

FLYPAPER EFFECT ON REGIONAL SPENDING IN CENTRAL JAVA PROVINCE

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Abstract: *Implementation of autonomy policies in the reform area aims to accelerate region growth, make Central Java Province continues to optimize their regional spending to increase their development. Purpose of this research is to determine effect of the original local government revenue and general allocation funds to regional spending and flypaper effect existence. Panel data regression and independent sample t test used as a method with 2014-2017 data from 35 districts and cities at Central Java. Result shown that there is positive and significant effect at original local government revenue and general allocation funds to regional spending. However, the construction being carried out still has a flypaper effect.*

Keywords: *Regional autonomy, regional spending, original local government revenue, general allocation funds, flypaper effect.*

1. Introduction

Indonesia's major changes in development occurred due to reform era (Soekapdjo, Tribudhi, Hariyanti, & Nugroho, 2020). To accelerate economic growth government rolled out the regional autonomy policy in the late 1990s (Soeharjoto, 2020). All of this, is inseparable from the previous centralization, causing community and local government to be less active. The existence of law no.22 of 1999, and law no. 25 of 1999, bring changes to the revolutionary relationship between the central and local government.

Aim of regional autonomy is making rapid improvements in public services. So, need capital expenditure budget in the local government budget (APBD), to increasing fixed assets of an area (Soeharjoto, 2019). The method is by giving rights, authorities, and obligations to regulate their own regions. Local government can manage the potential that they have, and has the authority to use their resources to improving their optimal financial performance, so they achieve their independently (Soeharjoto, Tribudhi, & Nugroho, 2020). But in implementation, decentralization for regions will cause local burdens at government budget, so need transfer assistance from central government.

Regional autonomy policy implementation is supported by financial balance between the center and regions policy. Purpose of this policy is to balancing between central and regional finances to become an integral part of the government financing system in Indonesia. Its also includes propotional distribution of finances between central and regional governments, democratic, fair and transparent manner, by taking into account the potential, conditions and interests of the regions, and in line with the obligations and distribution of authority, and implementation procedures, including financial management and supervision (Saragih, 2003).

In order to responding the difference of financial balance each local government, especially regard to transfer funds and their own income. In this situation, regional revenue originating from transfers will provide a stimulus for spending, which will be different impact from the stimulus originating from regional revenues. The flypaper effect will occur if greater regional expenditure is financed from transfers than from the income itself (Halim, 2002).

One of quite success full in implementing its regional autonomy Indonesia is Central Java province. During 2010-2017, economic performance that Central Java province grew above 5.2 percent per year.

Uniquely, the economic growth is higher than the national since 2014-2017. Increase in its Gross Regional Domestic Product (GRDP) has an impact on the socio-economic welfare of the community, while an increase in per capita income and a reduction in poverty.

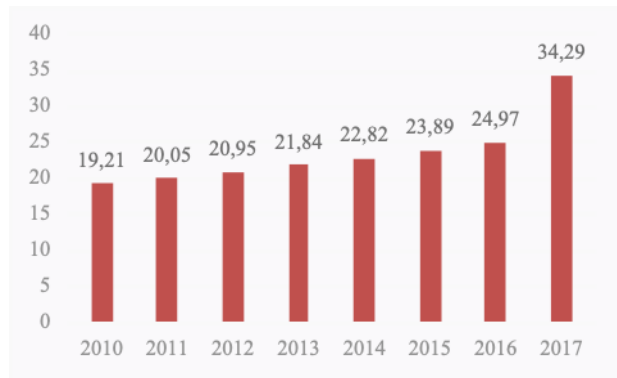


Figure 1. GRDP (ADHK 2010) Per Capita, Central Java 2010-2017 (Million Rupiah)
Source: Badan Pusat Statistik, 2019

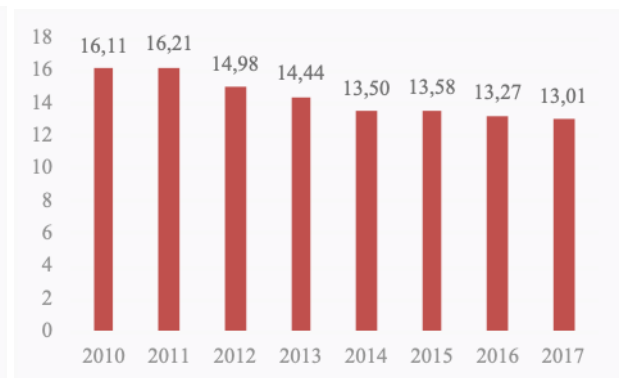


Figure 2. Percentage of Community that live in poverty at Central Java 2010-2017
Source: Badan Pusat Statistik, 2019

Implementation of regional autonomy have an acceleration impact on development in the regions, with assumption that the regions have good human and natural resources. Regional autonomy requires processes to success, especially related to regional expenditure funding. Regional expenditures funding source came from the region themselves, or transfers from central government. This condition could potentially cause flypaper effect.

