



**THE EFFECT OF MANDATORY EXPENDITURES ON BASIC SERVICES OF  
THE LOCAL GOVERNMENT ON GROSS PER CAPITA REGIONAL  
DOMESTIC PRODUCTS IN EAST JAVA PROVINCE**

DOI: 10.31002/rep.v7i1.61

**Enrico Adhanur Karyadi <sup>1✉</sup>, Hasna Imtiyaz Hanifah<sup>2</sup>**

<sup>1,2</sup>Ministry of Finance, Indonesia

✉ [enrico.karyadi@gmail.com](mailto:enrico.karyadi@gmail.com)

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**Abstract**

In Law Number 23 of 2014, government affairs are divided into three categories that are absolute, concurrent, and general government affairs. Decentralization of mandatory government affairs was expected to fulfil the state and local government goals, one of which is increasing welfare measured by income per capita. Government expenditure in mandatory government affairs was utilized to accomplish this. This study examined the effect of education, health, and social security expenditures on the gross regional domestic product (GRDP) per capita. The research sample was regency and city governments in East Java Province from 2014 to 2016. The research method was quantitative research methods. The results showed that education and social security expenditures negatively impacted GRDP per capita, while health expenditure positively impacted GRDP per capita. Local governments should reform the spending policies to ensure the efficiency and effectiveness of the budget used. The central government, authorities, and the public should also adequately monitor the local government.

**Keywords:** *fiscal decentralization; mandatory expenditure; gross regional domestic product per capita*

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Received: January 15, 2022  
Accepted: April 1, 2022  
Published: April 30, 2022

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## **INTRODUCTION**

The end of The New Order era was marked by fulfilling one of the reform agendas: regional autonomy. The Reformation-era mandated autonomy towards regional government as wide as possible into the constitutional system of the Republic of Indonesia. Regional autonomy was regulated for the first time in Law Number 22 of 1999, updated recently by Law Number 23 of 2014 on Regional Government that shifted the paradigm of centralized government administration to decentralized government administration, gradually solving centralized governmental problems (Bandiyono, 2018). Furthermore, Law Number 1 of 2022 on Fiscal Relations Between Central and Regional Government (UU HKPD) enforces local government to optimally provide public services, one of which is through mandatory spending monitoring by the central government (Ministry of Finance, 2022).

According to Law Number 23 of 2014, government affairs are divided into three categories, namely absolute government affairs, concurrent government affairs, and general government affairs (Bihuku, 2018). This research focuses on concurrent government affairs that are mandatory and related to essential services shared between the central government and the provinces and regencies/cities. Concurrent government

affairs are critical since the law mandates local governments to prioritize these affairs, and their implementation must be guided by service standards set by the central government. (Tantowi, 2019). As stated in Article 3 of the Government Regulation Number 2 of 2018 on Minimum Service Standards, the functions that are mandatory and related to basic services are education, health, infrastructure and spatial planning, public housing and residential areas, peace, public order, community protection, and social functions.

East Java Province is ranked 2nd as a province contributing to the national gross domestic product after DKI Jakarta Province. With a population of 48,274 million people, East Java Province also has the potential to be the second-most populous province in Indonesia after West Java Province, which could be a helpful asset in accelerating economic development (Ministry of Finance, 2021). For this reason, targeted policies are needed to build new economic centers so that the potential for such a large population can be utilized to the fullest.

There have been many previous studies discussing government expenditure based on expenditure type. Mainly, the components of expenditure type used in the study are education and health expenditure, as included in the research of Ezkiriando & Alexandi (2013),

Mongan (2019), and Harjunadhi & Rahmawati (2020). However, it turns out that not much is found in research that discusses government expenditure based on the classification of its functions, especially those related to basic service functions mandated by the central government to local governments. It is important to discuss the success of local governments in providing basic services before focusing on other matters (Tantowi, 2019). Therefore, this study aims to measure the success of local governments in providing adequate basic services for the people in their regions through fiscal instruments in the form of spending and measured through the distribution of income per capita.

