






# Use of Public Funds and the Flypaper Effect; Analysis of Regional Expenditure in Four Indonesian Provinces

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**Abstract.** This study aims to analyze the use of public funds and the impact of the Flypaper Effect on regional spending in Indonesia's four newly expanded provinces. The Flypaper Effect refers to the phenomenon where transfers of funds from central government to regions tend to be higher than the amount that should be received based on local conditions. This study involves four newly created provinces, namely West Papua, Gorontalo, North Maluku, and West Sulawesi. The research analyzed secondary data collected from various sources related to regional spending and transfers of central government funds. The analytical approaches used were panel regression and other statistical tests to identify the relationship between the use of public funds and the Flypaper Effect in the four provinces. The results showed Flypaper Effect phenomenon only occurred in the West Papua and Gorontalo Provinces. Meanwhile, in North Maluku and West Sulawesi, the Flypaper Effect phenomenon did not occur. This research provides important insights regarding public fund management policies and budget allocations at the regional level. The government needs to improve the fund transfer system and strengthen regional capacity in managing public finances can be important steps to reduce the dependence of provinces on funds from the central government.

**Keywords:** Flypaper Effect, Indonesian Province, Local Spending, Public Finance, Transfer of Funds, Use of Public Funds.

## 1 INTRODUCTION

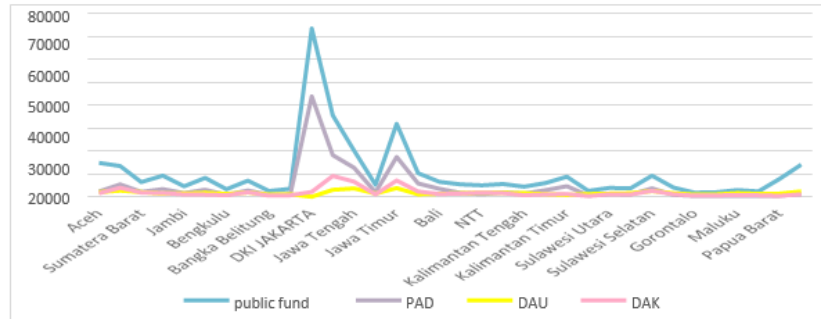
Indonesia is a developing country consisting of several provinces with their respective regional governments as a form of a decentralized system where the central government surrenders governmental authority to a region to manage its regional government affairs. The authority of the central government given to the regions is called regional autonomy which has been regulated in Law Number 32 of 2004 concerning Regional Administration and Law Number 33 of 2004 concerning Fiscal Balance between the Central Government and the Regional Governments. The existence of the Law on Regional Autonomy is seen as very democratic and very fulfilling of the real aspects of decentralization

so that each region has the opportunity to explore local potential and improve its financial performance in the framework of realizing regional independence.

The implementation of regional autonomy itself aims to encourage a region to empower the community, foster initiative and creativity, increase community participation, and develop the roles and functions of the Regional Legislative Council (DPRD). Regional autonomy and decentralization are the answers to the local problems of the Indonesian nation in the form of threats to the disintegration of the nation and society, and the problem of human resource development. Besides that, regional autonomy and decentralization are also strategic steps for the Indonesian people to welcome the era of economic globalization by strengthening the regional economic base. In this regard, local governments have a very important role in determining the success or failure of autonomous regions in creating self-reliance to develop their regions. Apart from regional uncertainty in various fields, regional autonomy is believed to be the best way to encourage regional development to replace the centralized development system (centralization) which is considered by many to be the cause of slow development in the regions and greater social inequality between central and regional governments or one region to other areas [1].