Without intervention from the government, economic development optimally can still improve people's welfare, there needs intervention from the central government when this can be achieved (Keynes, 1936). Implementation of this policy will cause it to occur the law of expanding state expenditure theory because government role getting bigger as a result of increasing expenditures and activities (Wagner, 1911). Rostow theory will occur in long term, because government spending follows the development stages, thus at the beginning of the development, there is large investment from governments and then replaced by the private sector, so that the role of the government will shift from providing infrastructure to spending on social activities in the form of old age welfare and services health (Musgrave, 1989). The endogenous growth theory will facilitate the achievement of state goals because it seeks to include Solow residuals and re-establish the role of capital accumulation, and takes several steps to include technological change as an endogenous variable, then emphasizes the importance of managing human resources, research and development research and development (Romer, 1986 & Lucas, 1988). For this reason, government needs to apply big push theory in order to accelerate industrialization by making plans and action programs in the form of large-scale investments (Rosenstein-Rodan, 1943). Government assists regions by providing conditional and unconditional transfers, so that the transfer problem can be explained using an indifference curve approach (Wilde, 1968). Flypaper effect can occur because the transfer from the central government will increase the consumption of public goods and will not have an impact on regional tax substitution.

To accelerate development, government carries out regional autonomy policies. But there is different result in practice between one region to another. All of them ability of human and natural resources are inseparable. Central government also provides funding assistance to the regions in implementing policies, but they also wants to know whether flypaper effect can occur. Success of regional autonomy cannot be separated from the regions ability to finance their regional expenditures. For this reason, it is necessary to research factors that influence regional spending and whether there is a flypaper effect in Central Java.

2. Research Method

This research use panel data in 2014-2017 from 35 districts and cities in Central Java. Data used comes from the Directorate General of Fiscal Balance, Ministry of Finance of the Republic of Indonesia. Dependent variable use regional spending (BD) while the independent variable use original local government revenue (PAD) and general allocation funds (DAU). Panel data regression method is used in this research. The models used are:

$$BD_{it} = \beta_0 + \beta_1 PAD_{it} + \beta_2 DAU_{it} + \varepsilon_{it}$$

Model of panel data regression equation on the effect of local government budget and general allocation funds on regional spending can be described in terms of the framework. To determine the existence of a flypaper effect, independent sample t test was carried out. The framework is as follows:

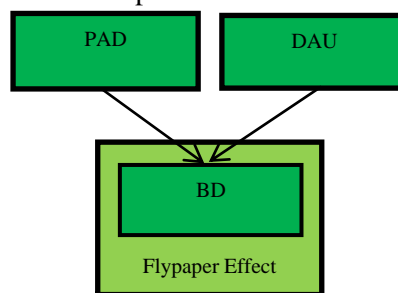


Figure 3. Research Framework

Hypothesis:

Original local government revenue on regional spending effect.

Regions that have good natural and human resources will have greater opportunities and abilities to manage their resources optimally. These regions will receive high original local government revenue for the impact, so that their ability to finance regional expenditures will increase. Accordance with the results from Pramuka (2010), Amalia, Nor, & Nordiansyah (2015), Paramartha & Budiasih (2016). A Hypothesis can be made:

H₁: Original local government revenue has a positive and significant effect on regional spending.

Effect of general allocation funds on regional spending effect.

General allocation funds are transfers of central government funds originating from state budget (APBN) revenues to local governments. The greater the general allocation funds provided by the central government will increase the capacity of the regions to finance their spending. Accordance with the results by Masdjojo & Sukartono (2009), Ferinal & Puspita (2012), Amalia, Nor, & Nordiansyah (2015). A hypothesis can be made:

H₂: General allocation funds have a positive and significant effect on regional spending.