## **LITERATURE REVIEW**

### **Gross Regional Domestic Product per Capita**

Central Agency on Statistics (2019) defines gross regional domestic product (GRDP) at market prices as the total value added from all economic sectors in a region. Value added is the total combination of production factors and raw materials in the production process. The added value calculation is the production (output) value minus intermediate costs. Gross value added here includes the components of factor income (wages and salaries, interest, land rent and profits), depreciation, and net indirect taxes. The gross value added of each sector and the

gross value added of all the above sectors will obtain the Gross Regional Domestic Product based on market prices. A per capita income will be generated if the gross regional domestic product is divided by the number of people living in the area.

Per capita income can describe the standard of living of a country or region from year to year. Rising per capita income is one of several indicators that the average standard of living of the population has increased. In the real economy, economic growth means physical and economic development in a country, such as multiplication in the number and production of industrial goods, infrastructure growth, educational facilities development, additional production of existing economic activities, and various other developments (Sasana, 2006).

Bils & Klenow (2000) find that anticipated economic growth reduces the effective discount rate and ultimately increases the demand for schools. Many researchers have also found that schooling is positively correlated with growth rates of GDP per capita in various countries. Higher school enrollment rates are associated with faster future growth in GDP per capita, GDP per worker, and GDP per worker after deducting physical capital accumulation.

### **Fiscal Decentralization Theory**

Oates (1972) states that decentralization can lead to efficiency in allocating public resources if spending decisions are made at lower levels of government. This efficiency is achieved because lower levels of government should be more responsive to local demands than central governments due to further distance. Decentralization also provides opportunities for more efficient use of public resources. The implementation of Oates' theory can be found in the principle of "subsidiarity", meaning that expenditure, taxation and regulatory functions should be carried out by lower levels than the central government, except for some issues deemed necessary by the central government (Schiavo-Campo, 2017). On the other hand, several other studies also have the view that decentralization has the potential to hinder coordination, trigger incentives for state administrators to compete with each other in carrying out responsibilities and create obstacles to reform so that the dangers of decentralization itself are contradictory to its benefits (Treisman, 2002).

Indonesia more or less adopted the subsidiarity principle with Law Number 23 of 2014 concerning Regional Government, which has divided government affairs into three categories: absolute government affairs, concurrent government affairs, and common

government affairs. Absolute government affairs can be carried out entirely by the central government or delegated to vertical agencies in the regions or to governors based on deconcentration. Concurrent government affairs are divided into affairs that are partly under the central government's authority, and some are designated as regional authorities. Common government affairs are carried out by governors and regents/mayors in their respective working areas and are assisted by vertical agencies (Asshiddiqie, 2015).

With these clauses, the basis for regional autonomy is concurrent government affairs handed over to the regions. Regulations regarding the administration of mandatory government affairs for basic services have become necessary because governmental affairs for basic services are part of the concurrent government affairs that form the basis of regional autonomy. In other words, without concurrent administration of government affairs, there is no regional autonomy (Desmon, 2019).

### **Education Expenditure**

Glewwe et al. (2011) describe situations in developing countries where basic educational needs have a significant effect, in the form of teaching infrastructure, towards education quality. However, research by Vegas and Coffin (2015) concludes that in most cases, learning outcomes are not affected by high

educational expenditures, opposing the idea that resources should be reserved for learning.

Education expenditure can be linked to improved learning outcomes in countries that budget the education expenditure lower than the cutoff point of expenditure. Beyond that limit, no clear and statistically significant relationship was found between education expenditure and outcomes in an already high-spending countries. There is no agreed level of education expenditure to determine when a cutoff should be made so that all education expenditure is beneficial. Therefore, if zero spending is unreasonable and overspending does not systematically improve outcomes, increasing efficient education spending should continue until a certain threshold is reached, i.e., when adequate resources are provided and additional resources add no more benefits (Vegas and Coffin, 2015).

### **Health Expenditure**

Chang and Ying (2005) use the theory of economic growth to examine 15 OECD countries and explain the long-term nature of increasing health expenditure in a growing economy. They see health consumption as an investment in human resources because it can improve workers' capabilities by increasing reliability, manpower, and work readiness. Bradley et al. (2011) explain the paradox of high health expenditure in OECD countries without increasing health indices, as evidenced by

variations in social service expenditure. Only focusing on nominal health expenditures may not be enough to overcome the problem of low health quality. To attain the health gains, stronger reform priorities in general social policy sectors, such as unemployment, housing, and education, may be required.

