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The Flypaper Effect on Regional Spending in Regencies and Cities in West Nusa Tenggara Province: Empirical Evidence During the Transition Period of the Regional Budget Law (UU HKPD) from 2020 to 2025

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ABSTRACT

This study examines the extent to which four sources of regional funding PAD, DAU, DAK, and DBH drive the level of regional expenditures in regencies and cities in West Nusa Tenggara Province, while also investigating whether the flypaper effect persists during the transition period of the aplication Regional Financial Management Law (UU HKPD) for the 2020-2025 period. Using an associative-causal quantitative design, this study analyzed panel data from 10 regencies and cities over a six-year observation period (60 observations) using a Fixed Effects Model corrected with robust cluster standard errors to address heteroscedasticity, followed by a Wald test to compare the magnitude of coefficients across variables. The findings indicate that all four variables PAD, DAU, DAK, and DBH have a positive and significant effect on Regional Expenditures, both individually and collectively, with the model's explanatory power reaching 89.35 percent. Interestingly, indications of a flypaper effect did not emerge when each type of transfer was compared individually with PAD; however, it became clearly evident only when all regional transfers were combined, and their combined effect was found to exceed that of PAD. This suggests that the fiscal dependence of regencies and cities in NTB on central government transfer funds is cumulative in nature not derived from a single type of transfer and therefore strengthening local fiscal autonomy remains a critical priority during the HKPD policy transition period.

Keywords: Flypaper Effect, Local Government Spending, PAD, DAU, DAK, DBH

INTRODUCTION

The implementation of fiscal devolution expands the scope of discretion for local governments in identifying revenue sources and formulating precise spending allocations aligned with local development priorities. This policy is projected to optimize the quality of Government services, minimize interregional disparities, dand improve community well-being. Within the regional budget structure, the main sources of funding are Local Original Revenue (PAD) and Transfers to Regions (TKD), which include the General Allocation Fund (DAU),

the Special Allocation Fund (DAK), and the Revenue-Sharing Fund (DBH). This revenue composition plays a crucial role because the optimization of local potential and the effective management of transfer funds are directly proportional to the level of fiscal autonomy and the orientation of regional expenditures. In the context of strengthening governance, the enactment of Law No. 1 of 2022 on Financial Relations between the central Government and Local Governments (HKPD Law) serves as a transformative pillar to strengthen local financial capacity while promoting the sustainable efficiency and effectiveness of public spending.

In practice, reforms to the framework governing financial relations between the central and local governments have not yet fully eliminated local governments dependence on transfers from the central government. This issue is also evident in the regencies and cities of West Nusa Tenggara (NTB) province. This region was selected as the research subject because it exhibits diverse inter-regional fiscal conditions, while there are significant disparities between local governments capacity to generate local revenue (PAD) and the amount of trnasfer they receive from the central government. According to data from the Directorate General of Fiscal Balancing (DJPK), the average regional expenditure for regencies and cities in NTB during the 2020-2025 period reached approximately Rp 1.65 trillion. This figure is significantly higher than the average PAD, which stands at only around Rp 253.69 billlion. During the same period, the average General Allocation Fund (DAU) reached Rp 769.85 billion, while the average Special Allocation Fund (DAK) and Forest Revenue Sharing (DBH) amounted to Rp 135.34 billion and Rp 153.73 billion, respectively. These disparities indicate that central government transfers remain a key source of funding for local government expenditure in NTB.

The heterogeneity of fiscal characteristics among regencies and cities in NTB makes it an ideal case study for examining variations in regional fiscal dependency patterns. West Sumbawa Regency serves as a concreate example of region with a significant share of Revenue-Sharing Funds (DBH) due to the presence of a large-scale mineral mining sector. In contrast, the majority of other regions in NTB tend to rely on the General Allocation Fund (DAU) given the limited potential of local taxes and natural resources. This disparity is clearly reflected in Table 1, where the range of DBH shows a very wide disparity (Rp 27.51 billion to Rp 1,314.77 billion) compared to other types of transfers. This situation highlights differences in local revenue structures that have the potential to shape diverse dynamics and responses in local government spending.

The significant role of transfers in regional financing can be linked to the potential emergence of the “flypaper effect” a situation in which regional expenditures respond more strongly to transfer funds than to local revenue (PAD).Solicha, F.A.,&Hanifa,N.(2024) This study examines the relationship between PAD, DAU, and DAK and regional expenditures in East Nusa Tenggara using panel data regression. The results show that PAD and DAU have a significant effect on regional expenditures, while DAK does not show a significant effect. Based on a comparison of the coefficients, the effect of PAD is greater than that of DAU and DAK; therefore, the study did not find any flypaper effect.

