
**FLYPAPER EFFECT ON REGIONAL OWN SOURCE REVENUE (PAD),
GENERAL ALLOCATION FUNDS (DAU), AND REVENUE SHARING
FUNDS (DBH) TOWARDS LOCAL EXPENDITURES IN SOLO RAYA FOR
THE 2012-2016 PERIOD**

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Abstract

Regional autonomy is intended so that regions are free to regulate and manage their own affairs, including in financial matters. Decentralization is an effective government policy tool to deal with matters relating to stability and economic growth. The purpose of this study was to determine the flypaper effect phenomenon on Local Expenditures in Solo Raya. Considering the previous research, this research was conducted in Solo Raya, which consists of 1 City and 6 Regencies. This study uses a quantitative method using panel data with secondary data from 2012 to 2016 to see the flypaper effect phenomenon on Local Expenditures. The results found are flypaper effects that occur in local expenditure in Solo Raya. PAD, DAU, and DBH simultaneously have a positive and significant effect on Local Expenditures in Solo Raya. Partially PAD and DAU have a positive and significant effect on Local Expenditures. While DBH does not have a significant but positive effect on Local Expenditures.

JEL Classification: H72

Keywords: flypaper effect, pad, dau, dak, local expenditure

Introduction

Regional autonomy is intended so that regions are free to regulate and manage their own affairs including financial management matters. In Law Number 23 of 2014 states that the region has the authority to regulate and manage the government and the interests of its people in a system of the Unitary State of the Republic of Indonesia. The demand to prove the independence of a region makes regional autonomy a challenge that must be faced.

The success of regional autonomy must be directed at allocating sufficient funds through balancing funds between the Central Government and the Local Government, so that the Local Government's policies have a goal of improving service to the community and increasing participation in development.

Decentralization is the principle where regions have the authority to regulate and manage all government affairs, so that regions can make policies in terms of serving the community, increasing community participation, and empowering communities. The principle of decentralization regulates the surrender of rights and powers to act from the Central Government to the Local Government, except for fiscal/monetary aspects, foreign policy, defense/security, religion, and the system regarding court cases. Which is the main objective in implementing

fiscal decentralization, namely creating an independent region as evidenced by the ability to manage Local Own Resources (PAD) well?

Law Number 23 of 2014 states that decentralization is a submission relating to government by the Central Government to the Local Government based on the principle of autonomy. The existence of such authority makes Local Governments must have readiness because the matters handled are increasing. Financial readiness is one aspect that must be prepared, where the region has the ability to explore its own potential financial resources that are used to finance the financing needs of the region without having to depend on transfers from the Central Government. But in reality the transfers originating from the Central Government to the Local Government are increasing every year. This shows that there is a dependency of the Local Government to the Central Government.

Likewise the implementation of regional autonomy and decentralization in Solo Raya. From the data on Realization of PAD in Solo Raya in 2012-2016, each Regency/City has increased every year. In 2013 the total realization of PAD in Solo Raya increased by 234 billion from 2012. The increase in 2014 was the biggest increase reaching 470 billion. The increase in 2015 was 214 billion, and the increase in 2016 was 249 billion.

Table 1.1: Realization of Transfer Funds from the Central Government to Local Governments in Solo Raya (in millions)

YEAR	DAU	DBH	DAK	TOTAL
2012	5.351.110	376.073	411.395	6.138.579
2013	5.957.963	295.506	399.193	6.652.663
2014	6.441.709	228.256	441.525	7.111.490
2015	6.615.328	216.500	572.809	7.404.638
2016	7.247.907	279.721	2.058.148	9.585.776

Source: <http://www.djpk.kemenkeu.go.id/visual>

The increase in transfer funds from the Central Government also affected the increase in Local Expenditures. The Local Government uses the transfer funds as the main fund to finance operations that are included in the APBD calculation, rather than from local taxes or local retribution, so that the financing of local expenditure becomes ineffective. This is due to greater local expenditure using transfer funds so that the phenomenon is called a flypaper effect.

