that supports investment in education, in order to increase the development of human capital. The higher the income level, the more it will affect productivity in the future. For public expenditure in the education sector, this has an effect on the development of human capital, as well as a potential influence on the ability of individuals to

increase their productivity in the future. The relationship can be described mathematically as follows:

$$Y_t = f(X_{1t}, X_{2t}, Z_t)$$

Yt shows social indicators that show education outcome as represented by enrollment rates, expected years of schooling and the average number of years of schooling; X_{1t} shows the function of the education expenditure allocation while X_{2t} is the allocation for other related programs, while Z_t is a socio-economic variable.

The adapted approach in this study shows the relationship between education spending and education outcome. This model is a function of modified demand for education combined with control variables, namely health expenditure, decentralization fiscal and GDP per capita.

Referring to the research of Verhoeven, Gupta and Tiongson, (1999); Wardani, Ferianto; dan Arsandi, (2020), so that this research model is clarified as follows:

$$EP = f(EXEDU_{t-1}, EXHEA_{t-1}, DF, GRDP)$$

Or:

EP = Educational performance as an indicator of school participation rates for primary, middle and secondary levels, expected years of schooling and average length of school

EXEDU = Education expenditure lag-1 (ratio of education expenditure to total regional expenditure)

EXHEA = Health Expenditure lag-1 (Ratio of health expenditure to total regional expenditure)

DR = Decentralization Fiscal GRDP= Income per capita

Thus, this research model uses five empirical models, as follows:

$$PSE = \beta_0 + \beta_1 EXEDU_{t-1} + \beta_2 EXEDU_{t-1} + \beta_3 DF + \beta_4 GRDP$$

$$JHSE = \beta_0 + \beta_1 EXEDU_{t-1} + \beta_2 EXEDU_{t-1} + \beta_3 DF + \beta_4 GRDP$$

$$HSE = \beta_0 + \beta_1 EXEDU_{t-1} + \beta_2 EXEDU_{t-1} + \beta_3 DF + \beta_4 GRDP$$

$$OSH = \beta_0 + \beta_1 EXEDU_{t-1} + \beta_2 EXEDU_{t-1} + \beta_3 DF + \beta_4 GRDP$$

$$ALS = \beta_0 + \beta_1 EXEDU_{t-1} + \beta_2 EXEDU_{t-1} + \beta_3 DF + \beta_4 GRDP$$

Where PSE is the primary school participation rate, JHSE is the middle school participation rate, HSE is the HSE is the secondary school participation rate, OSH is the expected duration of schooling and ALS is the average length of schooling. OSH and ALS are new research proxies. The analytical method used is structural equation modeling (SEM) using Rstudio software.

3. RESULTS DAN DISCUSSION

Before testing the hypothesis, the fit of the model is tested through a study of various goodness-of-fit criteria. Here are the results of the goodness of fit index analysis from the full model test results are shown in Table 2

Table 2 shows that the goodness-of-fit index value parameter conforms to the required standard, so that the overall analysis model can be said to be fitted and there is a correspondence between the model and the data.

Further, to test the effect of the independent variable on the dependent variable in the form of a panel

Table 2. Goodness of Fit Index

Model Test User Model	Cut – Off Value	Output RStudio
Model Test User Model (Metode Absolute fit indices)		
Test statistic (X2) Chi Square (CMIN/DF)	Kecil	0.000
Root Mean Square Error of Approximation:		
RSMEA	< 0.08	0.000
90 Percent confidence interval - lower	< 0.05	0.000
90 Percent confidence interval - upper	< 0.05	0.000
GFI	≥ 0,9	1.000
AGFI	≥ 0,9	1.000
Root mean square residual (RMR)	<0.08	0.000
Standardized Root Mean Square Residual(SRMR)	< 0.08	1.000
Model Test Baseline Model (Incremental fit indices)		
P-value	< 0.05	0
User Model versus Baseline Model		
Comparative Fit Index (CFI)	≥ 0,95	1.000
Tucker-Lewis Index (TLI)	≥ 0,95	1.000

regression analysis in the form of a panel data regression analysis using the Structural Equation Modeling (SEM) using Rstudio software. Here are the results of the model estimation test in the table 3 below:

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Table 3 and the hypothesis tests carried out using the Rstudio software show that education expenditure has a positive and significant impact on education outcome as a function of enrollment rates for all levels of education, years expected schooling and the average length of schooling in eastern Indonesia. However, what is significant is only participation at based on primary, school level and expected length of schooling, while middle school, high school and average years of schooling are not significant. that an increase in public spending can improve education outcome. This is in line with the results of Faguet and Sánchez (2008), who explain that public expenditure on education has an effect on school results seen from the level of school participation. Mohammed, Yusuf and Omar, (2021), education spending has a positive and significant effect on educational performance at all levels of the school in Zansibar. This indicates that the greater the public expenditure in the education sector or the education budget, the higher the level of participation in education in the region. This is also consistent with (Verhoeven, Gupta and Tiongson, 1999; Obi *et.al.*, 2016).

Table 3. Result Of The Model Estimation Tests

	Variable		Estimate	Standar Error	t value	Pr(> t)	Description
	Eksogen	Endogen					
EDEXP		PSE	35.802	7.664	4.672	0.000***	Significant
EDHEA		PSE	46.647	13.932	3.348	0.001***	Significant
DF		PSE	7.969	1.911	4.171	0***	Significant
GRDP		PSE	0.930	0.634	1.467	0.142	Not significant
EDEXP		JHSE	9.515	10.375	0.917	0.359	Not significant
EDHEA		JHSE	92.580	18.862	4.908	0.000**	Significant
DF		JHSE	2.007	2.587	0.776	0.438	Not significant
GRDP		JHSE	2.514	0.858	2.928	0.003**	Significant
EDEXP		HSE	-17.390	13.117	-1.326	0.188	Not significant
EDHEA		HSE	144.956	23.845	3.270	0.000***	Significant
DF		HSE	-8.653	3.270	-2.646	0.008***	Significant
GRDP		HSE	4.342	1.085	4.001	0.000***	Significant
EDEXP		OSH	4.334	1.606	2.698	0.007***	Significant
EDHEA		OSH	16.570	2.920	5.675	0.000***	Significant
DF		OSH	-0.088	0.400	-0.221	0.825	Not significant
GRDP		OSH	0.359	0.133	2.704	0.007***	Significant
R Square		OSH			0.362		
EDEXP		ALS	0.159	1.899	0.084	0.933	Not significant
EDHEA		ALS	8.211	3.452	2.379	0.017**	Significant
DF		ALS	0.725	0.473	1.532	0.126	Not significant
GRDP		ALS	0.533	0.157	3.390	0.001***	Significant

Source: Data processing with Rstudio, 2021

Description *** Significant 1%; ** Significant 5%; * Significant 10%

The results of this estimate explain that public spending provides insight into the government's efforts to open up access to educational opportunities, when the government allocates a budget for education spending, the government has effectively made an investment and expects a return. As explained in the theory of investment in human capital, the return to education can take the form of human capital development (Wardani, Ferianto; dan Arsandi, 2020). In the context of the state, the higher the income of a country, the higher the expenditure allocated to the education function, so that it will constitute the development of human capital. The development of human capital can be achieved by opening and equalizing access to education, which results in increased participation rate. However, the research results in eastern Indonesia did not maximize the achievement of educational performance as they did not show a significant influence on educational performance, this is certainly inseparable from the allocation for education. education which is still less than

30% of the total budget allocation mandated by the 1945 Constitution and the National Education Act.