In the Indonesian Public Expenditure Study, the World Bank (2007) argues that fiscal disparities between regions in Indonesia occur due to the wide diversity and distribution of regions, thus affecting social and economic conditions quite significantly. Therefore, to overcome this fiscal gap, the government provides a balancing fund in the form of an allocation of transfer funds sourced from the State Budget (APBN) to fund regional needs in implementing regional autonomy. Law Number 32 of 2004 explains that for the implementation of local government, the central government will transfer balancing funds consisting of General Allocation Funds (DAU), Special Allocation Funds (DAK), and Revenue Sharing Funds (DBH) consisting of taxes and natural resources. In addition to these balancing funds, the Regional Government also has its funding sources in the form of Local Own-source Revenue (PAD), financing, and other income. The policy for using all of these funds is left to the regional government.

Only 20% of regional spending can be financed by Local Own-source Revenue (PAD). Based on the regulations of Ministry of Home Affairs Number 13/2006 which was then revised in regulations of Ministry of Home Affairs Number 59/2007, it mentions that maximizing regional spending is aimed at developing infrastructure, education, health, and improving people's welfare. Realization of government spending, in this case regional spending, can be seen including the development of regional revenues and expenditures contained in the Regional Budget (APBD). The components of the Regional Budget (APBD) are Regional Revenue, Regional Expenditures, and Regional Financing. The following is the realization of Regional Expenditures, Local Own-source Revenues, and General Allocation Funds for 34 Provinces in Indonesia in 2017 [2].



**Fig. 1.** Regional Expenditure Realization, PAD, DAU, DAK 34 Provinces in Indonesia.

Figure 1 shows the realization of Regional Expenditures, Local Own-Source Revenue, General Allocation Funds, and Special Allocation Funds for 34 Provinces in Indonesia in 2017. Of the 34 provinces in Indonesia, there are several provinces with low Regional Expenditure, Local Own-source Revenue, and general allocation funds. From the graph above, it can be seen that the 4 provinces that are at the lowest level of realization are North Maluku, West Papua, Gorontalo, and West Sulawesi.

## 2 METHODS

This research was carried out using literature studies, namely studying, understanding, analyzing, and identifying things that already exist to find out what already exists and what does not yet exist in the form of journals or scientific papers related to research problems.

The type of data used in this study is secondary data. Secondary data is a source of research data obtained through intermediary media or indirectly in the form of books, notes, existing evidence, or archives, both published and not published in general. In other words, researchers need to collect data by visiting libraries, study centers, archive centers, or reading books related to their research.

In applying panel data, the panel data regression method can be used. In general, the panel data regression model can be carried out in two approaches, namely the fixed effect approach and the random effect approach. This means that in doing regression, one approach that produces a significant model must be chosen. A good regression model must be based on hypothesis testing.

The equation used to see the effect of Local Own-source Revenue, General Allocation Funds, and Special Allocation Funds on Regional Expenditure is:

$$BD_{it} + QPAD_{it} + Q_2DAU_{it} + Q_3DAK_{it} + e_{it} \quad (1)$$

Description:

$BD_{it}$  = Regional Expenditures

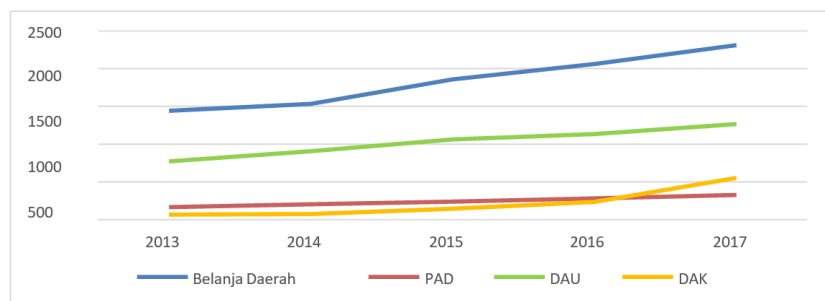
$\beta_0$  = Intercepts

$\beta_1, \beta_2, \beta_3$  = Regression Coefficient

PAD = Local Own-source Revenue  
 DAU = General Allocation Fund  
 DAK = Special Allocation Fund  
 i = Cross-Section  
 t = Time Series  
 eit = Error Term

