

Flypaper Effect in North Maluku: Investigating the Role of Local Own-Source Revenue, General Allocation Fund, Special Allocation Fund, And Revenue Sharing Fund on Regional Expenditure

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Abstract

This study aims to analyze the occurrence of the Flypaper Effect on regional spending in the regencies/cities of North Maluku Province using four main variables: Local Own-Source Revenue (PAD), General Allocation Fund (DAU), Special Allocation Fund (DAK), and Revenue Sharing Fund (DBH). The Flypaper Effect refers to a phenomenon where transfers from the central government, such as DAU, significantly impact regional spending more than local own-source revenue. This study employs a quantitative method with a Fixed Effect regression model. The data used are panel data from 10 regencies/cities in North Maluku Province over the 2017-2022 period. The results show that both DAU and PAD significantly influence regional spending. However, based on Wulansari's (2015) criteria, since PAD is also significant and DAU's influence is not dominantly greater than PAD, the Flypaper Effect does not occur in the regencies/cities of North Maluku. Furthermore, DAK does not significantly affect regional spending, while DBH is close to the significance threshold. These findings suggest that, while DAU and PAD are both significant, local governments still have the potential to enhance fiscal independence by optimizing PAD.

Keywords: Flypaper Effect, Regional Spending, Local Own-Source Revenue, General Allocation Fund, Special Allocation Fund, Revenue Sharing Fund, North Maluku.

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IJEBIR, Volume 03 Issue 05, 2024



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INTRODUCTION

Managing regional finances is a crucial aspect of governance, directly influencing local development. Each regency and city in Indonesia has the authority to manage its financial resources, which consist of Local Own-Source Revenue (PAD), General Allocation Fund (DAU), Special Allocation Fund (DAK), and Revenue Sharing Fund (DBH). As part of the regional autonomy system, the regencies and cities in North Maluku face the challenge of ensuring the sustainability of development and the welfare of their communities. As regional autonomy policies evolve, there is growing attention to managing regional expenditures and their impact on growth. Therefore, a deep understanding of the dynamics of PAD and the financial transfers from the central government (DAU, DAK, and DBH) becomes essential, particularly in the context of the potential Flypaper Effect. The Flypaper Effect refers to the phenomenon where transfers from the central government tend to influence regional spending more than increases in local revenue significantly. This finding is supported by Oates (1972), who indicated that transfers are more often utilized for expenditures than local resources. Courant, Gramlich, and Rubinfeld (1979) discovered that central transfers can shift regional spending priorities.

In the regencies and cities of North Maluku, managing financial resources is crucial, given the unique challenges its archipelagic geography poses. While rich in natural resources, North Maluku faces accessibility and infrastructure limitations, making it an interesting case study for identifying and analyzing the application of the Flypaper Effect on regional expenditures. Previous studies have shown that the Flypaper Effect may vary depending on a region's economic, geographic, and administrative characteristics. Devarajan et al. (1996) emphasized the importance of understanding the relationship between revenue transfers and regional spending policies to optimize the use of financial resources. Empirical research by Bird and Tarasov (2004) highlighted that transfers from the central government can influence regional spending policies, although the variability depends heavily on the local context. A global study by Gamkhar and Shah (2007) found that the Flypaper Effect is more prevalent in developing countries that rely heavily on central government transfers.

In the Indonesian context, Ahsan and Stavins (2008) examined the impact of the DAU formula on regional spending behavior and found that DAU significantly drives increased expenditures. Additionally, Ardila and Alfiandri (2016) explored the effect of DBH allocations on spending policies in several provinces in Indonesia. At the regency and city level, Sudarsono and Firdaus (2019) demonstrated that DAK positively influences

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PAD and regional spending. However, these studies have not specifically explored the application of the Flypaper Effect in North Maluku. This research is consistent with findings in other countries, as shown by Rodriguez-Pose and Ezcurra (2010), who emphasized that regions with low fiscal capacity tend to rely more on central transfers, increasing spending propensity.

