The Effects of Economic, Social, Education and Health Expenditure on Poverty Rate with Capital Expenditure as Moderation on Java 2019 – 2020

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Abstract: This study aims to analyze the effect of government economic, social, education, and health expenditure with capital expenditure as moderating variable on reducing poverty in Java Island. The data used is secondary data from 113 districts and cities in Java with a period of 2018- 2020 sourced from the Central Statistics Agency (BPS) and the Directorate General of Fiscal Balance (DJKP). The method in this study uses Multiple Regression Analysis. The results of these study indicate that social, education and capital expenditure have no impact on poverty rate, but economic and health expenditure have an influence for poverty rate. Whereas capital expenditure as moderation variable does not have the effect of not being able to moderate economic, social, education, and health expenditure relation to poverty rate in Java on period 2019-2020.
Keywords: Poverty, Economic Expenditure, Social Expenditure, Education Expenditure, Health Expenditure and Capital Expenditure.

1. Introduction

Poverty is a complex problem and is influenced by several interrelated factors and is experienced by an individual or group who are unable to support themselves to meet the basic needs of life such as the need for food, clothing, housing, health, education and proper social services. Poverty is seen as an economic inability to meet basic food and non-food needs as measured from the expenditure side. Research on the effect of government spending that has been conducted by Hadi Sasana & Panji Kusuma (2018) states that government spending has a negative effect on poverty, which means that the higher government spending, the lower the poverty rate. Miar & Ahmad Greece (2020) said in their research that government spending plays an important role and has a significant direct effect on reducing poverty. However, not all cases of government spending have a positive impact on reducing poverty. Millsap (2021) argues that too much spending by the government can cause some harm to society.

In previous studies capital expenditure was found to have an effect on reducing poverty as stated in Jideofor's research (2021) that capital expenditure has a significant effect on reducing the poverty rate. This was also revealed by Rina Nabilah & Dani Sugiri (2022), Agustien Sendouw et al, (2019) and Dewi Purnama Issa et al, (2019) in their research that capital expenditure has a negative and significant effect, which means that capital expenditure has a significant impact on poverty reduction. Based on the research that has been done, capital expenditure is indicated to have a strong influence as a moderating variable. Rizky Syamsuri and Agus Bandiyono (2018) which stated that economic has success reduced poverty rate which is mean it gives effect on poverty reduction. This means that the higher the level of economic spending, the lower the poverty rate. For social expenditure, Agustien Sendouw, et al (2020), Gusti Pratiwi, et al (2022), Rina Nabilah & Dani Sugiri (2021) stated that social expenditure has no effect on reducing poverty. In research by Muji Lestari (2021) found that education expenditure had no effect on poverty reduction. Meanwhile Syifa, et al (2020) Annisa Marni Melati, et al (2021) Vinny Alvionita, et al (2021) stated that education expenditure had an effect on poverty reduction.

With the differences in the results of previous studies that were contradictory, the authors attempted to reexamine the factors for reducing the poverty rate by moderating capital expenditures and the variables used for the research were expenditures for the economic function, expenditures for social functions, expenditures for the education function and expenditures for the health function. Bandiyono (2018) said that spending on health functions has no effect on poverty. However, Muji Lestari (2021), Annisa Marni Melati, et al (2021) stated that health expenditure has no effect on poverty reduction.

2. Literature Review and Hypothesis

2.1 Public Sector Budget
Public sector budgets are a means of coordination between sections of government or also known as political documents as a form of executive commitment and legislative agreement on the use of public funds. Public sector budgets are made to help determine the level of community needs. The budget is a tool to monitor the financial condition and implementation of government operations.[15]

The public sector budget is a breakdown of all aspects of the activities to be carried out which are composed of income and expenditure plans to be carried out within one year. Public sector budgets are made to assist the government in assisting people's growth rates such as electricity, clean water, quality health, education and so on so that they are properly guaranteed and the level of people's welfare will be guaranteed and their use and allocation will be more effective and efficient.[15]

2.2 Economic Expenditure
Economic expenditure is part of the realization of APBD spending issued by City/Regency governments in Java Island which is carried out to assist in trade, cooperative business development, MSMEs, labor and so on.The total expenditure for the economic function is obtained from the total expenditure on personnel, expenditure on goods and services, capital expenditure and other expenditures in the economic sector.

Spending on economic functions is government spending that is useful in creating jobs, developing public infrastructure facilities, and will advance the economy of the community which continues to increase. This expenditure aims to have a direct influence on people's welfare and have a multiplier effect.[16]
H1: Economic Expenditure has an effects on reducing poverty rate

2.3 Social Expenditure
Expenditures for Social Functions are part of the realization of APBD expenditures issued by City/Regency governments on the island of Java which are carried out in the form of money or goods to the public to protect the social community, increase economic capacity and/or community welfare.

