

ANALYSIS OF FISCAL CAPACITY ON HUMAN DEVELOPMENT INDEX WITH MANDATORY SPENDING ON EDUCATION AND HEALTH AS INTERVENING VARIABLE (AN EMPIRICAL STUDY ON REGENCIES/CITIES IN JAVA)

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Abstract

Regional autonomy is aimed at enhancing the proximity between the local government and its people, in terms the local government will identify the weaknesses and strengths of its area from the highest to lowest level. This research attempts to find out the influence of the Fiscal Capacity Index on the Human Development Index with mandatory spending on education and health as the intervening variables. The research used empirical and explanatory research method to analyze the fiscal capacity index on the intervening variables. This study involved secondary data, which were obtained from certain agencies, namely the Regulation of Minister of Finance (PMK No. 119/PMK.07/2017), the GRDP Realization Report of Regencies/Cities in Java Fiscal Year 2016, and the data published by the Central Bureau of Statistics of Regencies/Cities in Java in 2017. The results of the hypothesis analysis reveal that the fluctuation in the Fiscal Capacity Index in each region is able to influence the amount of mandatory spending in education and health. Meanwhile, the Path Analysis test indicates that the Fiscal Capacity Index has a stronger influence on the Human Development Index without any intervention from mandatory spending on education and health. Essentially, the Fiscal Capacity Index is the main variable that affects the Human Development Index.

Keywords: Fiscal capacity, mandatory spending on education, mandatory spending on health, Human development index

Introduction

During fifteen years of the implementation of fiscal decentralization, many regions have been perceived unsuccessful for running their regional matters as indicated by their dependency on transfer funds from the central government. Basically, a region with low financial dependency on the central government can be identified from the low proportion of local revenue (PAD) and other local resources to meet the regional expenditures (Anwar et al., 2013).

Decentralization becomes an unfinished task for a number of regencies/cities in Indonesia due to diverse levels of local revenue (PAD).

Consequently, regencies/cities with lower PAD are inclined to lag behind others. The imbalance in regional development triggers the issuance of fiscal policies in the form of fiscal incentives (Narindra & Jati, 2016). Rosmawati et al., (2015) suggested that to solve the problems of unequal development among regencies/cities due to different local resources, the central government should prepare the scheme of balance funds, i.e., general allocation fund (DAU), special allocation fund (DAK), and revenue sharing fund (DBH). Under Law No. 32/2004 Article 2 Paragraph (4), the administrative features of the local government involve the relationship between the local and

central government as well as with other local governments. Meanwhile, Article 15 stipulates financing fund from central government to local governments includes the allocation of balance funds and loan finance and/or grant finance.

The enactment of Law No. 32/2004 on Local Government and Law No. 33/2004 on Fiscal Balance between the Central Government and the Local Governments that obliges local governments to make changes in their financial management, in which such changes are expected to enable them for autonomously develop their regions. Decentralization allows regencies/cities to obtain the general allocation fund (DAU) from the central government, which is adjusted to the regional fiscal capacity since it reflects the capacity of a region in fulfilling its regional expenditure (Veraningsih, 2009).

In a study on the fiscal capacity of Gunung Kidul Regency, Sriyana (2009) explicated that the local government of Gunung Kidul Regency had not been able to resolve the problems of development program and public service in which the allocation of program funding from the Local Revenue and Expenditure Budget (APBD) and the State Revenue and Expenditure Budget (APBN) had been firmly determined. Another drawback was linked to the requirement to enhance public saving in which Gunung Kidul Regency had relatively low fiscal capacity due to the low revenues from tax and retribution coupled with the uncertain balance funds (transfer funds) from the central government from year to year (Sriyana, 2009).

Furthermore, Narindra and Jati (2016) suggested the human development index (HDI) as the indicator to access the public services carried out by the local government. The indicators of HDI comprise of a long and healthy life, access to knowledge, and a decent standard of living. Moreover, HDI is claimed capable of exposing the natural resources of a region. Therefore, there is a synergy between HDI and natural resources in which it can be realized when the government has the capacity to supply proper infrastructure and facility for the economic development.