Education expenditure is the main capital to encourage the quality of human resources, according to research by Iqbal, and Kiendrebeogo (2015), suggesting that public spending in the education sector affects the level of education. Research by Baldacci *et al.*, (2008) explains that public spending in the education sector will increase the level of school participation. An increase in the enrollment rate will directly increase the average length of schooling. (Gupta, S., 2002) concludes that high public spending on primary and secondary education will have a positive impact on educational attainment. Ebi and Ubi (2017), explain that there is a strong and positive relationship between education spending and access to all levels of education in Nigeria.

Farayibi and Folarin (2021) studied the impact of public education spending on education outcomes in the 31 countries of sub-Saharan Africa (SSA) from 2000 to

2019 using the common moment method (G). This study highlighted the priorities of public education spending on the continent. The results obtained that the effect of public expenditure on education on educational outcomes in sub-Saharan Africa is determined by the measure of educational outcomes used. Public spending in Africa is mainly concentrated on primary and secondary education to the detriment of higher education because it is practical and enjoys political advantages. School performance is good, given the school participation rate for the primary, secondary and secondary levels as well as the expected duration of school and the average duration of schooling has not yet reached the government's target, with the exception of North Sulawesi, Maluku achieved the average length of schooling target in 2018.

To encourage the improvement of education outcome, several programs are implemented, one of the national priority programs, namely the PIP (Smart Indonesia Program), is a set of policies in accordance with the Instruction concerns the 2014 presidential issue. implementation of prosperous family savings. Program, the Smart Indonesia program and the Healthy Indonesia program to build a productive family, as well as the Family Assistance Savings Program (PSKS) and the Healthy Indonesia Program (PIS). The PIP through the Smart Indonesia Card is the provision of financial aid education to elementary, middle and high school/vocational high school students age 6 (six) from 21 (poor or vulnerable vingtsus) families to finance their, so that they can access education educational services until they graduate from high school. In 2019, the PIP was awarded 18.39 (eighteen point thirty-nine) million In addition to the PIP, the government is also implementing other programs to ensure that school-aged children are in education units such as: school operational assistance, construction of new units (New USB unites) and new classrooms (RKB), scholarships for gifted and exceptional students, school dormitories, and classroom rehabilitation.

Unlike research Wardani, Ferianto; dan Arsandi (2020), from 55 regencies/cities (27 Java and outside Java) in 2010- 2012, explained that education spending had an effect on net enrollment rates for the SMA level, but that SD and SMP levels had no significant effect. The same chosen was stated by Maharani and Yulhendri (2020), education expenditure has a negative and insignificant effect on participation in secondary education in the regency/city of the province of West Sumatra.

Obi *et.al.*, (2016) research also reveals the same, the weak relationship between education spending and the quality of education, education spending does not have a significant effect on schoolchildren, (Ihugba, Ukwunna and Obiukwu, 2019) in Nigeria. Filmer and Pritchett (1998), examined the relationship between public education expenditure per student and the percentage of 15-19 year olds who successfully completed grade 5. At first, the correlation seemed positive and significant, but

after controlling for per capita income, the correlation turned out to be weak. The results of this study are the same as the research started by Guo (2006) regarding education spending and regional inequalities between local governments education in rural areas through fiscal transfers, but statistically shows results. negative. Likewise the conclusions obtained in (Hanushek, 1997; Hanushek, 1986, 2003; Al-Samarrai, 2006). Likewise, this increase in participation is not always followed by an increase in the quality of students if there is no incentive to exceed (Blanckenaut and Camera, 2009). Moreover, public expenditure does not have a direct correlation with educational achievement (Michaelowa, 2001).