### 3 RESULTS AND DISCUSSION

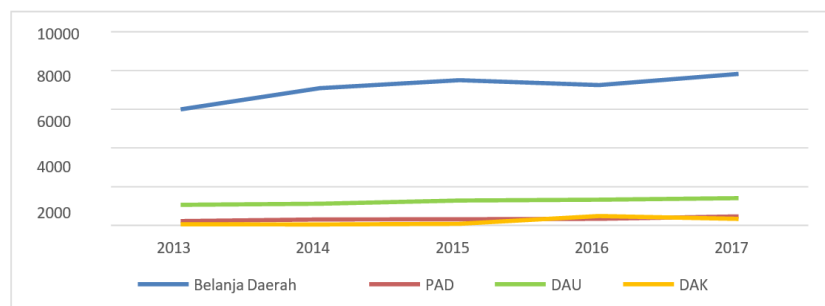
#### 3.1 North Maluku Province



**Fig. 2.** Realization of Local Own-source Revenue, General Allocation Fund, and Special Allocation Fund in North Maluku Province in 2013-2017 (in Billion Rupiah).

According to Figure 2, a significant increase occurred in Regional Expenditures in 2015 – 2017 accompanied by an increase in the General Allocation Fund in the same year. Meanwhile, Local Own-source Revenue and Special Allocation Funds also increased in 2016 - 2017 even though it is not significant and not comparable to the increase in Regional Expenditure and also the General Allocation Fund.

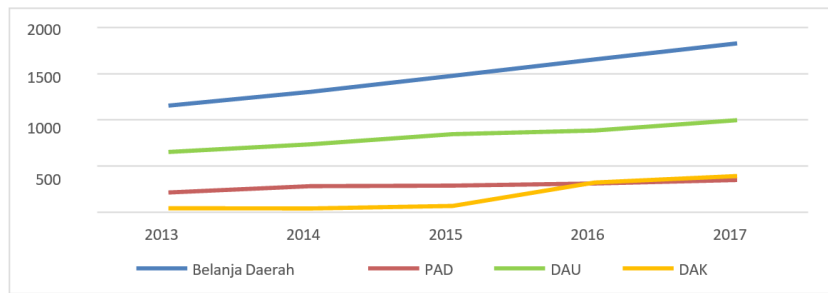
#### 3.2 West Papua Province



**Fig. 3.** Realization of Local Own-source Revenue, General Allocation Fund, and Special Allocation Fund in West Papua Province in 2013-2017 (in Billion Rupiah).

Figure 3 shows the level of regional spending in West Papua Province increased in 2013-2015 but decreased the following year, due to revenue-sharing spending in 2016 of only Rp460 billion whereas in the previous year, it reached Rp1 trillion, then regional spending increased again in 2017. This increase was dominated by an increase in the amount of indirect spending which increased by 1 trillion from Rp3.2 trillion to Rp4.3 trillion. The level of Local Own-source Revenue, General Allocation Funds, and Special Allocation Funds increases each year, even though it is not significant [3].

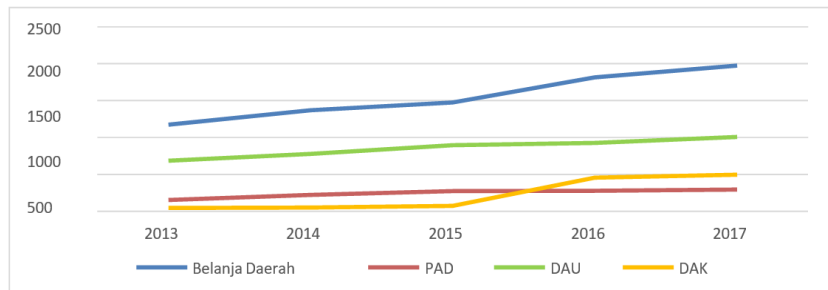
### 3.3 Gorontalo Province



**Fig. 4.** Realization of Local Own-source Revenue, General Allocation Fund, and Special Allocation Fund in Gorontalo Province in 2013-2017 (in Billion Rupiah).