In the context of North Maluku, a study by the Regional Financial Monitoring Team (2018) provided an analysis of the region's financial performance, including PAD, DAU, DAK, and DBH. However, the primary focus of this study was not on the Flypaper Effect. This research aims to fill the gap in the existing literature by providing a more in-depth understanding of the application of the Flypaper Effect at the regency/city level in North Maluku, which has been underexplored in previous studies. According to Baskaran et al. (2016), regions that depend on central transfers often face challenges in improving fiscal efficiency, and this is particularly relevant in the context of North Maluku. This study is expected to significantly contribute to regional stakeholders, local governments, academics, and research institutions in enhancing the effectiveness of regional financial management, supporting development, and maximizing the use of available financial resources.

This study focuses on investigating the Flypaper Effect on regional spending in North Maluku, with an emphasis on four key variables: Local Own-Source Revenue (PAD), General Allocation Fund (DAU), Special Allocation Fund (DAK), and Revenue Sharing Fund (DBH). This analysis is closely linked to infrastructure development in the archipelagic region and the implementation of regional autonomy. The research will examine how PAD contributes to infrastructure development funding in the archipelagic region and how DAU influences local government spending in response to central government transfers. Additionally, DAK will be analyzed to assess its impact on infrastructure development policies. At the same time, DBH will provide insights into the role of revenue sharing in improving governance, particularly in infrastructure development in North Maluku. Simatupang and Yolanda (2017) state that increased fiscal transfers can incentivize regions to allocate funds to strategic sectors relevant to infrastructure development in archipelagic areas like North Maluku. Therefore, this research broadens the understanding of the Flypaper Effect and contributes to strengthening the relationship between local revenue, central transfers, and the development of archipelagic regions.

The novelty of this study lies in its exploratory focus on the Flypaper Effect in archipelagic regions with unique geographic and administrative characteristics, such as

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North Maluku. The study expands the understanding of how various financial resource components (PAD, DAU, DAK, and DBH) influence regional spending policies and infrastructure development in archipelagic areas. Furthermore, the findings of this research are expected to provide valuable input for policymakers in improving the effectiveness of fund allocations to accelerate growth and enhance the welfare of communities in autonomous regions with geographic challenges like North Maluku. This research also enriches the international literature, as demonstrated by Dollery and Worthington (1996), who emphasized the importance of understanding the fiscal policy implications in regions with geographic challenges, and Boadway and Shah (2007), who showed that the effectiveness of budgetary transfer management could determine the success of regional development.

LITERATURE REVIEW

Flypaper Effect in the Context of Regional Finance

The Flypaper Effect, a phenomenon that has become a central focus in regional financial research, reflects a more significant regional spending response to central government transfers than local revenue. Inman (1979) identified that local economic characteristics can influence how "non-mobile" regions are about central transfers. Within this framework, Hines (1999) contributed insights by evaluating the impact of the Flypaper Effect across various economic contexts. Given this variability, understanding the Flypaper Effect is crucial for designing effective fiscal policies at the regional level. In the context of North Maluku, where economic and geographic characteristics play a significant role, understanding the Flypaper Effect can offer a more specific view of how central fiscal policies affect the allocation of resources in the region. Duflo et al. (2009) analyzed the effect of local development, providing a foundation to understand that the Flypaper Effect is not just about the transfer amount but also how these transfers stimulate regional spending to support local economic development. This approach can assist in designing more effective and sustainable regional fiscal policies.

Archipelagic Infrastructure and Remote Area Development

Infrastructure development in archipelagic regions, such as North Maluku, significantly impacts economic growth and reduces regional disparities. Das and Dutta (2015) emphasized the role of infrastructure in supporting economic growth and creating essential inter-island connectivity. This study provides a crucial context for North Maluku, where infrastructure development efforts must consider the unique geographic

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IJEBIR, Volume 03 Issue 05, 2024



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conditions. Understanding the relationship between Local Own-Source Revenue (PAD) and infrastructure development is critical to supporting growth in remote regions. Siregar and Raharjo (2019) indicated that optimizing PAD can be essential for supporting local infrastructure projects. Furthermore, Adnan et al. (2022) highlighted the need for prudent fund allocation for infrastructure in remote areas, considering geographic characteristics and regional needs. In North Maluku, with its widely scattered islands, a focus on infrastructure development is critical to ensuring equitable accessibility and inclusive economic growth.

