

## Research Article

# Local Finance and Regional Expenditures: Is There a Flypaper Effect in Indonesia?

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The granting of authority based on regional autonomy should be able to create local government independence to manage their own finances through local own-source revenue and promote sustainable economic growth. However, many previous studies have found the flypaper effect phenomenon in Indonesia. This research aims to determine the effect of local own-source revenue, intergovernmental transfers, and local government financing on local government expenditure and detect the flypaper effect phenomenon in Indonesia. This quantitative method with a purposive sampling technique has been used to obtain data from 467 regencies/cities in Indonesia for the fiscal year 2021. Hypothesis testing in this research employs multiple linear regression analysis. The research result shows local own-source revenue, general allocation fund, special allocation fund, and revenue sharing fund do not affect local government expenditure, and local government financing positively affects local government expenditure. This research did not find the flypaper effect in local governments in Indonesia but identified other funding mechanisms to meet the needs of local government expenditure derived from local government financing.

**Keywords:** flypaper effect, local own-source revenue, intergovernment transfers, local government financing, regional expenditures

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## 1. Introduction

Law No. 1 of 2022 on Financial Relation between Central Government and Local Government has effectively implemented on January 5th, 2022 [1], in order to encourage fiscal decentralization through enhance local government tax and retribution, local government expenditure, intergovernment transfer, local financing, and harmonization of tax relation between central government and local government [2]. Indonesia has been implemented decentralization since 2021, which means Local Government has authority and responsibility to manage their own region [3]. According to Armadani and Maryono [4], Decentralization allowed local government to have an authority, power, and freedom to manage their own region. Local government which has more specific territory than central government, expected to be able optimize their performances

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including maximize local economic activities in order to improve the welfare of society equally [5].

Local government must have the authority to obtain and explore their local own-source revenue potential, supported by intergovernment transfers, to manage local government expenditure [6]. The phenomenon of local government expenditure according to the Minister of Home Affairs Tito Karnavian in News.ddtc.co.id [7], capital expenditure and goods expenditure that have a direct effect to society should allocate a greater amount for spending to development programs. However, empirical data from Directorate-General of Regional Fiscal Balance as shown in Table 1, the realization of local government expenditure in 2020-2022 was absorbed dominantly for operating expenditure. Even though capital expenditure is increasing, its contribution is still low compared to operating expenditure.

TABLE 1: Government expenditures for all provinces and district/cities in 2020-2022 (in billion rupiah).

Local Government Expenditures	Realization in 2020		Realization in 2021		Realization in 2022	
	Rp	%	Rp	%	Rp	%
Employees Expenditure	373.300	33	376.032	33	365.726	34
Goods & Service Expenditure	274.965	25	315.812	28	312.506	29
Capital Expenditure	157.572	14	167.354	15	171.915	16
Others Expenditure	316.121	28	285.889	25	230.961	21
Total Local Government Expenditures	1.121.958	100	1.145.087	100	1.081.107	100

Source: Directorate-general of regional fiscal balance 2020-2022 [8]

Apart from that, according to Daily Executor (Plh) Director General of Regional Financial Development, Ministry of Home Affairs Agus Fatoni in kompas.id [9, 10], realization of expenditure absorption is still below 90% or 85.69% of budgeted. Furthermore, the Executive Director of the Centre of Reform on Economics (CORE) Indonesia, Mohammad Faisal, said that the actual absorption of expenditure that below 90% had caused many projects from third parties delayed and development hampered.

The granting of authority based on regional autonomy should be able to create local government independence to manage their own finances through Local Own-Source Revenue (PAD). Empirical evidence shows the authority given to regional governments is not directly correlated with the extent of level regional independence. Based on the 2020-2022 Regional Fiscal Capacity (KFD) shown in Table 2, districts/cities in the

TABLE 2: Regional fiscal capacity (KFD) district/cities 2020-2022.

KFD Categories	District/Cities 2020		District/Cities 2021		District/Cities 2022	
Very Low	126	25%	127	25%	78	15%
Low	128	25%	127	25%	181	36%
Middle	126	25%	120	24%	120	24%
High	91	18%	86	17%	52	10%
Very High	37	7%	48	9%	77	15%
Total	508	100%	508	100%	508	100%

Source: PMK No. 120/PMK.07/2020, PMK No. 116/PMK.07 /2021, dan PMK No. 193/PMK.07/2022 [11].

low and very low categories, from 2020 to 2022, reach 50% of the districts/cities in Indonesia.