Social expenditure is one type of regional spending that is used to provide financial and/or in-kind assistance to individuals, families, groups and/or communities that are not continuous and selective in nature which aims to protect against possible social risks under certain circumstances it can be sustainable [17]. Social expenditure e has the specificity of increasing people's welfare, both when social assistance is provided in the form of goods or in the form of money [18].
H2: Social Expenditure has an effects on reducing poverty rate

2.4 Education Expenditure
Expenditure on the Education Function is part of the realization of APBD spending issued by City/Regency governments on the island of Java which is carried out for the procurement of educational facilities for the community. Expenditures according to the function of education are government expenditures that reflect the government's efforts to provide services to the public in the field of education. Education is one of the factors that can affect the level of poverty. By getting proper education, a country will have quality human resources. Education has a crucial role for a nation and aims to improve human intelligence and skills [19]. Education has a very important role in shaping the ability of developing countries to absorb modern technology and to develop capacities for sustainable development and growth. This can be realized by allocating government spending on the education sector, thereby increasing the productivity and quality of the population [20]. Thus programs in the field of education have a big role in the progress of the nation, economy and social.
H3: Education Expenditure has an effects on reducing poverty rate

2.5 Health Expenditure
Health Function Expenditure is part of the realization of APBD spending issued by City/Regency governments on the island of Java which is carried out to procure health facilities for the community. Palenewen et al, (2018) found out that health spending had a negative and significant impact on poverty. Meanwhile, Bandiyono's research (2018) said that spending on health functions had no effect on poverty.

Government investment in health has a detrimental impact on reducing poverty. The importance of ensuring that the poor have access to health services must be raised in pro-poor activities. Therefore, it is necessary to plan, allocate and focus on pro-poor programs and activities. In order for the poor to be able to access proper health facilities, the disbursement of health financing by the Regional Government needs to be increased [22
H4: Education Expenditure has an effects on reducing poverty rate

2.6 Capital Expenditures
In accounting for the acquisition value of assets, all funding needed until the assets are available and ready for use is calculated. Including the operational costs of the goods/services procurement committee related to the procurement of related assets. In accordance with the Minister of Home Affairs Regulation Number 59 of 2007 concerning Changes to the Principles of the Minister of Home Affairs Regulation Number 13 of 2006 concerning Guidelines for Regional Financial Management Provisions in Article 52, capital expenditure is goods/services expenditure which is budgeted for APBD expenditures used for expenditures made in the context of procurement tangible fixed assets that have a useful value of more than 12 months to be used in government activities [23].
H5: Capital expenditure moderates the relation between function expenditures with reducing poverty rate

2.7 Poverty Rate
Poverty is a condition in which a person or household experiences total shortages to the point where they are unable to meet even the most basic needs. It is seen as an economic inability to meet basic food and non-food needs as measured from the expenditure side [15]. Because poverty is related to problems of low income and consumption as well as low levels of health and education and the inability of the poor to be involved in development, poverty is a multifaceted problem. Poverty is a complex problem and is influenced by several interrelated factors and is experienced by an individual or group who are unable to support themselves to meet the basic needs of life such as the need for food, clothing, housing, health, education and proper social services.

3. Research Methodology
This study focus on the phenomenon of poverty within the districts and cities on Java. It is using secondary data during period in 2018 – 2020. Data variables of poverty rate are sourced from CBS through each province websites. In the meantime, data of APBD realization report for economic, social, education, health and capital expenditure are sourced from the publication of Directorate General of Fiscal Balance's website. To observe the influence of economic, social, education and health expenditure on poverty rate, this study used linier regression model and moderated regression analysis to analyze the moderate effect of capital expenditure on free variables relation with poverty rate.

The linier regression model used in the test is as follows:
PR= α + β1ECE + β2SE + β3EDE + β4HE + e …..(1)
The moderated regression analysis equation is as follows:
PR= α + β1ECE + β2SE + β3EDE + β4HE + β5M + β6ECE*M + β7SE*M + β8EDE*M + β9HE*M + e..(2)

Information:
PR = Poverty Rate
α = Regression Constant
β1-β5 = Regression Coefficient
ECE = Economic Expenditure
SE = Social Expenditure
EDE = Education Expenditure
HE = Health Expenditure
M = Capital Expenditure
e = Error Term

4. Result and Discussion

4.1 Descriptive Statistical Analysis

Table 1 Descriptive Statistical Test Results

(million)