Regional Autonomy and Local Governance

Regional autonomy has been foundational for local governments in managing resources and designing policies that suit local needs. Qibthiyyah and Huda (2018) critically evaluated the role of independence in shaping fiscal policies and maintaining good governance. Practical regional autonomy creates space for community participation in decision-making processes and supports sustainable local development. In the context of North Maluku, where cultural and geographic diversity is prominent, implementing regional autonomy requires a deep understanding of local needs and aspirations. Arifin et al. (2017) provided an analysis of how regional autonomy can influence resource allocation and decision-making at the local level. Emphasis on transparent and accountable governance, as described by Boediono (2007), is also crucial to optimizing regional autonomy's benefits in supporting North Maluku's development.

Local Own-Source Revenue and Infrastructure Development

The relationship between Local Own-Source Revenue (PAD) and infrastructure development is essential in regional development strategies. Siregar and Raharjo (2019) demonstrated that optimizing PAD can be a catalyst for supporting local infrastructure projects. Dadang and Ashari (2016) presented a detailed analysis of the impact of Local Own-Source Revenue on regional government spending, providing an understanding of how PAD can be a primary funding source for regional development. In the context of North Maluku, with its complex archipelagic characteristics, understanding the role of PAD in supporting infrastructure development is crucial. Emphasizing the diversification of Local Own-Source Revenue sources, as explained by Iskandar (2018), can be a relevant strategy to ensure the sustainability of infrastructure projects amid geographic and social challenges.



General Allocation Fund (DAU) and Central Fiscal Policy

The General Allocation Fund (DAU) is a central transfer instrument to the regions with significant implications for the Flypaper Effect. In their analysis of DAU's impact, Tugiyono and Susilo (2017) provided deep insights into the extent to which regional dependence on DAU can trigger the Flypaper Effect. This analysis is critical to understanding the dynamics of central financial resource allocation at the local level. In North Maluku, where DAU allocation can influence infrastructure development and sustainability, Rizki and Huda (2021) indicated a need for measured and sustainable central fiscal policies. Considering regional needs and the potential Flypaper Effect, an appropriate DAU allocation strategy can be vital in supporting the holistic development of North Maluku.

Special Allocation Fund (DAK) and Infrastructure Focus

The Special Allocation Fund (DAK) is often directed toward infrastructure projects. Rasyid, Fauzi, and Yuliana (2018) evaluated the effectiveness of DAK in supporting regional infrastructure development. This analysis can provide insights into the extent to which DAK creates a Flypaper Effect in infrastructure management in North Maluku. Additionally, Salam and Riyanto (2019) emphasized that the implementation of DAK needs to be tailored to the characteristics and needs of each region. Given North Maluku's geographic and social complexities, a customized approach to DAK allocation is essential to maximize its impact in supporting infrastructure development.

METHODOLOGY

Research Type

This study is quantitative research with a descriptive approach. Quantitative research focuses on statistically analyzing numerical data to describe relationships between variables. In this context, the research aims to quantify the effects of Local Own-Source Revenue (PAD), General Allocation Fund (DAU), Special Allocation Fund (DAK), and Revenue Sharing Fund (DBH) on regional expenditure using statistical models.