In Table 3, the 2020-2022 APBD realization posture for all districts/cities in Indonesia, regional revenue dominantly comes from intergovernment transfers. Intergovernment transfer consists of general allocation funds (DAU), special allocation funds (DAK), and revenue sharing funds (DBH). Weingast [12] states that government officials prefer policies that loosen their budget constraints. Therefore, internal transfers in different governments directly affect the behaviour of local governments and their policy choices. The regional tendency in intergovernment transfer to fund their needs is still very large, which is in line with the previous regional government independence, which was still categorized as low and very low.

TABLE 3: Posture of 2020-2022 APBD regional revenue realization (in billions of rupiah).

Regional Revenue	Realization in 2020		Realization in 2021		Realization in 2022	
	Rp	%	Rp	%	Rp	%
PAD	264.066	24	297.010	25	291.149	27
DAU	381.612	34	377.791	32	378.000	35
DAK	176.561	16	184.541	16	173.162	16
DBH	93.906	8	117.157	10	168.407	16
Total Regional Revenue	1.115.490	100	1.168.216	100	1.064.798	100

Source: Directorate-General of Regional Fiscal Balance 2020-2022 [8]

In the LRA structure, apart from the PAD and intergovernment transfer fund posts, there are also local government financing posts. Wati et al. [13] found that during the Covid-19 pandemic, regional governments tended to fund their regional expenditure using local government financing rather than using PAD. From this, we could conclude that from 2020-2022, Indonesian regional governments tend to depend on

intergovernment transfer and find it difficult to fund their regional expenditure from PAD. This dependency phenomenon is typically known as the flypaper effect, which means the condition that the contribution of intergovernment transfer is greater than the contribution of PAD to regional expenditure [14]. Flypaper effect phenomenon was also occurred in Ghana [15] and Poland [16]. In Indonesia, several studies have contradiction findings. Research that the flypaper effect did not occur was found by Pradipta and Jatmiko [17]. However, research that found the flypaper effect was occur by Zulfan and Mustika [14], Fadilah and Helmayunita [18], and Wati et al. [13].

Apart from that, there are also differences in results for each variable. PAD has a positive effect on regional expenditure by Armawaddin et al. [19], Tasri [20], Pradipta and Jatmiko [17], Asari and Suardana [6], Dayanti et al. [21], and Fadilah and Helmayunita [18]. Meanwhile, PAD has no effect on regional expenditure by Zulfan and Mustika [14]. DAU has a positive effect on regional expenditure by Armawaddin et al. [19], Tasri [20], Wati et al. [13], and Fadilah and Helmayunita [18], in contrast to Pradipta and Jatmiko [17] that DAU has no effect on regional expenditure. DAK has a positive effect on regional expenditure by Armawaddin et al. [19], and Pradipta and Jatmiko [17]. Meanwhile, DAK has no effect on regional expenditure by Fadilah and Helmayunita [18]. DBH has a positive effect on regional expenditure by Armawaddin et al. [19], Fadilah and Helmayunita [18] and Pradipta and Jatmiko [17], different from Dayanti et al. [21] DBH has no positive effect on regional expenditure.

This research complements the research of Wati et al. [13], by adding DAK and DBH variables. The research aims to determine the effect of PAD, DAU, DAK, DBH, and local government financing on regional expenditure and analyse whether there is a flypaper effect for districts/cities in Indonesia in 2021. Apart from that, the measurements in this research are different from previous research. This research modifies the measurements of PAD, DAU, DAK, and DBH variables. This research complements the research of Wati et al. [13], by adding DAK and DBH variables.

In general, the research results showed there was no evidence found to support the existence of a flypaper effect within local governments in Indonesia, but the research results found the flypaper effect in another mechanism, namely local government financing. This research contributes primarily to regulators and all regional governments in Indonesia to be careful in responding to the phenomenon of using local government financing to fund regional expenditure. Regulators should also be able to formulate policies that encourage original regional revenue that can be used to fund regional expenditure.

Next, this research is structured as follows: literature review and hypothesis development are presented in the second section, followed by a description of the research design in the third section. The fourth section presents research results and discussion, and the fifth section contains research conclusions, research limitations, and suggestions for further research.