Based on the background, the present study attempts to examine the effect of the fiscal capacity index on the human development index (HDI) with mandatory spending on education and mandatory spending on health as the intervening variables.

Fiscal Capacity

The Indonesian Ministry of Finance defines Fiscal Capacity as the capability of collecting state revenues for the realization of the state revenue and expenditure budget (*Kemenkeu RI*, 2014). Regulation of the Minister of Finance No. 37/PMK.07/2016 dated March 11, 2016, concerning Regional Fiscal Capacity Map states that the fiscal capacity index of regencies/cities is measured by calculating the fiscal capacity of each regencies/cities divided by the average fiscal capacity of all regencies/cities (PMK No. 37, 2016). Based on this regulation, the fiscal capacity index is classified into four groups, namely: (1) very high, (2) high, (3) moderate, and (4) low.

The components of the fiscal capacity are as follows:

1. Local revenue (PAD)

Based on Law No. 33/2004, local revenue is locally-raised revenue of a region collected based on a regional regulation (*Perda*) in implementation of Decentralization. Furthermore, Law No. 32/2004 stipulates the local revenue/PAD that consists of local taxes, regional levies, separated regional wealth management and other legitimate revenues. Purbasari (2014) affirmed that in order to increase PAD, the local government should improve infrastructure and facilities in the public service sector as an effort to augment the productivity of the community which ultimately will attract investors.

2. Local Expenditure

Based on Law No. 32/2004, local expenditure is all regional obligations that are recognized as deductions from revenue in the period of the relevant fiscal year. It shall be prioritized to protect and improve the quality of the community in an effort to fulfill regional obligations, namely to protect the community and maintain national unity, integrity and harmony of the Unitary State of the Republic of Indonesia, to improve the quality of life, develop democratic life, realize social justice and equality, improve basic education services, provide health facility services, provide social facilities and decent public facilities, develop social security systems, develop regional planning and spatial planning, develop regional productive resources, preserve

the environment, manage population administration, preserve social and cultural values, establish and implement legislation in accordance with its authority, and other obligations stipulated in the laws and regulations.

Mandatory Spending on Education

Access to knowledge or education is one of the indicators in the measurement of HDI in which it also indicates the steadfastness of the government in providing public services. One of the implementations is a mandate for the central and local governments to allocate a minimum of 20 percent of the national and regional budgets for national education. Furthermore, based on the decree of the Constitutional Court of the Republic of Indonesia, mandatory spending on education includes the salary of educators. Nevertheless, a problem that arises regarding the allocation of education spending is the absence of a basis for regencies/cities in Indonesia in allocating their budgets for education. Currently, such expenditure is incorporated within the Regional Medium-Term Development Plan/RPJMD and manifested in the Local Government Annual Work Plan/RKPD. Therefore, the amount and proportion of education spending are in compliant with the priorities determined by each regency/city.

Mandatory Spending on Health

Similar to the educational sector, health has an important role as an indicator in HDI. Accordingly, the allocation of health spending becomes a serious concern for the central

government. In accordance with Law No. 32/2014 on Local Government, the allocation of health spending is at least 10 percent of total expenditure outside of employee expenditure. Moreover, similar to education spending, the allocation of health spending in regencies/cities is also linked to the development priorities in the Regional Medium-Term Development Plan/RPJMD and the Local Government Annual Work Plan/RKPD. In the present study, a preliminary observation showed that the allocation of health spending also highly varied among regencies/cities in Indonesia.

Human Development Index (HDI)

The problems of human development should be examined partially. Some of the fundamental problems entail poverty, unemployment, illiteracy, democracy enforcement and food insecurity. Assorted indicators have been applied to predict human development yet there is no standardized measurement since the level of human development in each region/country is dissimilar. As a solution, the United Nations Agency/UN establishes a standard called the Human Development Index/HDI. Furthermore, this HDI sets out four indicators, i.e., life expectancy, literacy rates, mean years of schooling, and purchasing power parity. The extent of the HDI is perceived as a manifestation of human development. Furthermore, education and health are two effectual factors perceived to be substantial in human development. These factors are basic human needs to enhance their potential. The higher the basic capacities of a nation is, the greater the potential of the nation (BPS, 2008).