The Effect of health expenditure on Education Outcome Based on Primary, Middle and Secondary School Participation Rates, Years of School Expectations, and Average Length of Schooling in Eastern Indonesia

In addition to education expenditure, health factors also determine access to education. Good nutrition will promote children's participation and persistence in school (Verhoeven, Gupta and Tiongson, 1999). In this study, the health expenditure variable was used. The amount of health spending affects the level of public health. The healthier a person, the higher the expectations of going to school, so participation in education increases (Obi *et.al.*, 2016). Thus, health spending improves the state of health of (Zubair, 2018). Likewise, if the lack of access to health services, especially for children, can affect children's success in education (Baldacci *et al.*, 2008). This indicates the need for simultaneous improvement of public services in various fields to achieve the optimal impact of quality improvement. Other service areas such as the availability of drinking water and sanitation infrastructure can also affect the health status and education level of the community.

Table 3 shows that health spending has a positive and significant effect on education outcome, enrollment rates at all levels, expected years of schooling and average length of schooling. Although health expenditure is still minimal, each province is still less than 10%, as regulated by Health Law No. 36 of 2009 in Article 171 which governs the state's obligation to allocate 5% of the APBN to the health sector excluding salaries. health workers and also orders provincial and district / city governments to set aside at least 10% of the APBD. The health sector budget is one of the compulsory expenditures in Indonesia whose expenditure allocation has been regulated by law and aims to improve health facilities and infrastructure, improve the quality of health services, strengthen the management and prevention of malnutrition (stunting), as well as the strengthening of government programs to improve public health. Therefore, it is hoped that the allocation of the provincial government health budget can improve human development in terms of health.

According to research by Edeme (2014; 2017), public health spending has a positive marginal impact on

human development. Likewise, research by Iheoma (2014) aims to examine whether social spending is able to ensure human development for some countries in sub-Saharan Africa in the context of panel data. The results show that only public health and higher education spending is important in explaining human development in these countries. Razmi, M. J., Abbasian, E and Mohammadi (2012), This study examines the effect of public health expenditure on the human development index (HDI) using the least squares method (OLS) during the period 1990-2009 in Iran. The results showed a positive and significant relationship between public health expenditure and the human development index. However, unlike Haque and Khan (2019), they found a significant and negative relationship between health spending and the HDI.

The Effect of Fiscal Decentralization on Education Outcome Based on Primary, Middle and Secondary School Participation Rates, Years of School Expectations, and Average Length of Schooling in Eastern Indonesia

The results of the study prove that fiscal decentralization has a positive and significant impact on the enrollment rates in primary, college and on the average length of schooling, but only the enrollment rate for primary levels is significant, but different from the high school rate has a negative and significant effect, while the old school expectations have a negative and insignificant effect. This indicates that the changes in fiscal decentralization have not been able to maximize the performance of education, both in terms of school participation rates, except for the elementary level.

One form of fiscal decentralization policy is that each region has the power to determine the budget of its respective regions, so that the function of local governments in the education sector is to plan and budget for education programs and to compete with other sectors to obtain them. One of the risks of implementing regional autonomy, especially from the point of view of health financing, is the possibility that local governments may not prioritize the education sector. Empirically, it can be seen that the development of provincial fiscal decentralization in East Indonesia in 2011- 2020 is still highest in South Kalimantan Province, with an average of 54.9%, followed by East Kalimantan at 51, 3% and the lowest development is West Papua. and Papua, which is at the rate of 5-6%. The same has happened in the province of South Sulawesi which has experienced fluctuations and even decreased. Fiscal decentralization in Eastern Indonesia is still not effective because there are still several obstacles and problems, for example the capacity of each region to multiply the still low local revenue potential and the large number of people with various variations.

Contrary to the results of a study by Faguet, Faguet and Kanth (2020), examining the impact of fiscal decentralization on education and health in Ethiopia using panel data to examine whether this decentralization

increases net enrollment in primary schools and access to antenatal care for pregnant women. The main channel seems to be institutional and not fiscal. In addition, Faguet and Sanchez (2008), examined the impact of decentralization on public sector production in Colombia and Bolivia. In Colombia, the decentralization of education financing has increased enrollment rates in public schools. In Bolivia, decentralization makes the government more responsive by redirecting public investment to areas where it is most needed. In both countries, investment is shifting from infrastructure to primary social services. (Faguet and Sánchez, 2014; Khan *et al.*, 2014) also found the same that decentralization increased net participation in education.