## 2. Literature Review and Hypothesis Development

### 2.1. Agency theory and flypaper effect phenomenon

In 1976, Jensen stated that agency theory is a relationship between stakeholders (principal) and management (agent), where the principal entrusts the agent to carry out decision-making authority to fulfill the principal's wishes [22]. In agency theory in the public sector, the central government acts as the stakeholder and manager of state finances which provides funds to regional governments to finance and support regional activities. The central government as principal entrusts regional governments as agents to carry out regional autonomy authority in order to equalize finances between the center and regions, and between regions. Part of decentralization is the hope that autonomous regional governments can manage their regions, which triggers regional growth and development. The central government acts as the principal who provides intergovernment transfers. Intergovernment transfers provided by the government are not just the most important thing, intergovernment transfers only provide funds that can be managed as part of regional government capital to generate Regional Original Income (PAD) and be able to be financially independent in the future.

Research conducted by Fadilah and Helmayunita [18], Fatimah et al. [23], and Syahrina and Ermawati [24], regional governments as agents are expected to be able to realize the principal's wishes in managing regional finances independently. However, according to Tama and Pujihastuti [25], problems occur if these intergovernment transfers do not produce results that meet expectations.

In relation to the flypaper effect, as in Arthur Okun in Chalil [26], his famous opinion "money sticks where it hits". This means that the money is stuck to its place, which means that when central transfer funds to regional governments, the money is "stick" to the interests of the regional government itself. Local government spending tends to be higher as it relies on transfer funds, which do not necessarily result in a proportional increase in community income. This phenomenon is often referred to as the flypaper effect. As explained by Hines and Thaler [27], when a local government receives grant

funds, it is possible to increase spending without increasing taxes. This is due to the fact that the government's decision regarding grant funds is not a choice between investing the money or reducing taxes, but rather about determining how the funds should be spent.

## 2.2. Hypothesis Development

### 2.2.1. The effect of PAD on regional expenditure

In agency theory, the conflict between the desires of the central government and regional governments in managing regional finances optimally will encourage regional governments to realize the desires of the central government. However, the limited funds provided will trigger self-interested behavior. Therefore, any funds obtained from original regional income will be useful for meeting regional needs that cannot be met by transfer funds from the center. Thus, the large PAD will cause an increase in regional expenditure.

In Zulfan and Mustika [14], PAD has no effect on regional expenditure. However, the latest research conducted by Yacoub and Lestari [28], Putri et al. [29], Fadilah and Helmayunita [18], Guziejewska et al. [16], and Wati et al. [13] shows the results that PAD has a positive effect on spending. So the hypothesis built on this argument is:

H1: There is a positive effect of local original income on regional expenditure.

### 2.2.2. The effect of DAU on regional expenditure

In agency theory, the central government trusts regional governments to make decisions in developing their regions accompanied by transfer funds from the central government, one of which is DAU. The central government hopes that DAU should be used to fulfill local government needs which will have an impact on community welfare.

DAU is formulated based on the fiscal gap. Governments that have a higher fiscal gap will also get a higher DAU. It can be concluded that the size of the DAU will increase the amount of regional expenditure in order to reduce the fiscal gap between regions according to the expectations of the central government.

Pradipta and Jatmiko [17], DAU has no effect on regional expenditure. However, recent research by Fadilah and Helmayunita [18] and Wati et al. [13] results in DAU having a positive effect on regional expenditure, so the hypothesis built on this argument is:

H2: There is a positive effect of general allocation funds on regional expenditure.

### 2.2.3. The effect of DAK on regional expenditure

DAK functions to fund special regional government activities that are national priorities. In agency theory, the central government entrusts local governments to meet specific regional needs. DAK must be allocated for specific needs as a national priority. Therefore, each additional DAK will increase regional expenditure, which indicates that regional special activities are also increasing.

Research by Armawaddin et al. [19] and Pradipta and Jatmiko [17] found that DAK had a positive effect on regional expenditure, so the hypothesis built on this argument is:

H3: There is a positive effect of special allocation funds on regional expenditure.

### 2.2.4. The effect of DBH on regional expenditure

Government revenues, apart from relying on taxes, also depend on the availability of natural resources. Regions that are abundant in natural resources will also have abundant regional income potential [28]. DBH has full freedom in its use to meet its own regional needs [17]. In agency theory, the central government trusts regional governments to develop their regions from profit sharing funds.

Research by Pradipta and Jatmiko [17] and Fadilah and Helmayunita [18] shows that DBH has a positive effect on regional expenditure. The amount of DBH received by regional governments will also increase the amount of regional expenditure because the DBH fund expenditure policy is flexible, so the hypothesis built on this argument is:

H4: There is a positive effect of revenue sharing funds on regional expenditure.