Population and Sample

The population in this study consists of all local governments (regencies and cities) in North Maluku Province, amounting to 10 regencies and cities. The sampling technique used in this study is purposive sampling, which involves selecting samples based on



specific criteria relevant to the data required for the research. The sampling criteria for this study are as follows:

- a. Regencies and cities in North Maluku Province that have published Audit Reports on Local Government Financial Statements (LHP_LKPD) for the entire province of North Maluku from 2017 to 2022.
- b. Regencies and cities in North Maluku Province that have reported budget allocations for the expenditure sector, detailing types of regional expenditures, Local Own-Source Revenue (PAD), and intergovernmental transfers (balance funds) used as the basis for this study.

Types and Sources of Data

This study uses secondary data obtained from the North Maluku Audit Board of Indonesia (BPK RI) branch. The data consists of Regional Budget Realization Reports (APBD), which include detailed information on regional expenditures, balanced funds, and local own-source revenue.

Data Collection Technique

The data collection technique employed in this study is documentary analysis. Secondary data is collected in the form of LHP_LKPD reports for North Maluku Province from 2017 to 2022, sourced from the North Maluku BPK RI office, along with books, articles, and other related materials relevant to this research.

Data Analysis Model and Technique

This research adopts a quantitative descriptive approach, as the data consists of numerical values processed using statistical methods and described accordingly. The study includes several variables, namely Regional Expenditure (Y), Local Own-Source Revenue (X1), General Allocation Fund (X2), Special Allocation Fund (X3), and Revenue Sharing Fund (X4). The analysis technique used for data processing is multiple linear regression analysis, which examines the influence of numerous independent variables on a dependent variable. Multiple regression analysis provides insights into the extent of the impact of each independent variable on the dependent variable. The software used for descriptive statistics, classical assumption tests, panel data regression analysis, and hypothesis testing is Eviews.

The regression model equation used in this study is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

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Explanation:

α = Regression equation constant

β = Regression coefficient

X1 = Local Own-Source Revenue (PAD)

X2 = General Allocation Fund (DAU)

X3 = Special Allocation Fund (DAK)

X4 = Revenue Sharing Fund (DBH)

Y = Regional Expenditure

e = Standard Error

Panel Data Regression Analysis

In panel data regression analysis, both time series and cross-sectional data are combined to provide richer information. Panel data offers several advantages, such as accommodating individual heterogeneity that cannot be observed, studying the dynamic behavior of data, and identifying otherwise unobservable effects in pure cross-sectional or time-series data. Additionally, panel data can be used to build and test more complex models, thereby minimizing bias caused by aggregating individuals, as it involves many observational units. There are three main approaches to estimating panel data regression: the Common Effect Model (CEM), the Fixed Effect Model, and the Random Effect Model.

The Common Effect Model (CEM) is the most straightforward approach, assuming that the intercept and slope coefficients are the same for all time series and cross-sectional units. The Fixed Effect Model allows the intercept to vary between individuals while maintaining a constant slope across all units. This model can use dummy variables as independent variables to account for specific characteristics of each unit. The Random Effect Model includes additional error components in the model, such as individual error, time error, and combined error, to account for variability across units and periods. The Chow Test and the Hausman Test are employed to determine the most appropriate approach for the data.

The Chow Test selects between the Common and Fixed Effect Model. The decision criteria are as follows: if the p-value of the cross-section chi-square or the F-test is less than $\alpha = 5\%$, the null hypothesis (H_0) is rejected, and it is concluded that the Fixed Effect Model should be used. Conversely, the Common Effect Model is preferred if the p-value is greater than or equal to $\alpha = 5\%$. The Hausman Test decides between the Random and Fixed Effect Model. The decision criteria are similar: if the p-value of the cross-section

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IJEBIR, Volume 03 Issue 05, 2024



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chi-square or the F-test is less than $\alpha = 5\%$, the null hypothesis (H_0) is rejected, indicating that the Fixed Effect Model is more appropriate. The Random Effect Model is used if the p-value is greater than or equal to $\alpha = 5\%$. Finally, the Lagrange Multiplier (LM) Test is employed to determine whether the Random Effect Model or the Common Effect Model (OLS) is more suitable. This test, developed by Breusch Pagan, evaluates the significance of the random effects by analyzing the residuals from the OLS method. It helps identify whether random effects contribute significantly to the model's performance compared to a more straightforward common effects approach.