Figure 4 shows the increase is quite significant every year, which is different from the Special Allocation Fund which in 2013 – 2015 experienced an insignificant increase, but in 2016 – 2017 the increase was quite high [3].

### 3.4 West Sulawesi



**Fig. 5.** Realization of Local Own-source Revenue, General Allocation Fund, and Special Allocation Fund in West Sulawesi Province in 2013-2017 (in Billion Rupiah).

Figure 5 shows the increase in regional spending in the province was very significant, which was dominated by an increase in indirect spending which in 2015 amounted to

490 billion, increasing to 829 billion in 2016, and in 2017 it reached 966 billion. Accompanied by the level of Local Own-source Revenue and also the General Allocation Fund which increases every year but is not too significant or tends to be normal. In contrast to the value of the Special Allocation Fund, which in 2015 - 2016 experienced a fairly high increase in West Sulawesi Province by 100 billion.

### 3.5 Panel Data Analysis Model Result

The results of data processing from 2011-2017 which were processed using Eviews 8 and the fixed effect model obtained the regression equation in the form of the following equation:

**Table 1.** Panel Data Regression (Flypaper Effect).

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2005.303	0.820850	1.002326	<b>0.3276</b>
X1	2.83E-10	4.37E-10	0.339230	<b>0.7378</b>
X2	4.40E-09	3.98E-09	0.119550	<b>0.9060</b>
X3	7.72E-09	1.53E-09	-2.936173	<b>0.0079</b>
<b>Fixed Effects (Cross)</b>				
MALUT--C	0.174156			
_PAPBAR--C	-3.377733			
_GRNTL--C	1.652791			
_SULBAR--C	<b>1.550787</b>			

Based on the results shown in Table 1, the coefficient value of the General Allocation Fund is 4.40 and the coefficient value of Local Own-source Revenue is 2.83 and both have an effect, seen from a significant value of <0.05 for General Allocation Funds and Regional Original Revenue. This shows that there has been a flypaper effect on the Regional Expenditure of 4 Provinces in Indonesia because it is by the first condition, where the effect of the General Allocation Fund on the Regional Expenditure of the 4 Provinces in Indonesia is greater than the effect of Regional Original Revenue on the Regional Expenditure of the 4 Provinces in Indonesia.

**Table 2.** Correlation Time Series.

No.	Province	PAD	DAU	Category
1	North Maluku	2.407035	0.880257	<b>Not occur FPE</b>
2	West Papua	2.261716	4.318805	<b>Occur FPE</b>
3	Gorontalo	0.491863	1.377798	<b>Occur FPE</b>
4	<b>West Sulawesi</b>	<b>1.211989</b>	<b>0.686369</b>	<b>Not occur FPE</b>

By carrying out a time series regression analysis, the coefficient value of Regional Original Income and the General Allocation Fund in each Province can be seen. As

shown in Table 2, the Flypaper Effect only occurs in West Papua Province and Gorontalo Province where the coefficient value of the General Allocation Fund is greater than the coefficient value of the Local Own-source Revenue. Meanwhile, in the North Maluku and West Sulawesi Provinces, the Flypaper Effect did not occur, as indicated by the coefficient value of Local Own-source Revenue which was greater than the coefficient value of the General Allocation Fund. This analysis also shows that the overall relationship between Local Own-source Revenue and General Allocation Funds for Regional Expenditures in each Province is positive.

### 3.6 Discussion

The estimation results between Local Own-source Revenue and General Allocation Funds for Regional Expenditures for the Provinces of North Maluku, West Papua, Gorontalo, and West Sulawesi show that both have a positive effect on Regional Expenditure, but in this case the General Allocation Fund tends to be more dominant in financing Regional Expenditure, shown in the coefficient value of the General Allocation Fund (4.40) is greater than the coefficient value of Regional Original Income (2.83). These results illustrate that as a whole there has been a flypaper effect on Regional Expenditure in the four provinces because the coefficient of the General Allocation Fund is greater than the Regional Original Revenue. The results of this study support the research conducted by Supatra and Saimul (2015) entitled "Analysis of the Flypaper Effect on Regional Financial Management in Lampung Province". According to their research, there was a flypaper effect on regional finances in Lampung Province.