### 2.2.5. The effect of local government financing on regional expenditure

Local government financing can be used as a funding input for regional expenditure in order to accelerate the level of economic growth and regional services [13]. There is a positive effect of financing on regional expenditure as proxied by SiLPA by Kosim [30], but research by Wati et al. [13] updated the financing proxy using regional net financing.

Net local government financing is obtained from local government financing income minus local government financing expenditure. The greater the net local government financing, the greater the alternative sources of funding for regional expenditure from local government financing posts. Therefore, the large net local government financing will also lead to an increase in regional expenditure, so the hypothesis built on this argument is:

H5: There is a positive effect of local government financing on regional expenditure.

### 2.2.6. Detection of the flypaper effect phenomenon

In agency theory, problems occur if intergovernment transfers do not provide maximum results. This creates the potential for PAD not to develop optimally and the level of regional government dependence on transfer funds becomes increasingly massive because regional governments tend to wait for grants from the central government [20].

Research by Fadilah and Helmayunita [18], Yacoub and Lestari [28], and Tasri [20] found a flypaper effect on regional expenditure. Wati et al. [13], in their findings, they found that there were regions that produced PAD of only 0.43% of the average PAD value and there were regions that had DAU of 511% of the average DAU value. This indicates that there are still regions that are given very high DAU and there are still regions that receive very low PAD, so it is thought that the result of low PAD and too high DAU results in a large dependency on intergovernment transfers. Because of this conclusion, the hypothesis built on this argument is:

H6: There is a flypaper effect in districts/cities in Indonesia.

## 3. Research Method

### 3.1. Population and sample

All district/city governments in Indonesia in 2021 are the population in this research. Until this research was conducted, the latest data available was the audited local government financial report for 2021. Based on the Decree of the Minister of Home Affairs Number 050-145 of 2022 [31], the total population is 514 districts/cities in Indonesia. The sample uses a purposive sampling technique based on criteria, namely:

In 2021, districts/cities will have LKPD that has been audited by the Indonesian Financial Audit Agency (BPK RI)

Has PAD, DAU, DAK, DBH and local government financing components in the LRA in the 2021 LKPD.



### 3.2. Analysis and hypothesis testing techniques

The data source comes from the 2021 LRA LKPD obtained via the official website [ppid.bpk.go.id](http://ppid.bpk.go.id). The data analysis technique uses multiple linear regression using the STATA and Microsoft Excel applications. Apart from that, testing also includes descriptive statistics, normality test, multicollinearity test, heteroscedasticity test, autocorrelation test, hypothesis test. Variable operationalization can be seen in Table 4. The following is the regression equation in this research:

$$BD_i = a + \beta_1 PAD_i + \beta_2 DAU_i + \beta_3 DAK_i + \beta_4 DBH_i + \beta_5 LF_i + e_i \quad (i)$$

TABLE 4: Variable operationalization.

Variable	Measurement
Local government expenditures (BD)	Natural logarithm of total local government expenditures
Local own-source revenue (PAD)	The amount of local own-source revenue is divided by total revenue
General allocation funds (DAU)	The amount of general allocation funds divided by total revenue
Special allocation funds (DAK)	The amount of special allocation funds divided by total revenue
Revenue sharing funds (DBH)	The amount of profit-sharing funds is divided by total revenue
Local government financing (LF)	Natural logarithm of total local government financing

Source: Author's own work

### 3.3. Flypaper effect detection

In detecting the flypaper effect, research by Yacoub and Lestari [28] and Armawaddin et al. [19], suggests that this can be done by considering two conditions. First, if each of the DAU, DAK, and DBH variables produces a coefficient value on local government expenditures that is higher than the PAD coefficient value on local government expenditures and the DAU, DAK, and DBH variables and PAD have a positive effect on local government expenditures. Second, if the PAD variable produces results that have no effect on regional spending while the DAU, DAK, DBH variables have a positive effect on local government expenditures.

## 4. Result and Discussion

### 4.1. Description of research objects

Of the total population of 514 districts/cities, there are 35 districts/cities that do not fully present all components of the research variables. Apart from that, 12 districts/cities were excluded because they had outlier values. Thus, the total sample used was 467 districts/cities in Indonesia in the 2021 fiscal year.

### 4.2. Descriptive statistics

To explain the mean (average), standard deviation, minimum and maximum values of each variable are outlined in Table 5.