The Effect of GRDP Per Capita on Education Outcome Based on Primary, Middle and Secondary School Participation Rates, Years of School Expectations, and Average Length of Schooling in Eastern Indonesia

Table 3 and the hypothesis tests performed using the Rstudio stated that GRDP per capita has a positive and significant software effect on education outcome both based on enrollment rates for all levels of education, college and high school, expected years of schooling and average length of schooling except elementary school which is low, not significant in eastern Indonesia. This means that an increase in public spending can improve the performance of education.

This requires that the ability to access education is largely determined by the economic capacity of a community. One measure of the economic capacity of the community is per capita income. The higher the per capita income of a society, the more likely it is that consumption will increase as well as the consumption theory proposed by Keynes (1936), this includes education spending. The higher the income level of the community, will encourage an increase in school participation, the expected duration of school and the average duration of school

This research case adds GDP per capita as a control variable in the study. Table 2 and the hypothesis tests using Rstudio indicate that per capita income has a positive and significant software effect on educational performance as a function of enrollment rates for the primary and intermediate and secondary levels of education of expected years of schooling and average length of schooling in eastern Indonesia. This illustrates that there is a relationship between GDP per capita and educational performance, both in terms of enrollment rate, expected years of schooling and average years of schooling.

Line to research Kalu *et al.*, (2014), shows that per capita income has an insignificant impact on participation in education, both primary and secondary. An increase in household income will reduce the relative cost of educating children, so that per capita income can be associated with per capita income (Verhoeven, Gupta and Tiongson, 1999). Conversely, a decrease in household income will force households to reduce their expenditure on education

in order to maintain the need for consumption, which has an impact on the decrease in participation in education (Chetty and Looney, 2013). Parents' level of education also influences the income they receive (Burney and Irfan, 1995).

According to Lee and Barro (2001), family background, a strong community, school contribution and length of schooling are positively related to student performance; however, they cannot fully explain why East Asian countries perform better in school than other developing countries. This suggests that there are other factors at play, including those associated with a more open environment and a more export-oriented economic environment. However, Sequeira and Robalo (2008) explain that the GDP per capita systematically remains an important determinant of the overall quality of the school.

Economic factors or costs closely related to the work and income of parents of students. These factors include the educational level of the parents, the occupation of the parents and the income of the parents. This is one of the factors that influence students to continue their education. Family economic conditions also greatly affect the implementation of children's education in the family environment, which means that if the family economy is minimal, it will force parents to always support the family. Thus, the inability to economically finance schools is the main factor in students dropping out of school.

The economic situation of the family greatly affects the implementation of children's education in the family. This means that if the family economy is very small, it will require their parents to always try to support the family.

Therefore, the inability to economically finance schools is the main cause of student dropout, this fact being evidenced by the percentage of poor people in the provinces of the eastern region which is still in the two highest figures in Papua, West Papua and West Papua. Nusa Tenggara East.

Thus, households or residents have an urgent role to play in improving the quality of human resource development, where household spending has a direct contribution to human development, such as spending on food, health and education. Poor people will spend more on food purchases than people with high incomes. This means that the poor do not have the opportunity to obtain adequate and appropriate education and health services if they rely only on their income. This is where government intervention is needed to help the most disadvantaged or disadvantaged.