Variabel	N	Minimum	Maximum	Mean	Std. Deviasi
PR	153	-8.55	18.06	2.0918	7.06920
ECE	153	7334.52	194185.68	100193.3660	36851.14
SE	153	2861.00	42596.00	22003.9012	7644.62
EDE	153	164638.00	1228735.41	633392.8241	242574.39
HE	153	137411.00	634968.00	380425.4358	98694.19
M	153	57422.00	577461.00	316928.2645	121088.65
ECE.M	153	3286017226315120.00	87274670143516050.00	87274670143516100.00	18556061085552647.00
SE.M	153	1152114372213750.00	17593298003350629.00	6927695175572173.00	3478331180038866.00
EDE.M	153	23186325537891742.00	555426687706738300.00	233640610471508000.00	3501692726634839.00
HE.M	153	22424764336089403.00	273390469584844000.00	122321793102658920.00	59558719871986360.00
Valid N (listwise)	153	-8.55	18.06	2.0918	7.06

Source: Data Analysis Results, 2023

Variable of PR has the lowest (minimum) value of -8.55 and the highest (maximum) value of 18.06 with an average (mean) of 2.0918 and a standard deviation of 7.06920. Variable of ECE has the lowest (minimum) value of 7,334,251,701.52 and the highest (maximum) value of 194,185,781,090.68 with an average (mean) of 100193278050.3660 and a standard deviation of 36851454155.14403. Variable of SE has the lowest (minimum) value of 2,861,957,099.00 and the highest (maximum) value of 42,596,405,074.00 with an average (mean) of 22,003,103,816.9012 and a standard deviation of 7,644,176,629.62337. EDE variable has the lowest (minimum) value of 164,638,395,224.00 and the highest (maximum) value of 1,228,735,553,424.41 with an average (mean) of 633,392,707,835.8241 and a standard deviation of 242,574,541,823.39084. Variable of HE has the lowest (minimum) value of 137,411,049,260.00 and the highest (maximum) value of 634,968,734,902.00 with an average (mean) of 380,425,551,058.4358 and a standard deviation of 98,694,691,383.19272.

Variable of CE has the lowest (minimum) value of 57,422,540,258.00 and the highest (maximum) value of 577,461,193,639.00 with an average (mean) of 316,928,474,635.2645 and a standard deviation of 121,088,846,284.65330. Variable of ECE.M has the lowest value (minimum) of 3,286,017,226,315,120,000,000.00 and the highest value (maximum) of 87,274,670,143,516,050,000,000.00 with an average (mean) of 87,274,,43,516,100,000.00 and standard deviation of 18,556,516,516. Variable of SE.M has the lowest value (minimum) of 1,152,114,372,213,750,000,000.00 and the highest value (maximum) of 17,593,298,003,350,629,000,000.00 with an average (mean) of 6,927,695,175,572,173,000,000.00. Variable of EDE.M has the lowest value (minimum) of 23,186,325,537,891,742,000,000.00 and the highest value (maximum) of 555,426,687,706,738,300,000,000 with an average (mean) of 233,640,610,471,508,000.00. Variable of HE.M has the lowest value (minimum) of 22,424,764,336,089,403,000,000.00 and the highest value (maximum) of 273,390,469,584,844,000.00 with an average (mean) of 122,321,793.

4.2 Discussion

Data tabulation was processed with the IBM SPSS Statistics 25 application, produced descriptive statistics, fixed effect tables for regression equations, and t-test results, but previously the data had passed the classic assumption test results which included normality tests, multicollinearity tests, autocorrelation tests, and heteroscedasticity tests. In the normality test a good regression model is must having normal data distribution. From the results of the Kolmogorov-Smirnov test, a value of 0,000 is produced, which can be concluded that the regression model is not normally distributed because the value is below 0,05. The regression model is not feasible for further analysis. To normalize the data, it is necessary to remove outlier data. Outlier data is data that has unique characteristics that look very different from other observations and appear in the form of extreme values [24]. Outlier detection can be done using the outlier boxplot and 73 extreme data are found that must be eliminated. After the elimination has been done, the normality test was tested again after eliminating

outliers and produced 0,053 which can be concluded that the regression model is normally distributed because the value is above 0,05.

So that the residual data is normally distributed, during the multicollinearity test there is no multicollinearity problem because the coefficient between the tolerance variables is more than 0,1 and the VIF value is less than 10. The autocorrelation test found no signs of autocorrelation because the Durbin Watson value lies between -2 to 2, which is 1,926. As well in the heteroscedasticity have a significance value nor sig. (2-tailed) is greater than 0,05.