TABLE 5: Descriptive statistics (BD and PD variables in millions of rupiah).

Variabel	Obs	Mean	Std. Dev.	Min	Max
Y_BD	467	1.548.275	984.389	514.734	8.708.394
X1_PAD	467	0,126	0,097	0,006	0,646
X2_DAU	467	0,446	0,097	0,018	0,675
X3_DAK	467	0,145	0,050	0,023	0,637
X4_DBH	467	0,069	0,072	0,008	0,583
X5_PD	467	135.107	176.714	136	2.010.516

Note: Y\_BD = Regional Expenditure; X1\_PAD = Regional Original Income; X2\_DAU = General Allocation Fund; X3\_DAK = Special Allocation Fund; X4\_DBH = Profit Sharing Fund; X5\_PD = Local government financing

Source: Output STATA 16, Author's own work (2023)

In the local government expenditures variable (BD), the lowest value is owned by Pakpak Bharat Regency, Papua, while the highest value is owned by Bogor Regency, West Java. The average local government expenditures value is also close to the lowest value. The data distribution does not vary too much because the standard deviation is smaller than the average. This shows that expenditures absorption by local governments in Indonesia is still relatively low. In the Local-Own Source Revenue variable (PAD), the lowest value is owned by Deiyai Regency, Papua. The highest score is owned by Badung Regency, Bali. The average PAD is also close to the lowest value and the data distribution does not vary too much because the standard deviation is smaller than the average. This shows that there is a large gap between the richest and poorest regions in Indonesia. Apart from that, this shows that most regions in Indonesia have not succeeded in generating their local-own source revenue.

In the Profit-Sharing Fund variable (DBH), the lowest value is owned by Pidie Regency, Aceh, while the highest value is owned by Mappi Regency, Papua. The data is spread widely or varied because the standard deviation is greater than the average. Local government with higher revenue levels tend to receive higher tax (DBH) as well. This shows that the central government is less effective in targeting DBH because Papua tends to have low income compared to other regions but gets high DBH. In the general allocation fund variable (DAU), the lowest value is owned by Semarang City, Central Java and the highest DAU value is owned by Solok City, West Sumatra. The average value is close to the highest value. A similar thing also happened to DAK, the lowest Special Allocation Fund variable (DAK) value was owned by Mappi Regency, Papua, while the highest value was owned by West Seram Regency, Maluku. The distribution of DAU and DAK data does not vary too much because the standard deviation is smaller than the average. This shows that the amount of DAU and DAK is allocated more evenly than DBH.

In the local government financing variable, the lowest value is owned by Aru Islands Regency, Maluku, while the highest value is owned by Bojonegoro Regency, East Java. The average value is close to the lowest value and the distribution of data based on standard deviation is spread widely or varies because the value is greater than the average value. This shows that there is a large gap between the richest and poorest regions in Indonesia in terms of local government financing capacity.

### 4.3. Hypothesis testing

Before carrying out a hypothesis test, a classical assumption test is first carried out. The results of the normality test using the skewness and kurtosis tests show that the data is normally distributed. Apart from that, the multicollinearity test using the VIF and Tolerance values, as well as the heteroscedasticity test using the Breusch-Pagan Godfrey test, showed that there were no multicollinearity and heteroscedasticity problems.

Based on Table 6, the Adjusted R-square value is 0.6881 or 68.81%. This means that the independent variables in this research, namely PAD, DAU, DAK, DBH, and local government financing can effect changes in the dependent variable, namely regional government spending by 68.81%. The remaining 31.19% is effectd by other variables outside this research.

TABLE 6: Partial regression test (t-test).

Y_LGE (Local Government Expenditures)	Ordinary Least Square (OLS)				
	Hypothesis	Coef.	t	P >  t	
X1_PAD		-0.4360	-1.9200	0.9720	
X2_DAU		-4.4500	-18.7300	1.0000	
X3_DAK		-0.5410	-1.6600	0.9510	
X4_DBH		-2.8990	-11.1100	1.0000	
X5_LF		0.0910	7.6800	0.0000	***
<b>_cons</b>		<b>27.9650</b>	<b>78.5300</b>	<b>0.0000</b>	
Number of Obs	467				
Adjusted R-Square	0.6881				
Prob > F	0.0000				

Source: STATA 16 Output, Author's own work (2023)

To find out whether a dependent variable is affected individually by the independent variable, the t-test statistical test can be used [32] (p. 179). By using a one-sided t test with a significance level of 0.05, the results are as shown in Table 6.