Hypothesis Testing

The basis for decision-making in multiple regression analysis involves several critical tests: the Coefficient of Determination (R^2), Simultaneous Significance Test (F-Test), and Individual Parameter Significance Test (t-Test). The Coefficient of Determination, or R^2 , measures how well the model explains the dependent variable. The value of R^2 ranges between 0 and 1 ($0 < R^2 < 1$), where a value closer to 1 indicates that the model better explains the dependent variable. This suggests that the independent variables provide nearly all the information needed to predict variations in the dependent variable (Ghozali, 2018). Therefore, the closer the R^2 value is to 1, the better the model explains the relationship between the independent and dependent variables.

Next, the Simultaneous Significance Test (F-Test) is used to evaluate whether all independent variables included in the model simultaneously influence the dependent variable. According to Hammad et al. (2013), the significance of the F-Test is determined by setting a significance level of 5% or $\alpha = 0.05$. Suppose the F significance value is more significant than 0.05. In that case, the alternative hypothesis (H_a) is rejected, indicating that the independent variables do not substantially affect the dependent variable. However, if the F significance value is less than 0.05, the alternative hypothesis (H_a) is accepted, meaning that the independent variables collectively significantly influence the dependent variable.

Finally, the Individual Parameter Significance Test (t-test) assesses how each independent variable affects the dependent variable. This test also uses a 5% significance level ($\alpha = 0.05$). If the t-significance value is more significant than 0.05, the alternative hypothesis (H_a) is rejected, indicating that the independent variable does not significantly affect the dependent variable. Conversely, if the t significance value is less than 0.05, the alternative hypothesis (H_a) is accepted, showing that the independent variable significantly influences the dependent variable (Hammad et al., 2013).

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Operational Definitions of Variables

Regional Expenditure

Regional Expenditures refer to all obligations of regencies/cities in North Maluku Province that reduce net assets. In this study, regional expenditures consist of direct and indirect expenditures from the fiscal years 2015 to 2022, measured in Indonesian Rupiah (IDR).

Local Own-Source Revenue (PAD)

Local Own-Source Revenue refers to revenue generated by regencies/cities in North Maluku Province during the fiscal years 2015 to 2022. This revenue is collected based on regional regulations following national laws and measured in Indonesian Rupiah (IDR).

General Allocation Fund (DAU)

The balance fund in this study is proxied by the General Allocation Fund (DAU). DAU is sourced from the state budget (APBN) and is allocated to equalize the financial capacity of regions to fund their expenditures as part of decentralization (Salawali et al., 2014). The DAU variable used in this study refers to the DAU received by regencies/cities in North Maluku Province during the fiscal years 2015 to 2022, measured in Indonesian Rupiah (IDR).

Special Allocation Fund (DAK)

The Special Allocation Fund (DAK) is a fund sourced from the state budget (APBN) that is allocated to specific regions to help finance special activities that are under regional authority (Siahaan, 2022). The DAK variable used in this study refers to the DAK received by regencies/cities in North Maluku Province during the fiscal years 2015 to 2022, measured in Indonesian Rupiah (IDR).

Revenue Sharing Fund (DBH)

The Revenue Sharing Fund (DBH) is a fund sourced from specific revenues of the state budget (APBN) allocated to producing regions based on a certain percentage to reduce financial disparities between the central and regional governments (Siahaan, 2022). The DBH variable used in this study refers to the DBH received by regencies/cities in North Maluku Province during the fiscal years 2015 to 2022, measured in Indonesian Rupiah (IDR).

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Flypaper Effect

According to Wulansari (2015), the conditions for the Flypaper Effect are as follows:

- a. If the effect (coefficient value) of DAU on Regional Expenditure is greater than the effect of PAD, and both are significant; or
- b. If PAD does not significantly influence Regional Expenditure, the Flypaper Effect is said to occur.