Research conducted by (Kusumadewi and Rahman, 2007) found that PAD and General Allocation Funds (DAU) simultaneously had a significant effect on Local Expenditures in Districts/Cities in Indonesia and there were flypaper effects in the response of Local Governments to DAU and PAD. The results of this study are supported by the research of (Inayati and Setiawan, 2012), where the variables of PAD, DAU, and Revenue Sharing Funds (DBH) have a positive effect on Local Expenditure. While the Special Allocation Fund (DAK) does not affect Local Expenditures. The test results show the existence of a flypaper effect phenomenon on Regency/City Local Expenditures in Indonesia.

Likewise with (Amalia, 2017) who conducted research on flypaper effects that were associated with regional gaps in eastern and western Indonesia. The results of the study indicate that there is a flypaper effect on the Regency/City in Indonesia, where the response of the Local Government to DAU on Local Expenditure is more significant than the PAD response to Local Expenditures in both western and eastern Indonesia. Then it was also found that PAD and DAU had a significant effect on Local Expenditures, and there was a gap between western and eastern Indonesia due to differences in Local Expenditures, PAD, and DAU.

In Java, (Pramuka, 2010) conducted a study with the result that PAD and DAU simultaneously and partially had a significant effect on Local Expenditures. Another result is that there is no flypaper effect on Local Expenditures on Java. This indicates that the Regency/City in Java do not rely on DAU for Local Expenditures.

More conical research conducted by (Iskandar, 2012) in West Java Province. Unconditional Grants or unconditional transfers aimed at ensuring fiscal equality between regions have a positive and significant effect on Local Expenditures. Likewise PAD has a positive and significant influence on Local Expenditures. But GDP has a negative and significant effect on Local Expenditures. The coefficient value of PAD is greater than the value of the unconditional grant coefficient, so it does not indicate the existence of a flypaper effect in West Java Province.

The same thing was also found by (Al Khoiri, 2015) who conducted research in West Java Province. The result is PAD, DAU, and DAK that have a significant influence on Local Expenditures. The magnitude of the PAD coefficient makes West Java Province proven to have no flypaper effect.

The research conducted by (Nugroho, 2017) found that there was no flypaper effect on Local Expenditures or in the Local Expenditure Sub-Section in the Special Region of Yogyakarta (DIY). On Employees' Sub-Expenditures, Travel Expenditures, Maintenance Expenditures, Social Aid Expenditures have a PAD coefficient greater than DAU and DAK, which means that for these expenditures the Local Government uses PAD more than DAU or DAK. Whereas in the Capital Expenditure and Non-Expenditure Expected the PAD coefficient is smaller than DAU and DAK, thus indicating a flypaper effect.

Based on previous research which has never been done in the local government in Solo Raya, this research was conducted in Solo Raya, which consists of 1 City and 6 Regencies namely, the City of Surakarta, Boyolali Regency, Sukoharjo, Karanganyar, Wonogiri, Sragen and Klaten. The temporary suspicion is that there is a flypaper effect on local expenditure in Solo Raya where PAD, DAU, and DBH have a positive and significant effect on Local Expenditure.

a. Flypaper Effect

In (Sour, 2013) it was explained that the existence of intergovernmental transfers had brought a dependence on local governments in financing a series of public programs that could not be eliminated, even if intergovernmental transfers no longer existed. This is a pure empirical phenomenon called the flypaper effect.

The theory put forward by (Oates, 1999) states that recipients of transfer funds experience a fiscal illusion. Where the recipients see that the transfer fund is a reduction in the price of public services as well as an increase in community resources, due to confusion about average and

marginal prices. It can also be said that this Fiscal Illusion Theory is the cause of the flypaper effect.

The other theoretical model that causes the flypaper effect is The Bureaucratic Model. According to this model, the flypaper effect is the acquisition of the attitude of maximizing the budget by the Local Government which is easier to spend on transfers/grants than raising taxes. This model also states that the flypaper effect can occur due to the power and knowledge of the Local Government in understanding financial rules and transfers from the Central Government.

b. Local Expenditure

According to the Minister of Home Affairs Regulation Number 21 of 2011 Article 1, Local Expenditure is the obligation of the Regional Government which is recognized as a deduction from net worth. The Local Expenditures are prioritized for the issuance of Mandatory Government Affairs related to basic services that are set with minimum service standards that are guided by technical standards and local unit price standards in accordance with statutory provisions.