3. Results and Discussion

3.1. Results

Regional expenditure, original local government revenue, and general allocation funds in Central Java from 35 districts and cities have a fluctuating trend but have an increasing tendency. Average of regional expenditure capacity is Rp. 1,879,248 million and the lowest was Rp. 689,961 million in Magelang at 2014, while the highest is Rp. 4,550,158 million at Semarang in 2017. Original local government revenue has an average of Rp. 243,246.5 million, the lowest is at Rp. 92,132 million at Salatiga in 2014 and the highest is Rp. 1,513,278 million in 2017 at Semarang. General allocation funds have an average of Rp.

930,477.7 million, the lowest is Rp. 390,733 million at Tegal in 2014 and the highest is Rp. 1,525,152 million at Banyuwangi in 2017. Regional expenditures come from general allocation funds than original local government revenue on average, thus allowing an indication of the flypaper effect.

**Tabel 1. BD, PAD, and DAU Description
At 35 Distericts and Cities at Central Java**

Statistics	BD	PAD	DAU
Mean	1879248	243246.5	930477.7
Median	1847225	206202.5	943326
Maximum	4550158	1513278	1525152
Minimum	689961	92132	390733

Source: Processed data

To find out the specifications models, it is necessary to test the panel data model. Panel data has three models, namely Pooled Least Square (PLS) or what is called the Common Effect (CE), Fixed Effect (FE), and Random Effect (RE). The tests used were the Chow, Hausman, and Langrangge Multiplier tests. To find out what model is most suitable, using chow test. The choice is whether to use the Common Effect or Fixed Effect models. From the estimation results, calculation results of the Chow Probability F test are 0.0000, which means the F probability <0.05 . This situation shows that the suitable model is Fixed Effect rather than Common Effect. The Hausman test is carried out to be able to select the appropriate model between Fixed Effect and Random Effect. Results of the estimation shown that Hausman test calculation have probability as big as 0.0000, which means probability <0.05 . This condition shows that the suitable model is Fixed Effect rather than Random Effect. Langrangge Multiplier test done if there is no consistency of the selected model. From the Chow test and Hausman test, it is found that the correct model is Fixed Effect, thus there is no need test with Langrangge Multiplier.

Tabel 2. Estimating Fixed Effect Model Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1142926	174379.2	-6.554255	0.0000
PAD	1.332474	0.224512	5.934967	0.0000
DAU	2.899644	0.223942	12.94818	0.0000
R-square	0.972956		F-statistic	102.9324
Adjusted R-Square	0.963503		Prob(F-statistic)	0.0000
S.E. of Regression	120242.9		Durbin-Watson stat	2.262193
Sum square residual	1.49E+12			

Source: Processed data

Adjusted R-square obtained 0.963503, which means that variation or behavior of the independent variables, original local government revenue and general allocation funds, is able to explain the variation or behavior of the dependent variable, regional expenditure of 96.3503 percent, while the remaining 3.6497 percent is a variation of other independent variables that affect regional spending, but are not included in the model. This situation indicates that the regional spending model produces a goodness of fit model. The F-statistic is 102.9324 with a probability of 0.0000. This situation indicates that the probability is <0.05 , which means that at least one independent variable named regional expenditure has a significant effect on the dependent variable. For individual testing of original local government revenue on regional expenditure, estimated coefficient value is 1.332474, means increasing in original local government revenue will increase regional spending and decrease in original local government revenue will reduce regional spending with a probability of 0.0000, which shows that probability <0.05 . It is proven that original local government revenue has a positive and significant effect on regional spending.

General allocation funds effect on regional spending is obtained by an estimated coefficient value of 2.899644, means that increasing in general allocation funds will increase regional expenditure and a decrease in general allocation funds will reduce regional spending, with a probability of 0.0000 indicating that the probability is <0.05 , so it is proven that general allocation funds has a positive and significant effect on regional spending. The results of calculations using the fixed effect model obtained the BD equation model = $-1142926 + 1.332474PAD + 2.899644DAU$.

Results of the independent sample t-test obtained the value of F-statistics = 1.4108 with F-table = 6.3, so that F-statistics $<F$ -table, which means that both variances are homogeneous. In the t test, t-statistics = -5.3126 with t-table = 1.9432 is obtained, so that t-statistics $<t$ -table, which means that there is a significant difference between original local government revenue and general allocation funds. From the average size and coefficient, it can be seen that general allocation funds are larger than original local government revenue, thus indicating a flypaper effect.