RESEARCH RESULTS

Overview of the Research Object

North Maluku Province is located in the eastern part of Indonesia, specifically in the Maluku Islands. The province is bordered by the Pacific Ocean to the north, Halmahera to the northeast, Maluku to the northwest, and Maluku Province to the south. With a total area of approximately 145,801.10 km², the capital of this province is Sofifi. Administratively, North Maluku is divided into ten regions consisting of 8 regencies and two cities. This study covers all local governments in the regencies and cities of North Maluku Province. The data used in this research were obtained from the North Maluku representative office of the Audit Board of Indonesia (BPK RI). The data include Regional Budget Realization Reports (APBD), which provide information on regional expenditures, including various types of spending, balance funds, and local own-source revenue.

Descriptive Statistics

Table 1 presents the descriptive statistics of the key variables used in this study. These variables include Regional Expenditure (BD), Local Own-Source Revenue (PAD), General Allocation Fund (DAU), Special Allocation Fund (DAK), and Revenue Sharing Fund (DBH). Regional Expenditure (BD) reflects the total expenditure by local governments in conducting governmental activities, development, and public services. Local Own-Source Revenue (PAD) represents income generated by the region from local sources, such as local taxes, retributions, and income from separated regional assets. The General Allocation Fund (DAU) is a transfer fund from the central government to local governments to equalize financial capacity among regions. The Special Allocation Fund (DAK) is allocated to regions to fund specific activities that are national priorities. At the same time, the Revenue Sharing Fund (DBH) is derived from state revenue shared between the central and local governments based on a specified financial balance. The table will provide an overview of the data distribution for each variable in this research.

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Table 1: Descriptive Statistics of Key Variables

	BD	PAD	DAU	DAK	DBH
Mean	735,222	473,027	490,011	167,841	36,158
Median	739,824	343,075	477,903	142,714	28,892
Maximum	1,480,352	172,610	766,195	841,714	96,709
Minimum	402,878	75,380	312,261	55,368	9,151
Std. Dev	187,765	35,459	103,186	113,532	20,667

Source: Secondary data processed by the researcher, 2024

The table above presents the descriptive statistics of several financial variables, including Regional Expenditure (BD), Local Own-Source Revenue (PAD), General Allocation Fund (DAU), Special Allocation Fund (DAK), and Revenue Sharing Fund (DBH) in North Maluku Province. The average Regional Expenditure is IDR 735.222 million, with a median of IDR 739.824 million and a maximum value reaching IDR 1,480.352 million. Meanwhile, PAD has an average of IDR 473.027 million, with a minimum value of IDR 75.380 million and a maximum of IDR 172.610 million. DAU recorded an average of IDR 490.011 million, with a standard deviation of IDR 103.186 million, indicating significant variation between the regencies/cities. DAK and DBH also show considerable variation, with an average of IDR 167.841 million and IDR 36.158 million, respectively, and a maximum of IDR 841.714 million for DAK and IDR 96.709 million for DBH. The number of observations for all variables reflects data from all regencies/cities in North Maluku Province.

Model Selection

This study uses panel data, and to determine the appropriate model—whether to use the standard effect model, fixed effect model, or random effect model—preliminary tests are required. The tests performed to determine the appropriate model include the Chow and Hausman Tests.

Chow Test Results

Based on the results presented in Table 2, the Chow Test shows that the probability of the Cross-section Chi-square is 0.0096, which is less than 0.05. Therefore, the null hypothesis (H_0) is rejected, indicating that the fixed-effect model is more suitable. After determining that the fixed-effect model is more suitable, the next step is to proceed with the Hausman Test.



Table 2. Chow Test Result

Effects Test	Statistic	d.f.	Prob.
Cross-section F	2,840244	(9,46)	0,0096
Cross-section Chi-square	26,515533	9	0,0017

Source: Secondary data processed by the researcher, 2024

Hausman Test Results

The results of the Hausman Test, as shown in Table 3, indicate that the probability is 0.0004, which is also less than 0.05. Therefore, the null hypothesis (H0) is rejected once again. Consequently, the model selected and used in this study is the fixed effect model.