Public expenditure, especially in the field of education, has an important role in an area to absorb technology and develop the capacity for its realization in order to encourage sustainable growth and development, training activities for the hand -work and health care. With investments, both physical and non-physical, it is hoped that this will encourage future productivity in education and health. Schultz (1961), explaining that investment in human capital actually encourages faster economic growth than investment, supports (Becker, 1975). Becker also explains that investing in human resources can increase income. An increase in income will occur with activities that can improve human quality. According to Becker, various activities are efforts to invest in human capital, namely: work, school, information seeking,

Table 4 Percentage Of The Poor Population In The Eastern Region For September 2015 – 2020

Provinces	Year					
	2015	2016	2017	2018	2019	2020
West Nusa Tenggara	16.54	16.02	15.05	14.63	13.88	14.23
East Nusa Tenggara	22.58	22.01	21.38	21.03	20.62	21.21
West Kalimantan	8.44	8	7.86	7.37	7.28	7.24
Central Kalimantan	5.91	5.36	5.26	5.1	4.81	5.26
South Kalimantan	4.72	4.52	4.7	4.65	4.47	4.83
East Kalimantan	6.1	6	6.08	6.06	5.91	6.64
North Kalimantan	6.32	6.99	6.96	6.86	6.49	7.41
North Sulawesi	8.98	8.2	7.9	7.59	7.51	7.78
Central Sulawesi	14.07	14.09	14.22	13.69	13.18	13.06
South Sulawesi	10.12	9.24	9.48	8.87	8.56	8.99
Southeast Sulawesi	13.74	12.77	11.97	11.32	11.04	11.69
Gorontalo	18.16	17.63	17.14	15.83	15.31	15.59
West Sulawesi	11.9	11.19	11.18	11.22	10.95	11.5
Maluku	19.36	19.26	18.29	17.85	17.65	17.99
North Maluku	6.22	6.41	6.44	6.62	6.91	6.97
West Papua	25.73	24.88	23.12	22.66	21.51	21.7
Papua	28.4	28.4	27.76	27.43	26.55	26.8

Source: Central Bureau of Statistics, year 2021

increasing productive wages. This shows that the role of the government in providing educational facilities is very important as higher public spending in the education sector will be able to increase the quantity and quality of education. This will be followed by an increase in the value of the Human Development Index (HDI).

CONCLUSION

Using the analysis of panel data. The variables used in this study are education expenditure (health expenditure, fiscal decentralization, GRDP per capita as a control variable) on education outcome as seen from the school participation rate for levels of education. primary education, middle, high school, expected years of schooling, and the average length of schooling. It can be concluded that 1) education expenditure has a positive effect on education outcome, both school participation for primary, middle and high school levels, expected years of schooling and average length of schooling, but only Primary school enrollment rates and expectations for school years have a significant influence, so that education spending is able to improve education outcome in eastern Indonesia; 2) health expenditure has a positive and significant effect on school education outcome, enrollment rates at all levels, expected years of schooling and average length of schooling; 3) Fiscal decentralization has a positive and significant effect on the enrollment rate for primary, middle and the average length of schooling, but only the enrollment rate for primary schools is significant, but different from the enrollment rate in high school has a negative effect and significant effect, while expectations of school years have a negative and insignificant effect; 4) GRDP per capita income has a positive and significant effect on education outcome both based on enrollment rates for all levels of education, both lower and upper secondary, the expected duration of schooling and the average duration of schooling with the exception of the elementary level which is not significant.

The government should optimize spending on education on existing development programs, such as School Operation Support (BOS), Poor Student Support (BSM), Smart Indonesia Program (KIP), revitalization and skills of vocational education, as well as strengthening character education (PPK) and finding the best solution to increase school participation rates, expected duration of schooling and average duration of schooling in order to be able to achieve the objectives set by the central government, for example through the availability of educational infrastructure, the availability of educators. Provincial governments of eastern Indonesia in order to be able to improve education outcome, especially the school participation rate which has not reached the target set by the central government by providing educational infrastructure of equally in each region and how to raise public awareness of the importance of education supporting the quality of qualified and empowered

human resources. For further research, it is hoped that other researchers can develop several other variables that can improve educational performance such as teacher ratios, availability of educational infrastructure and other variables and pay attention to the rate of education abandonment that occurs.

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