#### 4.4. The effect of PAD on regional expenditure

From the results of the hypothesis test, PAD has a p value of 0.972 which is greater than the alpha value of 0.05, meaning there is no effect between PAD and regional expenditure, which means agency theory cannot be used to explain the results of this research. In the research sample, the province that has the most districts/cities in Indonesia, namely Central Java with 34 districts/cities, has a difference in regional expenditure that is not much different between the average of the upper quartile and the lower quartile of PAD. This difference shows that an increase or decrease in PAD has no effect on the increase or decrease in regional expenditure.

The results of this study are not in accordance with Yacoub and Lestari [28], Putri et al. [29], Fadilah and Helmayunita [18], and Guziejewska et al. [16] which shows that PAD has a positive effect on spending. However, this research is in line with Zulfan and Mustika [14] which shows that PAD has no effect on regional expenditure. Research conducted before the Covid-19 pandemic took place showed a positive and significant effect because the large PAD was able to affect an increase in regional expenditure under normal conditions. However, findings from Syamsul et al. [33] and Ishak [34] found that there were differences between districts/cities in Indonesia in obtaining PAD

before and after the Covid-19 pandemic. Almost all provincial governments in Indonesia experienced a decrease in PAD which came from regional taxes and regional levies which are the main components of PAD [33]. However, the decline during the Covid-19 pandemic was not accompanied by a decrease in regional expenditure due to the high regional needs to accelerate recovery from the Covid-19 pandemic. This results in a decrease in the value of PAD that does not reduce regional expenditure.

## **4.5. The effect of intergovernment transfers on regional expenditures**

### **4.5.1. The effect of DAU on regional expenditure**

From the results of the hypothesis test, DAU has a p value of 1.000 which is greater than the alpha value of 0.05, meaning that DAU has no effect on regional expenditure. The results of this research cannot be explained by agency theory. In the research sample, comparing the average regional expenditure in the upper quartile and lower quartile in each province, the results showed that the difference between the average upper quartile and the average lower quartile DAU was not much different, which illustrates that the increase in DAU did not affect the amount of regional expenditure.

The results of this study are not in accordance with Fadilah and Helmayunita [18] and Wati et al. [13] that DAU has a positive effect on regional expenditure. However, the results of this research are in accordance with Pradipta and Jatmiko [17], namely that DAU has no effect on regional expenditure. According to Pradipta and Jatmiko [17], the government no longer uses DAU as the main source to finance spending needs. Some of the reasons are because, based on Law Number 33 of 2004, higher DAU is given to regions that have regional needs that exceed the existing regional revenue potential. A higher proportion of DAU indicates that regional governments have a tendency to depend on DAU or that the regional ability to obtain other sources of income is lower, allowing regional governments to limit their regional expenditure. Therefore, regional governments whose regional income is dominated by DAU are unable to finance regional expenditure for other regional needs.

### **4.5.2. The effect of DAK on regional expenditure**

From the hypothesis test, the DAK p value of 0.951 is greater than the alpha value of 0.05, which indicates that DAK has no effect on regional expenditure. The results of this research cannot be explained by agency theory. In the research sample, one of the

provinces in Indonesia, namely the province of Aceh, which has 23 districts/cities, has a difference in regional expenditure that is not much different between the average of the upper quartile and the lower quartile of DAK. This difference shows that an increase or decrease in DAK has no effect on the increase or decrease in regional expenditure.

The results of this study are not in line with research conducted by Armawaddin et al. [19] and Pradipta and Jatmiko [17] that DAK has a positive effect on regional expenditure. But, this research is in line with Fadilah and Helmayunita [18], namely that DAK has no effect on regional expenditure. According to Fadilah and Helmayunita [18], DAK regulations are not as detailed as DAU and DBH allocation regulations. This causes local governments to not have initial certainty regarding the amount of DAK, so that the efficiency and effectiveness of DAK is not optimal. In addition, each region has different special activities. A region funded by DAK is less, indicating that there are fewer specific activities, but does not indicate that the spending needs of that region are also small.

#### 4.5.3. The effect of DBH on regional expenditure

From the hypothesis test, the DBH p value of 1.000 is greater than the alpha value of 0.05, which means that DBH has no effect on regional expenditure. The results of this research cannot be explained by agency theory. In the research sample, the comparison of the average regional expenditure in the upper quartile and lower quartile in districts/cities in Indonesia is not much different in terms of regional expenditure, indicating that the size of the DBH has no effect on the amount of regional expenditure.