Table 2. Hausman Test Result

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	20,327097	4	0,0004

Source: Secondary data processed by the researcher, 2024

Hypothesis Testing

Table 3 below presents the Fixed Effect Model test results, which evaluated the influence of several independent variables on the dependent variable, namely regional expenditure. The independent variables tested include Local Own-Source Revenue (PAD), General Allocation Fund (DAU), Special Allocation Fund (DAK), and Revenue Sharing Fund (DBH).

Table 3. Hypothesis Test Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.311946	117242.3	2.824872	0.0070
PAD	2.203546	0.349574	6.303526	0.0000
DAU	0.538743	0.242186	2.224504	0.0311
DAK	-0.013461	0.073496	-0.183152	0.8555
DBH	1.052679	0.567929	1.853539	0.0702



R-squared	0.910978		
Adjusted R-squared	0.885820		
S.E. of regression	70383.31		
F-statistic	36.20991		
Prob (F-statistic):	0.000000		

Source: Secondary data processed by the researcher, 2024

The coefficient values indicate the magnitude of the effect of each independent variable on regional expenditure. The standard error (Std. Error) reflects the degree of deviation from the regression results, while the t-statistic tests the significance of each variable's effect. The probability (Prob.) value helps determine whether the effect is statistically significant at a certain confidence level. In this table, Local Own-Source Revenue (PAD) significantly influences regional expenditure, with a probability value of 0.0000, indicating a very significant effect. General Allocation Fund (DAU) also shows a considerable influence, with a probability of 0.0311, whereas Special Allocation Fund (DAK) is not significant, with a likelihood far above 0.05, precisely 0.8555. Revenue Sharing Fund (DBH) has a probability of 0.0702, approaching the significance threshold of 0.05. The overall model indicator, such as the R-squared value of 0.910978, shows that this model explains approximately 91% of the variation in regional expenditure, indicating a robust model.

DISCUSSION

The Influence of Local Own-Source Revenue (PAD) on Regional Expenditure

The research results show that PAD has a highly significant influence on regional expenditure. This finding indicates that any increase in PAD significantly drives regional expenditure in North Maluku Province. PAD, which includes revenues from local taxes, retributions, and income from the management of separated regional assets, is a primary source of funding for regional autonomy, as revealed by Wicaksono (2020). Regions with high PAD tend to be more financially independent, enabling local governments to enhance their fiscal capacity to fund various development programs and public services.

Furthermore, a study by Dewi and Amalia (2019) emphasizes that increasing PAD is closely related to rising economic activity at the local level, strengthening the local government's ability to provide quality infrastructure and public services. However, in the context of North Maluku, although PAD contributes significantly to regional expenditure, the challenge remains in diversifying revenue sources. According to Pramono (2022),



PAD in many regions in Indonesia, including North Maluku, is still dominated by only a few sectors, such as hotel taxes and retributions, which pose fiscal risks when these sectors experience a downturn. Therefore, diversifying PAD sources is crucial to ensuring budgetary sustainability in North Maluku.

The Influence of General Allocation Fund (DAU) on Regional Expenditure

The coefficient and probability values indicate that the General Allocation Fund (DAU) significantly influences regional expenditure in North Maluku. DAU is a central government transfer designed to reduce regional fiscal disparities and promote equitable development. As Herlambang (2021) noted, DAU is essential for regions with low budgetary capacity, such as North Maluku, where dependence on central transfers remains high. The significant influence of DAU on regional expenditure reflects the need for central fiscal transfers to support local government spending, particularly in sectors like health, education, and infrastructure.

However, a study by Basuki and Sukoco (2020) highlights that although DAU contributes significantly to regional expenditure, its effectiveness is often hindered by slow bureaucracy and suboptimal spending planning. In the context of North Maluku, the effectiveness of DAU can be improved by adopting performance-based budgeting, as proposed by Yuliana (2018), to ensure that the funds received are allocated to priority programs that have a tangible impact on the community.