Local Expenditures can be grouped into direct and indirect expenditure. Direct expenditure is spending that is directly related to programs and activities. Direct expenditure includes employee expenditure, interest expenditure, grant expenditure, social assistance expenditure, profit sharing expenditure to provinces/regencies/cities and village governments, and unexpected expenditure. Indirect expenditure is expenditure whose budgeting is not directly related to the programs and activities implemented. Indirect expenditure in the form of employee expenditure, goods and services expenditure, and capital expenditure.

c. Local Own Resources (PAD)

According to Law Number 33 of 2004 Article 1, Local Own Resources (PAD) is income earned by regions collected under Local Regulations in accordance with laws and regulations. PAD has the purpose of giving authority to local governments to fund the implementation of regional autonomy in accordance with local potential as a manifestation of decentralization.

In Law Number 33 of 2004 Article 6, it is stated that PAD originates from local taxes, local levies, separated local wealth management results, and other legitimate PAD. Other legal PADs include the sale of local assets that are not separated, current accounts, interest income, profits from the difference between the rupiah exchange rate against foreign currencies, and commissions, deductions and other forms as a result of the sale and/or procurement of goods and/or services by the region.

d. General Allocation Funds (DAU)

DAU is one component in the Balancing Fund. In Law Number 33 of 2004 Article 27 states that the total amount of DAU is at least 26% of net domestic income in the state budget (APBN). Where allocations are based on fiscal gaps and basic allocations. Fiscal gap is a fiscal requirement minus regional fiscal capacity. While the basic allocation is calculated from the total salary of the Local Government Employees (ASN).

Regional fiscal needs are a regional funding requirement in the context of administering government affairs that are the authority of the region, both obligatory matters related to basic services and optional government affairs. Regional fiscal capacity is a source of regional funding originating from PAD and Revenue Sharing Funds (DBH).

There is a difference in the proportion of government affairs handed over to the regions and there is a difference in fiscal capacity of each region so that the DAU is given to the regions. This is intended to avoid fiscal disparity between regions.

e. Revenue Sharing Funds (DBH)

Revenue Sharing Funds (DBH) are funds originating from certain revenues of the APBN allocated to producing regions based on certain percentage numbers with the aim of reducing inequality in financial capacity between the central and local governments. In Law Number 23 of 2014 Article 11 it is stated that the DBH comes from taxes, excise, and natural resources.

Taxes that can be included in the DBH are Land and Building Tax (PBB), and Article 25 Income Tax (PPH) and Article 29 Domestic Individual Taxpayers and Article 21 Income Tax. Revenues from excise are tobacco products in accordance with statutory provisions. Whereas DBH originating from natural resources in the form of forestry, mineral and coal mining, petroleum mining, natural gas mining, and geothermal mining.

Method

In this study requires a framework of thinking as a conceptual foundation in order to facilitate the research activities to be carried out and clarify the framework of thought in this study. The conceptual framework can be described as follows:

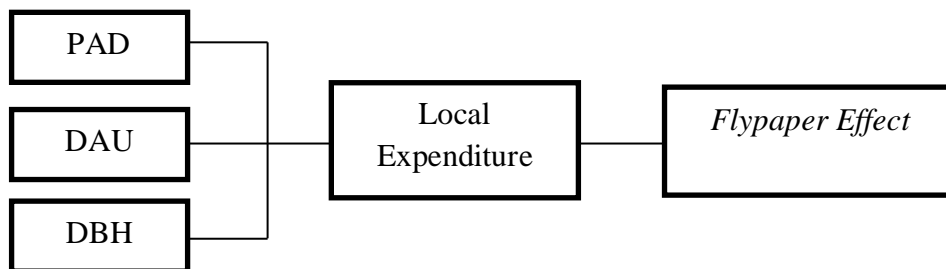


Figure 2.1: The Conceptual Framework

Figure 2.1 explains that this study uses dependent variable and independent variables. The dependent variable in this study is Local Expenditure. While the independent variables used are PAD, DAU, and DBH. Where from the figure can be seen the effect of independent variables on the dependent variable both simultaneously and partially. As well as knowing the flypaper effect on these variables.