Hassan & Kalim (2012) also noticed that bidirectional granger causality of health expenditure and real GDP per capita was found in a long term in addition to the education system in Pakistan. This indicates that the government should pay attention to the budgeting system, mainly on how they allocate priority focus on the health sector. By allowing this policy to run, a healthier lifestyle and more awareness to the people of the developing country would be promoted and boosted, thus improving the quality of life and the efficiency of the inputs by making more trained and healthy inputs accessible to industry and all production units in the nation.

### **Social Security Expenditure**

Policy analysis frequently focuses on a single policy instrument and makes positive and normative predictions about its level in a given model. However, the question of whether the policy is actually being used by the government to achieve its goals is generally ignored (Drazen & Limão, 2008). According to McCrudden (2004), the government operates as a free market regulator. However, it appears

that the government is becoming more involved in the market over time, such as through participating in project auctions, purchasing goods, and providing services. However, one issue that frequently emerges is how the government attempts to integrate these two duties, namely by continuing to engage in the market as a buyer while also regulating the market through its purchasing power to promote the ideal of social justice.

Castles & Obinger (2007) argue that social security spending cannot identify and measure the redistribution effects of social programs or provide tangible outcomes for the community, because they are better measured by information about the terms, scope, and level of usefulness of a program. Expenditure-based research is also unhelpful because researchers disregard both the process and consequences of private provision involvement. Indonesian Ministry of National Development Planning (2014) explains that there are at least three significant outcomes expected from the adoption of an integrated social protection system: increased program efficacy and consumer orientation by removing obstacles to social protection services; improved government efficiency by resolving program fragmentation issues; and a seamless process of grading the program's consumers, as well as enhancing the job market engagement

of people who have moved out of poverty and vulnerability.

## **HYPOTHESIS DEVELOPMENT**

### **Education Expenditure to Gross Regional Domestic Product per Capita**

Previous studies have found how education system expenditure affects human development index in terms of being knowledgeable. A properly functional school with better facilities, along with having instructors who are more well-educated about the things they teach as well as owning amazing tutoring skills, appears to be more favorable to student learning that indicate a desire for and dedication to giving a high-quality education (Glewwe et al., 2011). It appears that later on, increasing education expenditure in developing countries positively affects GDP per capita, and the effect is not different from that of Sub-Saharan African (SSA) countries, based on Appiah (2017) study. This result is similar to that obtained by research by Aidar & Muhajir (2014), which found a positive effect between education expenditure in regencies/cities in Aceh on per capita income. Thus, the hypothesis that is considered based on the theory and previous study is:

***H<sub>1</sub>: The education expenditure has a positive effect on Gross Regional Domestic Product per Capita***

### **Health Expenditure to Gross Regional Domestic Product per Capita**

Health sector expenditure, as mentioned in Devlin & Hansen (2001), more or less affects economic growth, as it appears that health care expenditure Granger causes GDP in some of the 20 OECD nations studied and vice versa for others. As a result, considering health and education expenditure as an investment in health and education capital increases the importance of the human and physical capital component in the growth model that works in the long run. This result is in line with Rahman (2011) discovering that health and education expenditure in Bangladesh aided GDP growth, and that GDP affected education expenditure but not health expenditure, and that health and education expenditure assisted each other's growth. Aidar & Muhajir (2014) also discovered that health expenditure in Aceh Province regencies/cities had a favorable but not significant influence on per capita income. Thus, the hypothesis that is considered based on the theory and previous study is:

***H<sub>2</sub>: The health expenditure has a positive effect on Gross Regional Domestic Product per Capita***

### **Social Protection Expenditure to Gross Regional Domestic Product per Capita**

Share of social sector expenditure in development expenditure basically plays quite a huge part for human capital to nourish

(Agarwal, 2015). The same study also found that apart from directly influencing human development index (HDI) by making various services more affordable, per capita real income may also be subsuming the influence of government expenditure on human capital because increased government spending tends to raise real incomes. On the other hand, Natalia et al. (2019) discovered that, while not statistically significant, social expenditure in North Sulawesi had a negative influence on economic growth. There has been no previous research on the impact of social investment on GRDP per capita. The reference for economic growth, on the other hand, can be used to assess success from an economic standpoint. Thus, the hypothesis that is considered based on the theory and previous study is:

***H<sub>3</sub>: The social protection expenditure has a positive effect on Gross Regional Domestic Product per Capita***

## **RESEARCH METHODS**

The data used in this study is secondary data in the form of Regency/City Expenditure Realization Reports per expenditure function for the 2014-2016 fiscal year obtained from the website of the Directorate General of Fiscal Balance, Ministry of Finance ([www.djpk.kemenkeu.go.id](http://www.djpk.kemenkeu.go.id)), and regional per capita economic growth data that are acquired from the website of the Central

Agency on Statistics (www.bps.go.id). Purposive sampling was applied to the population of 38 regencies/cities in East Java Province that had complete data. Eleven regencies are selected as the research samples, as presented in Table 1.

**Table 1.** Selected Regency/City Sample

No.	Regencies
1.	Bojonegoro
2.	Bondowoso
3.	Gresik
4.	Kediri
5.	Magetan
6.	Malang
7.	Nganjuk
8.	Pasuruan
9.	Ponorogo
10.	Sampang
11.	Situbondo

Source: By author

The year 2014-2016 was chosen due to the limited availability of data available on the BPS and DJPK websites and adjusting to the legalization of the renewal regulations in the same year (Law Number 23 of 2014). With the data above, the data is in the form of panel data, a combination of cross-section and time-series data of 33 observations from 11 regencies/cities from 2014 to 2016.

This study uses three independent variables and one dependent variable. The independent variables used in this study are expenditures on education, health, and social protection functions, while the dependent variable used is regional gross domestic

product (GRDP) per capita. The definition of each variable is explained as follows.

1. Gross regional domestic income per capita (PDRBK) is gross regional income at current prices divided by the number of people living in an area.
2. Education expenditure (PEND) is the realized amount of education function regional expenditure.
3. Health expenditure (KES) is the total realized amount of health function expenditure
4. Social protection expenditure (SOS) is the realized amount of social protection function expenditure.

This study employs multiple linear regression models with the Ordinary Least Square (OLS) method to explain the effect of independent variables on the dependent variable. The regression equation used in this study is as follows:

$$\ln (\text{PDRBK})_{it} = \beta_0 + \beta_1 \ln (\text{PEND})_{it} + \beta_2 \ln (\text{KES})_{it} + \beta_3 \ln (\text{SOS})_{it} + \epsilon_{it}$$

The data is converted to a natural logarithmic scale to avoid problems at later stages of the data analysis process so that the data can be distributed more evenly. Evenly distributed data means closer gap between high-values and low-values data, providing a distribution closer to the normal curve (Sekaran & Bougie, 2016).



**RESULTS AND DISCUSSION**

**Table 2.** Descriptive Statistics

Variable	N	Mean	Standard Deviation	Minimum	Median	Maximum
PDRBK	33	31.993	21.284	15.470	21.366	84.895
PEND	33	446.409.658	382.226.494	11.722.323	529.042.719	1.156.979.172
KES	33	192.946.295	138.049.851	9.757.009	170.061.993	529.632.928
SOS	33	14.362.665	7.472.808	1.396.988	13.688.614	32.372.799

Source: Research data (in thousand rupiah), processed

The descriptive statistics of the data used in the study which contains 33 regency-year observations are presented in Table 2. Overall, the standard deviation in years of observation is relatively high. In the sample year, Gresik Regency achieved the highest GRDP per capita in 2016, while Ponorogo Regency achieved the lowest per capita GRDP in 2014 with IDR 69.425.000,00 range. This relatively high range holds for the other independent variables. This high range indicated a significant fiscal capacity gap in the East Java Province and resulted in a significant gap in GRDP per capita.

A preliminary test was conducted to obtain the regression results to determine

which estimation model should be used between pooled least square, fixed-effect, and random effect models. The results of the preliminary tests (Likelihood Ratio or Chow test, Breusch-Pagan Lagrange-Multiplier test, and Hausman Test) are displayed in Table 3.

**Table 3.** Model Specification Test

No.	Test	Prob.	Conclusion
1	Chow test	0,0000	FEM
2	BP-LM test	0,0000	REM
3	Hausman test	0,9982	REM

Source: STATA output, processed

The results of the three tests indicate that the random-effects model approach was chosen as the best model for calculating panel data in this study. The regression results from the random-effects model are presented in Table 4.