Theoretical Framework

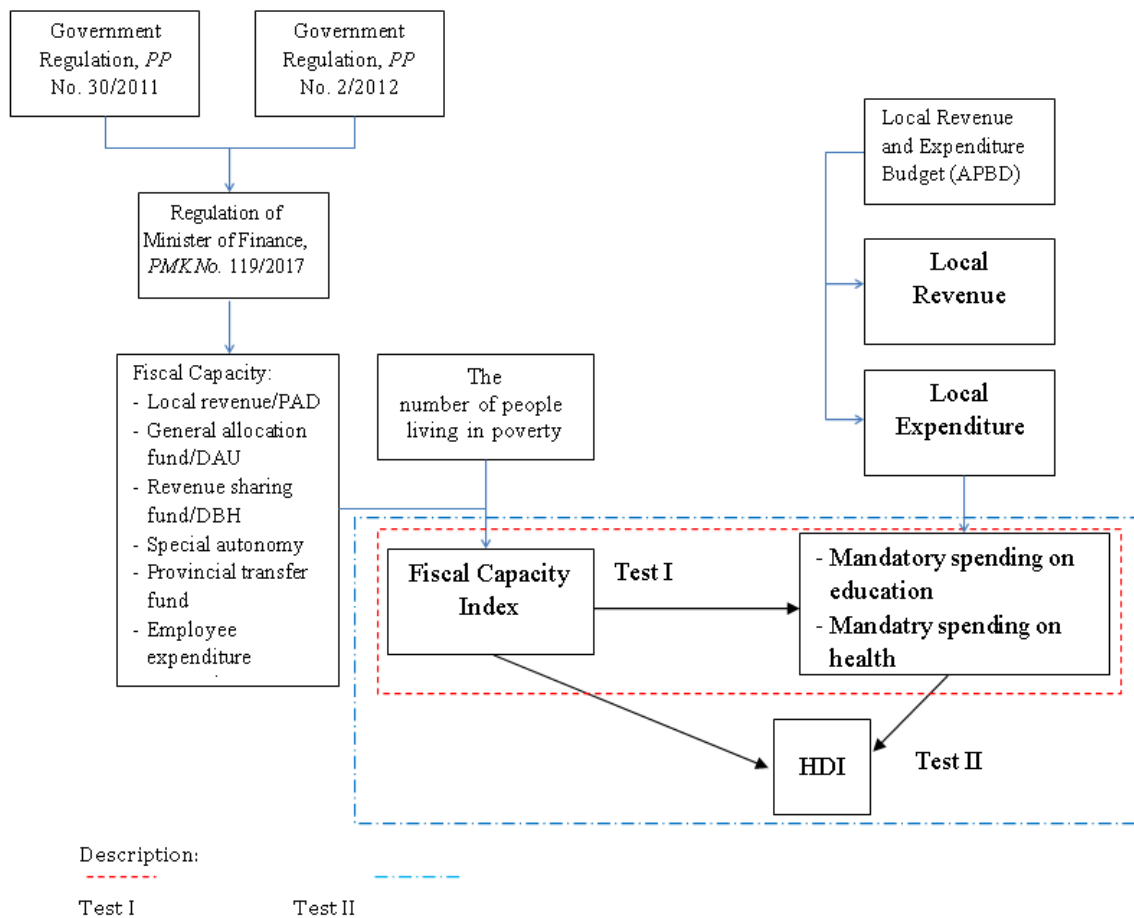


Figure 1. Theoretical Framework

Hypothesis Development

The inequality of fiscal capacity among regions becomes the cause of diverse amount of the general allocation fund/DAU received by the local governments. It is settled on based on several considerations, e.g., poverty rate, natural resources owned by the region, total area, and so forth. Sriningsih and Yasin (2009) explained several reasons for inequality, namely variations in the natural resources, the extent of the area and poverty that eventually lead to low local revenue/PAD and GRDP. Considering such situations, the central government devises the policy of allocating balance funds under the scheme of ‘general allocation fund/DAU’ which amount is diverse compliant with the fiscal capacity (PAD and GRDP) and fiscal needs (e.g., population and total area).