This study uses panel data, which is a combination of time series and cross section. The equation used is as follows:

$$Y_{it} = \beta_1 + \beta_2 X_{2t} + \beta_3 X_{3t} + \mu_{it} \quad (2.1)$$

$$i = 1, 2, 3, \dots, N$$

$$t = 1, 2, 3, \dots, T$$

Where:

Y_{it} = Dependent Variable

$B_{1,2,3}$ = intercept

$X_{1,2,3}$ = Independent Variables

i = time series

t = cross section

N = number of cross section

T = number of time series

Before conducting panel data regression, several tests are carried out first to determine the model to be used. According to (Gujarati, 2004) there are 3 types of models that can be used, namely Pooled Least Square (PLS), Fixed Effect (FE), and Random Effect (RE).

To determine the model to be used, first do the Chow Test, to determine whether to use PLS or FE in estimating panel data. If $F\text{-table} > F\text{-statistic}$ then H_0 is rejected, which means the model used is FE. Whereas if $F\text{ statistics} > F\text{ table}$, then H_1 is rejected, which means PLS is the right model.

When the Chow Test results show that FE is a good model, then the next is to do the Hausman Test, to choose whether the FE or RE. If the Hausman statistical value is greater than the critical value, H_1 is accepted, which is using FE. And vice versa, if the critical value is greater than the Hausman statistical value, then H_0 is accepted, ie RE is the right model.

But if the results of the Hausman Test show that RE is the right model, then the Lagrange Multiplier Test (LM Test) is carried out. LM test is seen from the P-value. If the P-value is < 0.05 , then accept H_1 , which is using RE as the best estimation model. But if the P-value is > 0.05 , then H_0 is accepted, that is the chosen PLS model.

Local Expenditures are influenced by PAD, DAU, and DBH, so that when described as a function is:

$$BD = f(PAD, DAU, DBH) \quad (2.2)$$

Then the multiple regression model used is =

$$BD_{it} = \alpha + \beta_1 PAD_{it} + \beta_2 DAU_{it} + \beta_3 DBH_{it} + e \quad (2.3)$$

Where:

α = constant

$\beta_{1,2,3}$ = Multiple regression coefficients of each independent variable

BD = Local Expenditure

- PAD = Local Own Source Revenue
- DAU = General Allocation Funds
- DBH = Revenue Sharing Funds
- i = Cross section
- t = Time series
- e = Random Error

Results

Before conducting an assessment analysis of panel data regression models, panel data is first determined to be used in this study. To find out the effect of PAD, DAU, and DBH on Local Expenditures both simultaneously and partially using the Stata version 12 program, the panel data form was obtained with the subject "code" and "year" variable time series in the form of year intervals starting from 2012 until 2016. Strongly balanced means uniformly, or in other words each subject "code" has the same number of repetitions / time series which is 5 years.

Descriptive tests per variable, by changing values into log forms, both in the overall subject (overall), per subject (between) and per year (within). In the Local Expenditure the overall variance is $0.1962 = 0.038$; where the variation is $0.182 = 0.032$ or 0.84%. The overall variance of PAD is $0.4062 = 0.165$; where the variation is $0.3192 = 0.102$ or 0.62%. DAU has an overall variance of $0.1732 = 0.03$; with variations of $0.1062 = 0.001$ or 0.38%. The overall variance of DBH is $0.3092 = 0.096$; with variations of $0.2212 = 0.045$ or 0.51%. In the DBH variable the population is 34 because there is 1 year with a value of 0.