**Table 4.** Random Effect Model Estimation

Variable	Expected Sign	Coefficient	z-Statistic	Prob.
LN_PEND	+	-0,0664	-3,58	0,0000
LN_KES	+	0,1718	3,98	0,0000
LN_SOS	+	-0,1196	-4,34	0,0000
C	?	17,2047	35,67	0,0000
R-squared		0,4971		
Adjusted R-squared		0,4451		
Wald chiz		20,68		
Prob>chiz		0,0001		

Source: STATA output, processed

From the regression results, the model is 0,0001, which is less than the probability value (Prob-chiz) of the overall significance level ( $\alpha$ ) of 5%. Thus, it can be

concluded that education expenditure, health expenditure, and social protection expenditure simultaneously have an effect on GRDP per capita. The regression results also show the Adjusted R<sup>2</sup> value of 0,4971, which means that 49,71% of the variation of the dependent variable (GRDP per capita) can be explained by independent variables (education, health, and social protection expenditures), while the remaining 50,29% is explained by other variables not included in this study. Partial significance test (z-Statistics) results show that each independent variable, namely education expenditure, health expenditure, and social protection expenditure, has a significant effect on GRDP per capita as the dependent variable. All independent variables also have a significant effect on GRDP per capita at 1% significance level.

The coefficient of the education expenditure variable on the regression results to GRDP per capita is -0,0664 with a probability of 0,0000. This means that education expenditure has a negative relationship to GRDP per capita and is significant at 1%. This also shows that every 1 percent increase in education expenditure, assuming *ceteris paribus* (other variables are assumed to be constant or unchanged) will reduce the value of GRDP per capita by 0,0664. This result is not in line with research conducted by Appiah (2017) and Aidar &

Muhajir (2014) which state that education expenditure has a positive effect on per capita income.

The results of this study indicate that education expenditure in regencies/cities in East Java Province is still unable to meet expectations of increasing the efficiency of production of goods/services and quality of technology. Instead, education expenditure decreases GRDP per capita significantly. Based on Central Agency on Statistics data (2022), in the 2014-2016 period, the average length of schooling and expected years of schooling, which are components of the HDI, increased incrementally. Therefore, in East Java Province, education expenditure in the short term increases HDI. However, this increase in HDI is not accompanied by the provision of adequate employment opportunities. East Java Province faces the challenge of reducing the unemployment rate, which is still relatively high, amounting to 5,84% of the workforce for 2020 (Ministry of Finance, 2021). The high unemployment rate shows that the potential large number of human resources in East Java Province are not utilized efficiently. This phenomenon occurs due to education expenditure that fails to prepare the workforce to enter the job market. Link and match policies in the education sector are needed to create linkages between labor suppliers and their users to create integration and synergistic

relationships between the world of education and the world of industry. (Disas, 2018).

The coefficient of the health expenditure variable on the regression results to GRDP per capita is 0,1718 with a probability of 0,0000. Education expenditure positively correlates to GRDP per capita and is significant at 1%. This result shows that every 1% increase in health expenditure, *ceteris paribus*, will increase the value of GRDP per capita by 0,1718. This result is in line with research conducted by Rahman (2011) which also found a significant positive effect between health expenditure on per capita income, but not in line with research by Aidar & Muhajir (2014), which found a positive but insignificant relationship.

Health expenditure in regencies/cities in East Java Province positively impacts the community's quality of life and health. According to Chang and Ying (2005), health expenditure is a type of government spending in terms of health consumption equal to an investment that has increased reliability, human resources, and work preparedness. This outcome also corresponds to Devlin & Hansen's (2001) finding that states causal effects between health expenditure and economic growth. Given that human capital is input to economic production, an increase in health care spending successfully causes an

increase in the gross domestic product that would consequently impact per capita income.

Based on Central Agency on Statistics data (2022), the increase in health expenditure in East Java is up to 279,86% compared to the health expenditure budget in 2015. The significant increase in expenditure in the health sector is allocated through some factors that improve the quality of public health, i.e. healthcare facilities. In 2016, there were 964 public health centers, 369 hospitals, and 1.352 medical centers/clinics (Ministry of Health, 2016). The abundant availability of health infrastructure shows that the East Java government constantly strives to ensure that one of the dimensions of HDI, which is a long and healthy life, is fulfilled. The number of health facilities causes the health budget to continue to increase to ensure that health facilities can continue to work to serve the community. This phenomenon is also in line with this study, concluding that the community's basic demands of quality of life and well health have been met. With an improvement in citizens' quality of life, particularly in guaranteeing that health services are available in the community suffering from health problems, it is assured that the citizens will be able to drive the economy's wheels. An increase in per capita income will indicate the success of health

program execution within the local government.