In accordance with the theoretical framework that has been clarified before, the hypotheses are developed as follows:

- H₁: Fiscal capacity index affects the allocation of mandatory spending on education.
- H₂: Fiscal capacity index affects the allocation of mandatory spending on health.
- H₃: Fiscal capacity index affects the human development index (HDI) as intervened by mandatory spending on education.
- H₄: Fiscal capacity index affects the human development index (HDI) as intervened by mandatory spending on health.

Data and Source of Data

The present empirical study is an explanatory research used to analyze the effect of fiscal capacity index on education spending and health spending. This study used secondary data collected by gaining certain information that had been published by specific agencies. The data were retrieved from:

1. The Regulation of Minister of Finance, PMK No. 119/PMK.07/2017

2. The GRDP Realization Report of Regencies/Cities in Java Fiscal Year 2016
3. The Central Bureau of Statistics of Regencies/Cities in Java in 2017 (data of 2016).

HDI = Human Development Index

Results

In the present study, the data of regencies/cities throughout Java in 2016 were examined. The samples of regencies/cities included in this study are:

Methodology

The data analysis method employed in this study was a simple regression analysis method using SPSS Statistics. Prior the simple regression analysis, a descriptive analysis and classic assumption tests were carried out as the requirement for regression analysis. The classic assumption tests included:

1. Normality test
2. Heteroskedasticity
3. Multicollinearity

Subsequently, a simple regression analysis was performed after the completion of classic assumption tests. The formula used in the simple analysis is as follows:

$$MSE = a + b_1 FCI$$

$$MSH = a + b_1 FCI$$

$$HDI = a + b_1 FCI + b_2 MSE$$

$$HDI = a + b_1 FCI + b_3 MSH$$

where:

MSE = Mandatory spending on education

MSH = Mandatory spending on health

FCI = Fiscal Capacity Index

Table 1. Research Sample

Province	N
Banten	7
West Java	27
Central Java	32
Yogyakarta	5
East Java	35
Total	106

Totally, there are 124 regencies/cities in Java. Nevertheless, since 18 of those regencies/cities did not publish the realization report of education and health spending, thus only 106 regencies/cities were involved in this study.

Subsequently, the classical assumption test of normality with the CLT, heteroskedasticity with the Glejser test, and multicollinearity with the VIF and tolerance method were carried out and they found that the data in this were normally distributed hence regression analysis could be done. From the simple regression analysis, the results were as follows:

Table 2. Regression Analysis Result

Equation	Variable	Sig.	T	Desc.	Std Coefficients Beta	F	Sig.	Desc.
I	IKF	.000	5.717	H1 is accepted	.504	32.684	.000	Fit model
								Adj. R ² = .246
II	IKF	.000	4.038	H2 is accepted	.381	16.308	.000	Fit model
								Adj. R ² = .136
III	IKF	.006	2.821		.321	4.372	.015	Fit model
	BWP	.514	-0.656		-.075			
								Adj. R ² = .065
IV	IKF	.038	2.102		.221	5.447	.006	Fit model
	BWK	.124	1.552		.163			
								Adj. R ² = .084

Based on the table, the adjusted R² of equation I shows that the variable of FCI explains 24.6% of the variability of MSE, the adjusted R² of equation II shows that the variable of FCI explains 13.6% of the variability of MSH; the adjusted R² of equation III shows the variables of FCI and MSE explain

6.5% of the variability of HDI, and the adjusted R² of equation IV shows that the variables of FCI and MSH explain 8.4% of the variability of HDI. Furthermore, the results derived from regression analysis reveals that the four equations are fit model as indicated by $p < .05$. Therefore, the

overall regression models are a good fit for the data.