3.2. Discussions

Results of this study obtained a goodness of fit in regional spending equation model with a fixed effect approach and a flypaper effect in Central Java. General allocation funds have a higher average value than original local government revenue, but in terms of growth the opposite occurs. All of this cannot be separated from the serious efforts of the regional government of Central Java province in increasing original local government revenue. Average growth of original local government revenue was 17.46 percent with a standard deviation of 9.96 percent and general allocation funds had an average growth of 5.95 percent with a standard deviation of 3.55 percent. This condition shows that average growth of original local government revenue is higher than general allocation funds, but it needs to be watched out because the average growth of general allocation funds is still more consistent than original local government revenue.

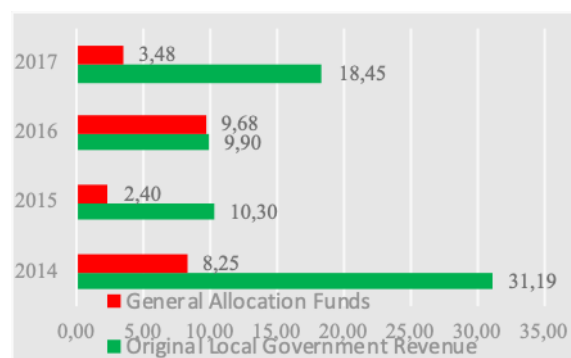


Figure 4. Growth of Original Local Government Revenue & General Allocation Funds at 2014-2017 at Central Java (percent)

Source: Direktorat Jenderal Perimbangan Keuangan,
Kementerian Keuangan Republik Indonesia, 2019

Average growth of original local government revenue in Central Java in 2014-2017 is 17.46 percent, a contribution from the growth of local taxes, retributions, income of regional government corporate and management of separated regional government wealth, and other original local government revenue. The highest average growth was 29.46 percent, obtained from other original local government revenue, as well as income of regional government corporate and management of separated regional government wealth and local taxes with an average of 18.20 percent and 13.53 percent. However, retributions have an average growth of -1.02 percent. For this reason, they need to maintain and improve sources of support

for original local government revenue that have experienced positive growth, but retributions need to get more serious attention from local governments because have negative growth.

Original local government revenue has a positive and significant effect on regional spending. Increasing in original local government revenue will increase regional spending and a decrease in original local government revenue will reduce regional spending. This research is in accordance with Pramuka (2010), Amalia, Nor, & Nordiansyah (2015), Paramartha & Budiasih (2016). So, local governments need to improve human resources and must be more active and creative in seeking breakthroughs to explore original sources of local government revenue. General allocation funds have a positive and significant effect on regional spending. A lower general allocation funds will increase regional spending and decrease in general allocation funds will reduce regional spending. This research is in accordance with Masdjojo & Sukartono (2009), Ferinal & Puspita (2012), Amalia, Nor, & Nordiansyah (2015). Central government still need to increase the provision of general allocation funds for regions with minimal natural and human resources, but in providing transfers, efforts are made to distribute them to sectors that can increasing support in original local government revenue. This policy will reduce dependence of local governments on general allocation funds, so can be reduced central government burden. National development can immediately accelerate community welfare, it is necessary to make a blueprint from development on local government which is adjusted to national and global conditions while maintaining environmental sustainability.

This study only use independent variables original local government revenue and general allocation funds that affect regional spending. For this reason, it is necessary to develop more from each of the supporting sources that can affect regional spending, so that it is known which supporting sectors have great potential to be developed. However, this research also needs to be carried out regularly because it will provide a cycle of developmental progress from the implementation of regional autonomy.

4. Conclusion

Factors that affect regional expenditure in Central Java Province use panel data regression with a fixed effect model. Results are original local government revenue and general allocation funds have a positive and significant effect on regional spending. Contribution of general allocation funds that is greater than original local government revenue indicates that there is a flypaper effect in districts and cities in Central Java. For this reason, local governments need to increase human resources and the government must be more active and creative in seeking breakthroughs to explore original sources of local government revenue.

Central government still needs to increase the provision of general allocation funds for regions with minimal natural and human resources, but in providing transfers, efforts are made to distribute them to sectors that can support increasing original local government revenue. This policy will reduce the dependence of local governments on general allocation funds, so can reduced the burden on the central government. National development can immediately accelerate community welfare, and necessary to make a blueprint from the local government in its development which is adjusted to national and global conditions while maintaining environmental sustainability.