The coefficient of the social protection expenditure variable in the regression result of GRDP per capita is -0,1196 with a probability of 0,0002. This result indicates that social protection expenditure has a negative relationship to GRDP per capita and is significant at 1%. The result of this study is in line with the research of Natalia et. al. (2019) which found a negative effect between social protection expenditure on economic growth. Although the concept of economic growth and per capita income are theoretically distinct, they will inevitably interact. A rise in economic growth will be followed by an increase in per capita income, hence the two are closely related. Unfortunately, this study's result contradicts results found by Agarwal (2015), which claims that social security expenditure may improve the capacity and quality of human resources, hence boosting per capita income.

Social protection expenditure in East Java Province's regencies/cities has not been able to improve the economic situations of the underprivileged. However, it has instead resulted in a decrease in per capita income. This drop reflects poorly targeted allocation of social protection expenditure. Based on the study by the Directorate General of Treasury (2018), it is stated that while Defense and

Mandatory Social Protection sector played the second biggest part in East Java's Province economic growth, most of the Q4 government's expenditure is allocated to salaries and allowances for civil servants, as well as the wages of project workers which were completed and paid at the end of the year. It is believed that inefficiency and ineffectiveness in the management of social protection funding occurs that it creates a dependable measure from local public to the social protection expenditure so that it could not bring such an expected escalation to economic growth. Increased social spending reduces people's desire for entrepreneurship, and this condition also negatively affects business development and lowers income per capita (Solomon et al., 2021).

The incompatibility of the allocation of the realization of social protection expenditure can be seen from two perspectives; first, the allocation of social protection expenditure in cash. Public consumption will increase by giving a larger portion of direct cash assistance, increasing people's welfare (Asnawi, 2022). However, the cash given to the lower-income people is used to buy non-primary and unproductive goods. Instead of being able to improve people's quality of life, expenditure on social protection has become a mere waste. Second, the allocation of grants and social assistance to businesses failed to boost

economic production in the regions, in contrast with the study conducted by Asnawi (2022). This phenomenon can happen if the type of business in the region diverts the source of grant funds and social assistance to operational maintenance or repair of infrastructure facilities that cannot provide added value. Eventually, social protection expenditure that should be able to cause a redistribution of income from local taxpayers to the poor cannot support the regency/city economy as a whole.

## **CONCLUSION AND SUGGESTION**

### **Conclusion**

Local government financial management reform continues to evolve and improve from time to time. This refinement aims to improve the standard of living and welfare of the people in the regions by utilizing fiscal instruments in the form of regional expenditures. Empirical evidence shows that the management of local government spending has not yet produced the impact expected by the community. While health expenditure helps increase the GRDP per capita in East Java Province, education and social protection expenditures lower the overall welfare, showing the local government's ineffectiveness and inefficiency in utilizing the allocated budget.

### **Suggestion**

Local governments are expected to utilize this research as one of the considerations in formulating and implementing spending policies in the future so that money originating from central government transfers and regional taxes or retributions provides the greatest benefit to local communities, especially considering the government's responsibility as local government acts as an extension of the central government to handle mandatory government affairs. A thorough policy and law reforms need to be conducted by the local government to enhance the effectiveness and efficiency of government spending. Proper policy execution and constant monitoring by the authorized party and public are also needed to ensure the policy improvements are performed responsibly. With these being implemented, local governments should be able to improve the quality of expenditure management so that the government's goal to improve the quality of life and welfare of its citizens is achieved.

### **Limitation**

This research still has limitations. Namely, it does not use all components of the mandatory service function related to basic services, and the measurement of the impact of these expenditures is only carried out with per capita GRDP as an economic indicator. Future research is expected to discuss the effect of the

classification of expenditure on other functions and the benefits of mandatory local government expenditures, which are basic services and their effect on other dimensions such as the social dimension and the dimension of government or bureaucracy.

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