Table 3.1: Descriptive Test Results

Variable	N	Mean	Overall	Within	Max	Min
Local Expenditure	35	28,101	0,196	0,180	28,456	27,767
PAD	35	26,053	0,405	0,319	26,776	25,163
DAU	35	27,515	0,172	0,106	27,817	27,112
DBH	34	24,391	0,309	0,221	25,178	23,787

Source: Data processed

The next step taken is to do a Chow Test to determine the PLS or FE model. By looking at the F-statistic value, the test results show that $Prob > F = 0.3490$ which means that p value is greater than 0.05 so accepting H_0 , the PLS model is used.

Table 3.2: Chow Test Result

Variable		Prob
Local Expenditure	Prob > F	0,3490
PAD	Prob > F	0,3490
DAU	Prob > F	0,3490
DBH	Prob > F	0,3490

Source: Data processed

Because the Chow Test results show that the model used is PLS, then the next is to do LM Test to determine the PLS or RE. Taking into account the probability value of Chibar 2, the LM Test results show that the prob value > chibar 2 = 1.0000, which means that the p value is greater than 0.05, so that receiving H_0 is using PLS. This is in line with the method in the research conducted by (Amalia, 2017) and (Al Khoiri, 2015).

Table 3.3: LM Test Result

Variable		Prob
Local Expenditure	Prob > Chibar 2	1,0000
PAD	Prob > Chibar 2	1,0000
DAU	Prob > Chibar 2	1,0000
DBH	Prob > Chibar 2	1,0000

Source: Data processed

Because PLS is the model used, the next is to do a classic assumption test. The first classic assumption test is the normality test. Because the number of observations is less than 50, it uses the Shapiro-Wilk method. The results show that the Prob > z value for all variables shows a value above 0.05, which means that the data is normally distributed.

Tabel 3.4: Saphiro-Wilk Test Result

Variable	Prob>z
Local Expenditure	0,26426
PAD	0,52812

DAU	0,80364
DBH	0,84330

Source: Data processed

The next classic assumption test is the multicollinearity test. The result is VIF <10, so there are no symptoms of multicollinearity.

Table 3.5: Multicollinearity Test Result

Variable	VIF
DBH	1,13
DAU	1.08
PAD	1,06

Source: Data processed

Heteroscedastic is a condition where the variant (δ^2) of a disturbing factor or an error term (disturbance term) is not the same for all observations or observations of the independent variable (X). To find out whether heteroscedastic problems occur or not used Breusch-Pagan Test. The results show that the Prob> chi2 value is 0.3944 which is greater than 0.05 so there is no problem with heteroscedasticity. Similarly, the results of the Woolridge Test show Prob> F 0.1204 so that there is no autocorrelation problem. Autocorrelation means the error or residual component is correlated based on the time sequence (in time series data) or space sequence (in the cross section data).

Because all the classic assumption tests have been fulfilled the results are panel data regression using PLS.

Table 3.6: Data Panel Regression Calculation Results Using the PLS Model

Local Expenditure	Coef.	Std. Err.	t	P> t
PAD	.2484397	.019416	12.80	0.000
DAU	.983912	.0447136	22.00	0.000
DBH	.0355106	.025899	1.37	0.181
_cons	-6.308471	1.685449	-3.74	0.001
R-squared	0.9561			

Adj R-squared	0.9517
F-stat	217.74
Prob > F	0.0000

Source: Data processed

From Table 3.6 the panel data regression equation models obtained are:

$$BD_{it} = -6.308471 + 0.2484397PAD_{it} + 0.983912DAU_{it} + 0.0355106DBH_{it} + e \quad (3.1)$$

R square has a value of 0.9561 which means that all independent variables can explain the dependent variable by 95.61%. Then the rest of 4.39% is influenced by other variables outside the regression model. F Test value = 0.0000. If the value is <0.05, the F Test accepts H₁ at the significance level of 5% or means PAD, DAU, DBH simultaneously has a significant effect on Local Expenditure, so that it is in line with the research conducted by (Inayati and Setiawan, 2012) and (Iskandar, 2012).