Based on the results of the calculation of equation I and equation III, it can be declared that FCI statistically significantly affects MSE, $\beta = 0.54$ (P2), $p < 0.000$, and FCI statistically affects HDI, $\beta = 0.321$ (P1), and $p < 0.006$. Meanwhile, MSE insignificantly affects HDI as indicated by $\beta = -0.075$ (P3), $p < 0.517$; therefore, it can be claimed that FCI has a direct effect on HDI ($\beta = 0.321$, $p < 0.006$), but it has indirect effect on HDI with MSE as the intervening variable as equal to -0.0378 . From these results, the direct effect of FCI on HDI is greater as indicated by its higher standardized coefficient compared to the effect of FCI on HDI with MSE as the intervening variable.

In accordance with the descriptive statistics, it can be clarified that in order to improve public education, the allocation of education spending of each regency/city is significantly affected by the fiscal capacity which entails the local revenue, transfer funds, and poverty rate. So, it can be interpreted that regarding the amount of education spending, the Local Governments in Java have determined it in accordance with budgetary principles and norms. Nevertheless, the findings of the present study opposes Bawono et al., (2017) in which regions with high fiscal capacity index are disposed to have low mandatory spending on education programs due to its allocation is only based on the poverty rate.

Furthermore, the fiscal capacity has a direct effect on human development index (HDI), implying the fluctuation of HDI is influenced by the components of fiscal capacity, i.e., local revenue, transfer funds, and poverty rate. A strong direct relationship between fiscal capacity and HDI reflects the insignificance of mandatory spending on education, or in other words, fiscal capacity is one of the main variables affecting the fluctuation of HDI in a regency/city. Basically, as an indicator of the fiscal capacity index formula, the higher the local revenues and transfer funds, the higher the human development index, and vice versa. Meanwhile, the greater the poverty rate, the lower the human development index, and vice versa.

The output of the calculation of equation II shows the effect of FCI to MSH, $\beta = 0.381$, *Sig.* $0.000 < 0.05$, while equation IV shows the effect of FCI on HDI, $\beta = 0.221$, *Sig.* $= 0.038$ and the effect of MSE on HDI, $\beta = 0.163$, *Sig.* $= 0.124$. From the result, it can be claimed that FCI has a direct effect

on HDI ($\beta = 0.221$), while it has indirect effect on HDI ($\beta = 0.062$). From these results, the direct effect of FCI on HDI is greater as indicated by its higher standardized coefficient compared to the effect of FCI on HDI with MSH as the intervening variable.

From the descriptive statistics, as explained in the health spending, it can be affirmed that in order to improve public health, the allocation of health spending of each regency/city is influenced by the fiscal capacity with the indicators of local revenue, transfer funds, and poverty rate. Therefore, it can be interpreted that in determining the amount of health spending, the Local Governments in Java have allocated it in accordance with budgetary principles and norms. Meanwhile, Bawono et al., (2017) state that regions with high fiscal capacity relatively have low mandatory spending on public health since the allocation for this budget is adjusted based on the poverty rate of a regency/city.

In addition, the fiscal capacity also has a direct effect on HDI, or in other words, the fluctuation of the HDI is determined by the components of the fiscal capacity, i.e., local revenue, transfer funds, and poverty rate. A strong direct relationship between fiscal capacity and human development index reveals insignificant influence of mandatory spending on health. Accordingly, fiscal capacity is the main variable that influences the fluctuation of human development index in regency/city. As an indicator of the fiscal capacity index formula, the higher the local revenue and transfer funds, the higher the human development index, and vice versa. Moreover, the higher the poverty rate, the lower the human development index, and vice versa.

Conclusion

The hypothesis testing reveals that the fluctuation of the Fiscal Capacity Index in a regency/city will affect the amount of mandatory spending on education as well as mandatory spending on health. Meanwhile, the output of the path analysis shows that the Fiscal Capacity Index has a stronger effect on the Human Development Index without mandatory spending on education and mandatory spending on health as the intervening variables. In other words, the Fiscal Capacity Index is the main variable in the fluctuation of the Human Development Index.

This study has several research limitations to extent the research duration is only one year (2016) population and research samples. and only in Jawa. It is suggested for further studies.

Volume 1, Number 2, December 2018

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