Table 2. Result of Linear Regression Analysis

Variable	P	T_{table}	T_{count}	Sig.	Conclusion	Information
ECE	0,05	1.28711	-2,78	0,006	Significant	H_1 Accepted
SE	0,05	1.28711	-.257	0,798	Significant	H_2 Rejected
EDE	0,05	1.28711	-.831	0,407	Significant	H_3 Rejected
HE	0,05	1.28711	2,051	0,042	Significant	H_4 Accepted

Source: Data Analysis Results, 2023

Table 3. Result of Moderated Regression Analysis

Variable	P	T_{table}	T_{count}	Sig.	Conclusion	Information	Moderation Type
ECE.M	0,05	1.28711	-0,705	0,482	Significant	H_5 Rejected	Homologiser
SE.M	0,05	1.28711	0,171	0,864	Significant	H_6 Rejected	Homologiser
EDE.M	0,05	1.28711	-1,579	0,116	Significant	H_7 Rejected	Homologiser
HE.M	0,05	1.28711	0,119	0,905	Significant	H_8 Rejected	Homologiser

Source: Data Analysis Results, 2023

The results of testing the significance of the regression coefficient of the economic expenditure is the first hypothesis of this study states that economic expenditure has an effect on the poverty reduction rate. The magnitude of the regression coefficient of economic expenditure is -4.988 and a significance value of 0.006. At the significance level α = 5%; then the regression coefficient is not significant because the significance is 0.006 <0.05 so it can be concluded that economic expenditure has an effect on poverty reduction rate so that the first hypothesis of this study is proven.

The results of testing the significance of the regression coefficient of the social expenditure is the second hypothesis of this study states that social expenditure has an effect on the poverty reduction rate. The magnitude of the social function expenditure regression coefficient is -2.036 and a significance value of 0.798. At the significance level α = 5%; then the regression coefficient is not significant because the significance is 0.798 > 0.05 so it can be concluded that social expenditure has no effect on poverty reduction rate so that the second hypothesis of this study is not proven.

The results of testing the significance of the regression coefficient of the education expenditure variable is the third hypothesis of this study states that education expenditure has an effect on the poverty reduction rate. The magnitude of the regression coefficient of education expenditure is -0.831 and a significance value of 0.407. At the significance level α = 5%; then the regression coefficient is not significant because the significance is 0.407 > 0.05 so it can be concluded that education expenditure has no effect on poverty reduction rate so that the third hypothesis of this study is not proven.

The results of testing the significance of the regression coefficient of the health expenditure is the fourth hypothesis of this study states that health ependiture has an effect on the poverty reduction rate. The magnitude of the regression coefficient for health expenditure is 2.051 and a significance value of 0.042. At the significance level α = 5%; then the regression coefficient is not significant because the significance is 0.042 <0.05 so it can be concluded that health expenditure has an effect on poverty reduction rate so that the fourth hypothesis of this study is proven.

The results of independent variable with capital expenditures as the moderating variable all obtains a significance value of greater than the specified error tolerance of 0.05. So it can be concluded that capital expenditures do not have a moderating effect on the relation between functional expenditure and poverty rate reduction.

5. Conclusion

According to the finding of research on the effect of economic, social, education and health expenditure on poverty rate with capital expenditure as moderating variables on Java in 2019 - 2020, it can be drawn conclusion as follows: economic and health expenditure have significant effect to poverty rate in Java, while

social and education expenditure have no effect to poverty rate in Java. While in moderation, the result that capital expenditure as moderation variable does not have the effect of not being able to moderate economic, social, education, and health expenditure relation to poverty rate in Java on period 2019-2020.