At the partial t test value seen from $P > |t|$ said to be significant at the level of 5% if p value <0.05. So that it can be said that PAD and DAU partially have a positive and significant effect on Local Expenditure, which means that the increase in PAD and DAU will increase Local Expenditure. The results of this study are in line with the research of (Kusumadewi and Rahman, 2007), (Inayati and Setiawan, 2012), (Amalia, 2017), (Al Khoiri, 2015), (Iskandar, 2012), and (Pramuka, 2010). While the DBH variable that has a positive but not significant effect on Local Expenditure is not in line with the research of (Inayati and Setiawan, 2012) and (Iskandar, 2012).

To find out the existence of the flypaper effect phenomenon can see the influence of PAD on Local Expenditures. The other way is to look at the magnitude of the coefficients of the independent variables, namely PAD, DAU, and DBH. If the coefficient of PAD is smaller than the DAU coefficient or DBH, it can be said that there is an effect Flypaper.

Table 3.7: Comparison of Coefficients of PAD, DAU, and DBH On Local Expenditures

Local Expenditure	Coef.
PAD	.2484397
DAU	.983912
DBH	.0355106
_cons	-6.308471

Source: Data processed

From table 3.7 it can be seen that in the Local Expenditure, the DAU coefficient is greater than the PAD coefficient. This shows that the response of the Local Government in Solo Raya to the local budget is still dependent on transfer funds from the Central Government. Therefore in the Local Expenditure of Local Government in Solo Raya is still have a flypaper effect.

The existence of a flypaper effect on Local Expenditures is in line with research conducted by (Kusumadewi and Rahman, 2007), (Inayati and Setiawan, 2012), (Amalia, 2017), who found a flypaper effect on Local Expenditures of Local Governments in Regencies/Cities in Indonesia and (Nugroho, 2017) who found a flypaper effect in the Special Region of Yogyakarta. This finding is not in line with the research of (Al Khoiri, 2015) and (Iskandar, 2012) who found no flypaper effect on Regency/City Local Expenditures in West Java, and (Pramuka, 2010) which did not determine the flypaper effect on Local Expenditures in Java.

Discussion

Based on the results of the calculation, there are some points that are the focus of this issue, are:

- a. PAD, DAU, and DBH simultaneously have a positive and significant effect on Local Expenditures in Solo Raya. PAD and DAU partially have a positive and significant effect on Local Expenditures. While DBH has a positive but not significant effect on Regional Expenditures in Solo Raya. Funds transferred from the Central Government; in this case DAU and DBH are basically as stimulants for the independence of the Local Government in creating the success of regional autonomy. Therefore, with the existence of the transfer fund, the regions are expected to be able to use it to be able to be active in efforts to increase revenue from PAD and can reduce dependence on the Central Government.
- b. This flypaper effect on Local Expenditures in Solo Raya indicates that central transfers only change hands from the Central Government to Local Governments. The existence of this flypaper effect makes the amount of Local Expenditures will be greater than the funds received, as well as the tendency to wait for assistance from the Central Government rather than managing the local resources themselves. Transfer funds from the Central Government should be a local economic stimulus through Local Expenditures which then creates the fiscal potential of the region such as through taxes, levies, and so on.

The limitation of this study is that the data obtained is secondary data in the form of realization of APBD from the Director General of Central and Regional Financial Balance, so that it does not involve the relevant Local Government. Therefore, it is not known the behavior of the Local Government in managing the resources owned and the efficiency of the allocation of the budget received, as well as policies in the allocation of Local Expenditures.

From these limitations, the recommendations that can be given are:

- a. Future research is expected to include aspects of government behavior variables in managing the potential of the region owned.
- b. With the transfer of funds from the Central Government, it is expected to be a local economic stimulus through Local Expenditure, which then creates regional fiscal potential in order to

increase revenue from PAD and can reduce dependence from the Central Government through taxes, levies, and so on.

- c. There are indications that the DAU is not only a fiscal gap in the ability of regional finances, but as the main source of revenue in the APBD, the Local Government is expected to further improve innovation so that PAD can increase and regions are able to finance their own expenses.

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