The Influence of Special Allocation Fund (DAK) on Regional Expenditure

The test results show that the Special Allocation Fund (DAK) does not significantly influence regional expenditure in North Maluku Province. This may be due to the low absorption of DAK funds or the local government's lack of readiness to plan and implement projects financed by DAK. A study by Nugraha (2019) revealed that many regions in Indonesia, including North Maluku, face challenges absorbing DAK due to limited administrative capacity and a lack of adequate human resources in planning and budgeting. This has resulted in the ineffective allocation of DAK to support regional expenditure.

Another study by Sari and Hartono (2020) shows that technical challenges in preparing DAK-funded programs often lead to delays or incomplete project execution. In North Maluku, geographic challenges and a lack of basic infrastructure also contribute to the slow absorption of DAK. To improve the effectiveness of DAK, enhanced coordination



between local and central governments and improved local capacity in project planning and implementation are needed (Suparman, 2021).

The Influence of Revenue Sharing Fund (DBH) on Regional Expenditure

The influence of the Revenue Sharing Fund (DBH) on regional expenditure shows that, although not statistically significant, DBH has the potential to support regional spending significantly. DBH is a source of local revenue from sharing the proceeds of natural resources and taxes collected by the central government and redistributed to the producing regions. As a resource-rich region, North Maluku, particularly in the mining sector, has substantial potential to receive significant DBH. A study by Oktaviani and Permana (2020) found that DBH plays a crucial role in funding infrastructure development in natural resource-producing regions, including North Maluku.

However, the fluctuation of commodity prices, especially in the mining sector, can affect the amount of DBH the region receives. Prabowo (2018) notes that the volatility of global commodity prices, such as nickel and gold—the primary sources of DBH in North Maluku—often creates uncertainty in regional budget planning. Therefore, local governments need to strengthen their financial planning by accounting for the uncertainties in DBH revenues. In the long term, local economic diversification should be prioritized to reduce dependence on the volatile natural resource sector (Sulaiman & Achmad, 2021).

CONCLUSION

Based on the research results on the Flypaper Effect on regional expenditure in the regencies/cities of North Maluku Province, it is concluded that the General Allocation Fund (DAU) and Local Own-Source Revenue (PAD) significantly influence regional expenditure. However, since PAD also has a considerable influence and DAU is not more dominant than PAD, it can be concluded that the Flypaper Effect does not occur. This indicates that although DAU impacts regional expenditure, local governments are not entirely dependent on central government transfers and still utilize PAD to finance their expenditures. Local governments in North Maluku still have the opportunity to optimize PAD in regional spending further, thereby reducing dependence on central transfers. On the other hand, the Special Allocation Fund (DAK) only significantly affects regional expenditure. At the same time, the Revenue Sharing Fund (DBH) approaches significance but is not yet strong enough to be considered significant. Although PAD is essential in financing regional expenditure, dependence on DAU remains relatively high,

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highlighting the need for local governments to improve their capacity to maximize PAD to achieve fiscal independence.

This study has several limitations. First, the data range used only covers 2017 to 2022, which may not capture the long-term dynamics of the Flypaper Effect in North Maluku. Second, the study is limited to the geographical area of North Maluku Province, which has an archipelagic characteristic, so the results may need to be generalizable to other regions with different characteristics. To reduce the high dependence on DAU, local governments in North Maluku are advised to focus more on diversifying the sources of Local Own-Source Revenue. This step will help increase regional fiscal independence by reducing reliance on taxes and retributions from specific sectors. In addition, improving the capacity of local governments to plan and implement projects funded by DAK is necessary to optimize budget absorption. Strengthening regional financial planning is also crucial, especially in dealing with uncertainties in DBH revenues, which are vulnerable to commodity price fluctuations. Local economic diversification can help reduce dependence on the high-risk natural resource sector due to price volatility.

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