The results in Table 2 show that 4 provinces in Indonesia are experiencing the flypaper effect as shown by the panel data regression results. It was found that the coefficient value of General Allocation Funds in the model is 4.40 and the coefficient value of Regional Original Income is 2.83. Table 2 shows the result of a timeseries regression revealing the flypaper effect in each province, which shows that the flypaper effect only occurs in the West Papua and Gorontalo Provinces where the Regional Expenditure response is greater to the General Allocation Fund when compared to the Regional Expenditure response to Revenue. For the Local Own-source Revenue, there was no flypaper effect where the coefficient value of Local Own-source Revenue in the North Maluku and West Sulawesi Provinces tended to be greater than the General Allocation Fund coefficient value.

This proves that in the context of implementing regional autonomy in several newly created regions, the policy package for balancing funds originating from the State Budget (APBN) for the use of inequitable regional development has not been able to overcome the problems that occur in these regions, especially in terms of regional independence in terms of finance. This can be seen in the dependence on funds which is increasing every year in several provinces as a result of the expansion of regions because of the inability of several provinces to rely on their regional finances in implementing regional autonomy. It can be seen that local governments are less able to recognize problems that occur in the regions so fiscal dependence arises which is indicated by the large response of regional expenditures to the balance of funds provided by the

central government as it happened in 4 newly created provinces in Indonesia discussed in this study.

The low contribution of Local Own-source Revenue in the provinces of North Maluku, West Papua, West Sulawesi, and Gorontalo is because these 4 provinces are still relatively new, so local governments have not been able to completely separate from the central government. The government is still not optimal in exploring the potential that exists in the region to be used as a source of regional income, which has caused these 4 provinces to still not have many regional-owned enterprises that provide benefits to the region. Moreover, this is also influenced by the lack of public awareness to pay taxes, fees, and other levies which are a source of income from Local Own-source Revenue.

To increase regional financial independence sourced from Local Own-source Revenue, the provincial governments of North Maluku, West Papua, Gorontalo, and West Sulawesi generally make efforts to intensify local taxes and regional levies which are sources of revenue from Local Own-source Revenue. However, this effort will have an impact on society because it will increase the burden on society in paying taxes. The local government should have started to explore the potential that exists in their regions to the fullest so that the 4 provinces can create regional-owned enterprises that are in accordance with the potential in their regions, which will greatly affect the income of these regions. This is because in the future local governments must immediately become independent and not always depend on balancing funds from the central government.

## 4 CONCLUSIONS

From the results of the research analysis regarding the Flypaper Effect Analysis on Regional Expenditures in 4 Provinces in Indonesia in 2013-2017 analyzed using the Eviews 8 analysis tool, some conclusions can be made as follows:

1. Partially, Local Own-source Revenue and General Allocation Funds had a non-significant positive relationship to Regional Expenditures of 4 provinces in Indonesia in 2013-2017 while Special Allocation Funds had a significant positive relationship to Regional Expenditures of 4 provinces in Indonesia in 2013- 2017.
2. Simultaneously, Local Own-source Revenue, General Allocation Funds, and Special Allocation Funds had a significant positive relationship with the Regional Expenditure of 4 provinces in Indonesia from 2013- 2017.
3. The Flypaper Effect phenomenon occurs in 4 provinces of expansion regions in Indonesia by carrying out panel data regression tests. To find out the Flypaper Effect in each province, a time series multiple regression test was carried out. The Flypaper Effect phenomenon only occurs in the Provinces of West Papua and Gorontalo. Meanwhile, in North Maluku and West Sulawesi, the Flypaper Effect phenomenon did not occur.



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