References

[1]. Badan Pusat Statistik. (2019). Profil Kemiskinan di Indonesia September 2019. Berita Resmi Statistik, 08, 1– 12.
[2]. Hadi Sasana and Panji Kusuma, (2018), "Government Expenditure and Poverty in Indonesia" in International Conference on Economics, Business and Economic Education 2018, KnE Social Sciences, pages 142–153. DOI 10.18502/kss.v3i10.3125
[3]. Miar, Ahmad Yunani. (2020) The Analysis of Influence of The Goverment Expenditure in Indonesia. Banjarmasin : Universitas Banjarmasin.
[4]. Millsap, A.A. (2021). The High Cost of Too Much Government Spending. https://www.forbes.com/sites/adammillsap/2021/08/06/the-high-costs-of-too-much-governmentspending/. 02nd October 2021.
[5]. Nabilah, Rina and Sugiri, Dani. (2018). "Do Social Assistance and Capital Expenditure Affect Regional Poverty Levels in South Sumatra Province? "Business Focus: Management and Accounting Study Media. pp 85.
[6]. Sendouw, A., Rumate, V. A., & Rotinsulu, D. C. (2019). The Influence of Capital Expenditures, Social Expenditures, and Economic Growth on Poverty Levels in Manado City. Journal of Regional Economic Development and Finance, 19(2), 1–15. https://doi.org/10.35794/jpekd.15780.19.2.2017
[7]. Issa, Dewi Purnama et al. (2019). "Effects of Capital Expenditures, Development Index and Unemployment on Poverty in Gorontalo Province". Jambura Equilibrum Journal.
[8]. Syamsuri, Rizky and Bandiyono, Agus. (2018). "THE INFLUENCE OF LOCAL GOVERNMENT EXPENDITURE BASED ON FUNCTION ON INCREASING HDI AND POVERTY REDUCTION (STUDY IN DISTRICTS/CITIES IN ACEH PROVINCE)". Artha Info Journal.
[9]. Pratiwi, Gusti et al. (2022). "The Influence of Social Assistance Spending and Economic Growth on Poverty Levels in Langkat District". Journal of Accounting Science Research.
[10]. Sustainability, Muji. (2021). "Analysis of the Impact of Regional Expenditures on Poverty in Jambi". Popular Scientific Journals.
[11]. Demak, Syifa K. N. et al. (2020). "THE EFFECT OF EDUCATION EXPENDITURE, HEALTH EXPENDITURE, CAPITAL EXPENDITURE AND INFLATION ON POVERTY IN MANADO CITY"
[12]. Melati, Annisa M. et al. (2021). "The Influence of Education Expenditure, Health Expenditure and Social Assistance Expenditure on Poverty in Regencies and Cities in West Java Province". Indonesian Accounting Research Journal.
[13]. Riva, Vinny A. (2021). "ANALYSIS OF THE INFLUENCE OF SOCIAL ASSISTANCE, EDUCATION AND ECONOMIC GROWTH EXPENDITURES ON POPULATION POVERTY LEVEL IN RIAU PROVINCE". PEKBIS.
[14]. Bandiyono, A. (2018). The Influence of Local Government Expenditures Based on Functions on Increasing HDI and Poverty Alleviation. Artha Info Journal.
[15]. Central Bureau of Statistics. (2019). Poverty Profile in Indonesia September 2019. Official Statistics News.
[16]. Azwardi. (2014). The Influence of Provincial Government Expenditures in Indonesia for Economic, Health, Education and Housing and Public Facilities Functions on the Poor in 2011-2013. Journal of Development Economics, 12(1), 1–11. https://ejournal.unsri.ac.id/index.php/jep/article/view/4862.
[17]. Regulation of the Minister of Home Affairs Number 77 of 2020 concerning Technical Guidelines for Regional Financial Management. (2020).
[18]. Sendouw, A., Rumate, V. A., & Rotinsulu, D. C. (2017). The Influence of Capital Expenditure, Social Expenditure, and Economic Growth on Poverty Levels in Manado City. Journal of Development Economics, 18(5), 1-15. https://doi.org/https://doi.org/10.35794/jpekd.15780.19.2.2017
[19]. Joseph. (2018). Government Concepts and Strategies in Poverty Reduction. Jakarta: Indocamp. Misdawati, & Sari, A. P. (2013). Analysis of the Impact of Government Expenditures on Education, Health and Subsidy Expenditures on Poverty in Indonesia. Journal of Development Economics.
[20]. Palenewen, T., & Walewangko, E. (2018). The Influence of Education Sector and Health Sector Government Expenditures on HDI and Their Impact on Poverty in North Sulawesi. Efficiency Scientific Periodical Journal.

[21].   Amiyati, Nuri and Bawono, ADB. (2018). "THE EFFECT OF NUMBER OF POOR POPULATIONS, ALLOCATION OF VILLAGE FUNDS (ADD) AND VILLAGE FUNDS (DD) ON THE ALLOCATION OF EDUCATIONAL EXPENDITURES (Empirical Study in Villages in Wonogiri Regency, 2017)". National Seminar and The 5th Call for Sharia Paper.

[22].   Hossain, M.I. (2014). Impacts of Public Expenditure On Poverty In Bangladesh: An Empirical Analysis. Journal of Developing Areas.

[23].   Regulation of the Minister of Home Affairs No. 59 of 2007 "Guidelines for Regional Financial Management" Focusmedia Publishers

[24].   Ghozali, Imam. 2005. Application of Multivariate Analysis with SPSS. Semarang: UNDIP Publishing Agency.