The results of this research are not in line with research by Pradipta and Jatmiko [17] and Fadilah and Helmayunita [18] where DBH has a positive effect on regional expenditure. However, this research is in line with Dayanti et al. [21] and Fatimah et al. [23] that DBH has no effect on regional expenditure. In 2021, where the Covid-19 recovery is still ongoing, tax incentives and tax relaxation provided by the government will reduce the amount of DBH in various regions. This has the impact of reducing DBH in areas that receive more tax DBH, especially the districts/cities of Banten, West Java and East Java. Apart from that, as reported by the Central Statistics Agency, West Java and East Java occupy the top positions with the largest population in Indonesia, namely 48,274,162 people and 40,665,696 people. This causes regional expenditure needs, especially during the Covid-19 pandemic, to remain high as evidenced by the highest position of regional expenditure of IDR 8,708,394 million. This condition proves that the decline in DBH does not affect the decline in regional expenditure.

#### 4.5.4. The effect of local government financing on regional expenditure

From the hypothesis test, it was found that the p value for local government financing was 0.000, which was smaller than the alpha value of 0.05, which means that local government financing influenced regional expenditure. Then local government financing has a positive direction indicating a positive effect on regional expenditure. In the research sample, comparing the average regional expenditure in the upper quartile and lower quartile in each province, local government financing is dominated by provinces which have a trend that the greater the local government financing, the higher the regional expenditure.

In agency theory, the central government hopes that regional governments that are given decision-making authority can manage regional finances well. However, the large regional expenditure needs compared to regional income obtained from the central government means that regional governments must obtain funding from other sources, one of which is local government financing. With the large amount of local government financing, where local government financing can be an alternative if there is a budget deficit, regional governments will have the courage to increase their regional expenditure.

Previous research using the SiLPA proxy or Remaining Over Budget Financing by Kosim [30], with funding from financing revenues, local governments can have the ability to meet spending funds. Likewise with net local government financing which is a proxy for local government financing in this research. Net local government financing is obtained from local government financing income minus local government financing expenditure. The greater the net local government financing, the greater the availability of alternative funding sources for regional expenditure from local government financing posts.

#### 4.6. Flypaper effect

In detecting whether there is a flypaper effect, based on research by Yacoub and Lestari [28] and Maimunah in Armawaddin et al. [19], can be seen in two conditions. The first condition is when the PAD and balancing fund variables have a positive effect on regional expenditure and the standardized coefficient value of the PAD variable is lower than the standardized coefficient value of the balancing fund variable. Apart from this condition, there is a second condition, namely when the PAD variable obtains results

that have no effect on regional expenditure, but the balancing fund has a positive effect on regional expenditure.

In Table 7, the PAD and balancing fund variables have a negative standardized coefficient value, which means that there is a negative relationship between the PAD and balancing fund variables on regional expenditure. It can be concluded that this research cannot detect the existence of the flypaper effect phenomenon in 467 districts/cities in Indonesia using the two conditions carried out in previous research.

The hypothesis of the flypaper effect is based on agency theory. However, agency theory cannot be used to explain the results of this research. Another theory that is more appropriate is stakeholder theory. The theory put forward by Freeman in 1984 concerns the management of an organization which aims to improve the welfare of all stakeholders. These stakeholders include the community, government, employees, suppliers and creditors [35]. On this basis, local governments must strive to pursue the best fiscal policy to satisfy all stakeholders. So, when PAD and intergovernment transfers cannot be relied on to meet spending needs, regional governments use other alternatives, namely through local government financing so that regional expenditure can still be distributed according to the wishes of stakeholders.

TABLE 7: Standardized coefficient.

Variabel	Standardized Coef.	P >  t
X1_PAD	-0,085	0,972
X2_DAU	-0.860	1,000
X3_DAK	-0,054	0,951
X4_DBH	-0,416	1,000
X5_PD	0,233	0,000
<b>_cons</b>	<b>-1,156</b>	<b>0,000</b>

Source: Output STATA 16, Author's own work (2023)

This research is not in line with Fadilah and Helmayunita [18], Yacoub and Lestari [28], and Tasri [20] who found a flypaper effect on regional expenditure in Indonesia. This research is in line with research by Pradipta and Jatmiko [17] that no flypaper effect was found on regional expenditure in Indonesia. According to Pradipta and Jatmiko [17], the flypaper effect indicates a situation where the effect exerted by intergovernment transfers (DAU, DAK, DBH) on regional expenditure is greater than the effect exerted by PAD on regional expenditure. This goes against the principles of decentralization and autonomy, highlighting the necessity for regional governments to operate independently and not rely on the central government.