To find out the progress of the region concerned in implementing regional autonomy flypaper effect research needs to be carried out regularly. The variables used can be developed again, especially on potential sources of regional financial capacity. After the regression analysis is carried out, it is necessary to continue the mapping of financial capacity area by making 4 quadrants according to the cluster, so policies can be made from each cluster in order to speed up handling in increasing regional revenue.

Reference

Amalia, W. R., Nor, W. & Nordiansyah, M. (2015). *Flypaper effect* pada pendapatan asli daerah (PAD), dana alokasi umum (DAU), dana alokasi khusus (DAK) terhadap belanja daerah pada pemerintah

- kabupaten/kota di provinsi Kalimantan Selatan 2009-2013. *Jurnal Akuntansi dan Bisnis*, 15(1). 1-12. <http://dx.doi.org/10.20961/jab.v15i1.171>
- Ferinal, I. S. & Puspita, H. (2012). Pengaruh Pendapatan Asli Daerah (PAD) dan Dana Alokasi Umum (DAU) Terhadap Belanja Daerah (Studi Pada Pemerintah Kabupaten/Kota di Sumatera Barat). *Eksistensi*, 4(3). 570-581.
- Halim, Abdul. (2002). *Seri akuntansi sektor publik-Akuntansi keuangan daerah*. Salemba Empat. Jakarta.
- Keynes, J. M. (1936). *The general theory of employment, interest and money*. Palgrave Macmillan. UK.
- Lucas, R. (1988). On the mechanics of economic growth. *Journal of Monetary Economics*, 22(1). 3-42.
- Musgrave, R. A. & Musgrave, P. B. (1989). *Public finance in theory and practice*. Mc Graw Hill Book Company, New York.
- Masdjojo, G. N. & Sukartono. (2009). Pengaruh pendapatan asli daerah dan dana perimbangan terhadap belanja daerah serta analisis flypaper effect kabupaten/kota di Jawa Tengah tahun 2006 – 2008. *TEMA*, 6(1). 1-15.
- Pramuka, B. A. (2010). Flypaper Effect pada pengeluaran pemerintah di Jawa. *Jurnal Ekonomi Pembangunan*. 11(1). 1-12. <https://doi.org/10.23917/jep.v11i1.331>
- Paramartha, M. F. & Budiasih, I. G. A. N. (2016). Analisis flypaper effect, pendapatan asli daerah, dana alokasi umum dan khusus pada belanja modal. *E-Jurnal Akuntansi Universitas Udayana*. 15(2). 1536-1563.
- Rosenstein-Rodan, P. N. (1943). Problems of industrialization of Eastern and southeastern Europe. *Economic Journal*, 53(202/211). 202-211.
- Romer. P. (1986). Increasing returns and long run growth. *Journal of Political Economy*. 94(5). 1002-1037.
- Soekapdjo, S., Tribudhi, D. A., Hariyanti, D., & Nugroho, L. (2020). Factors affecting economic growth in central java. *International journal of commerce and finance*, 6(1). 155-165.
- Soeharjoto, S. (2019). Kemampuan dan kinerja keuangan provinsi Kalimantan. *Akuntabel*, 15(2), 131–138. <http://dx.doi.org/10.29264/jakt.v15i2.4472>
- Soeharjoto, S. (2020). Factors that affect inequality distribution income in Central Java. *International Journal of Economics, Business and Accounting Research*, 4(3). 122-130. <http://10.29040/ijebar.v4i03.1196>
- Soeharjoto, S., Tribudhi, D. A, & Nugroho, L. (2020). Fiscal regency and city capacity in East Kalimantan in the era of regional autonomy. *International Journal of Economics, Business and Accounting Research*, 4(2). 23-30. <http://10.29040/ijebar.v4i02.973>
- Saragih, P. (2003). *Desentralisasi fiskal dan keuangan daerah dalam otonomi*. Ghalia Indonesia. Jakarta.
- UU No. 22 Tahun 1999 tentang pemerintahan daerah
- UU No. 25 Tahun 1999 tentang perimbangan keuangan pusat dan daerah
- Wagner, A. (1911). *Staat in nationalökonomischer hinsicht, in handwörterbuch der staatswissenschaften*. Jena: Lexis.
- Wilde, J. A. (1968). The expenditure Effects of grants in aid programs. *National Tax Journal*, 21 (3). 340-348.
- www.djpk.kemenkeu.go.id
- www.bps.go.id