In the economic and fiscal development report published by the Ministry of Finance, as of November 2021, aggregate regional expenditure realization increased by 2.11%, year-of-year, from IDR 812.50 T to IDR 829.67 T. Interestingly, the increase in spending This area was followed by an increase in the local government financing component, namely loan receipts of 205.97% from IDR 2.87 T to IDR 8.80 T. This strengthens the results of research which found that there are other funding alternatives besides PAD and intergovernment transfers to assist regional governments in meeting regional expenditure needs, which come from local government financing. The greater value of local government financing indicates that the regional government can cover the budget deficit if regional expenditure is greater than regional income, which allows regional governments to no longer depend on intergovernment transfers. However, stakeholders, especially regulators, must also be careful in responding to this phenomenon, especially the tendency to use local government financing to fund regional expenditure. Several sources of local government financing consist of loans/debts, proceeds from the privatization of BUMN/BUMD, and sales of other permanent investments. Although loans/debts, proceeds from the privatization of BUMN/BUMD, and the sale of other permanent investments can be fiscal instruments to fund development, careless use of this type of local government financing can also have an impact on going concerns and/or the sustainability of the regional government itself.

## 5. Conclusion

According to the conducted research, it was indicated that PAD, DAU, DAK, and DBH have no effect on regional expenditure. In terms of PAD, the Covid-19 pandemic that occurred in 2021 caused almost all provincial governments in Indonesia to experience a decline. However, this decline was not accompanied by a decrease in regional expenditure due to the high regional needs to accelerate recovery from the Covid-19 pandemic.

In DAU, a higher proportion of DAU indicates the region's ability to obtain other sources of income is less. Therefore, regional governments whose regional income is dominated by DAU are unable to finance regional expenditure for other regional needs. In DAK, the DAK regulations are not as detailed as the DAU and DBH allocation regulations, causing local governments to have no initial certainty regarding the amount of DAK given. A region funded by DAK is less, indicating that there are fewer specific activities, but does not indicate that the spending needs of that region are also small.

In DBH, tax incentives and tax relaxation provided by the government have reduced the amount of DBH in various regions due to the Covid-19 pandemic. This has the effect of reducing DBH in areas that receive more tax DBH. However, regional expenditure needs, especially during the Covid-19 pandemic, remain high, which causes a decrease in DBH, which does not affect the decline in regional expenditure. Meanwhile, it was found that local government financing had a positive effect on regional expenditure. The existence of local government financing means that regional governments can meet regional expenditure. The greater the net local government financing, the greater the availability of alternative funding sources for regional expenditure from local government financing posts.

Detection of the flypaper effect in this study concluded that the flypaper effect phenomenon was not detected in Indonesia from balancing funds. However, a new funding mechanism was discovered, namely the use of local government financing as an alternative in financing regional spending needs. However, regulators must also be careful in responding to this phenomenon because careless use of local government financing can also have an impact on the survival and sustainability of the regional government itself.

This research has limitations. This research uses nominal value measurements on the dependent variable, namely local government expenditures. Meanwhile, independent variables such as PAD, DAU, DAK, and DBH use ratio measurements to obtain comparable values between regions. Thus, local government expenditures still use measurements that assume that the value for each region is the same, even though the characteristics between regions are different. This is thought to influence the research results. Apart from that, the research sample did not utilize the most recent period because the LKPD has not yet been published by BPK RI and is still undergoing the audit process. Future research can test the flypaper effect on each type of local government expenditures. Apart from that, further research can also redefine the flypaper effect phenomenon which originates from funding other than balancing funds because a new funding mechanism has been discovered, namely local government financing.

This research can be informative and provide facts regarding the components of regional income and funding that influence regional spending. The research hopes to be a reference for regional governments to reconsider the management of regional expenditure so that regional governments prioritize generating their own original regional income first and do not depend on income from other sources so that public services and community needs can be met. This is exemplified by the fact that the average Percentage of PAD for districts/cities in Indonesia is only 12.6%, implying that 87.4% of the

total regional income is derived from sources other than PAD. Regional autonomy that has been going on for more than a decade should be able to trigger the development of districts/cities towards fiscal independence by financing regional spending needs which predominantly come from PAD.

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