Empirical evidence regarding the flypaper effect still shows varying results across regions. (Rizal, 2021) The study analyzed the impact of PAD and DAU on regional expenditures in the regencies and cities of Aceh Province and found that both variables had a positive and significant effect. The study also used a comparison of the PAD and DAU coefficients as the basis for identifying the "flypaper effect." (Rafi & Arza, 2023) further found that PAD, DAU, DAK, and SiLPA have a significant effect on regional expenditures and identified the presence of a flypaper effect among regency and city governments in West Sumatra. Meanwhile,(Mendra et al., 2024) to examine the relationship between DAU, DAK, and DBH and local government spending in regencies and cities in West Sumatra, with a focus on the flypaper effect. The variations in the research findings indicate that the response of local government spending to local revenue (PAD) and central government transfers may differ depending on regional characteristics and the observation period.

Specifically in the province of NTB, the study (Lulu Jumkhairatul et al., 2023) indicate that PAD, DAU, and DAK have a positive and significant effect on local government spending, while DBH has a negative and significant effect. Although this study provides an overview of the relationship between various revenue sources and local government spending in NTB, it has not specifically examined the flypaper effect by comparing the response of local government spending to PAD and each transfer component. Furthermore, the study did not incorporate policy changes resulting from the HKPD Law as part of the analytical context. This presents an opportunity to update the empirical evidence regarding the relationship between PAD, central government transfers, and regional expenditures in the regencies and cities of NTB province.

Empirical evidence regarding the flypaper effect in various regions of Indonesia reveals varying dynamics. At the national level, (Afrizal & Khoirunurrofik, 2022) revealed that the transfer of PBB-P2 as a pillar of Local Original Revenue (PAD) succeeded in driving an increase in Regional Expenditures, so that the flypaper effect was no longer evident following the decentralization of this tax. This is consistent with the findings (Etha Naraswari Wira & Ayu Wulan Trisna Dewi, 2023) which found no evidence of the flypaper effect in regencies and cities across Indonesia during the 2019-2021 period. In contrast, a study in Central Java Province by (Astari et al., 2025) and (Kristanti et al.,2025) confirms the existence of the flypaper effect in regional spending allocations, even in regions with high local revenue (PAD) capacity. This pattern of transfer funds dominating spending is reinforced by (Fitrianti et al., 2025) at the provincial level across Sulawesi, which shows that the responsiveness of spending to non-specific transfer funds exceeds the contribution from local revenue. Meanwhile,(Farica & Wijaya, 2023) provides a specific overview of the Special Region of Yogyakarta, where local revenue (PAD), general allocation funds (DAU), and special allocation funds (DAK) have been shown to contribute positively to local government spending, while revenue-sharing funds (DBH) have not had a significant impact.

A number of previous studies have highlighted capital expenditure allocation as an alternative proxy for evaluating local fiscal responsiveness. In Central Java, (Anthony & Rohman, 2024) found that local government revenue and transfer funds consistently drive

increases in capital expenditures, with economic growth acting as a moderating variable. A similar pattern was also examined by (Purnamawati et al., 2021) at the regency/city level in East Nusa Tenggara (NTT) province an area that shares a geographical border with and has characteristics similar to those of West Nusa Tenggara (NTB). Furthermore, (Nauw et al., 2024) also assess the presence of this phenomenon in total regional expenditures. Variability in the scope of the analysis (operating expenditures vs. capital expenditures), the application of methodology (panel or cross-section data), and inconsistent empirical findings (both those confirming and refuting the existence of the flypaper effect) indicate that the magnitude of the regional fiscal response is highly dependent on the spatial context, the observation period, and the specification of transfer variable measurements. Therefore, conducting a more in-depth Wald test in the context of NTB is crucial and highly relevant.

Based on this disparity, this study analyzes PAD, DAU, DAK, and DBH collectively to explain local government expenditures in 10 regencies and cities in West Nusa Tenggara Province during the 2020–2025 period. This timeframe was used to illustrate the state of fiscal relations before and during the transition period of the implementation of the Regional Fiscal Management Law (UU HKPD). The analysis was conducted using panel data with a Fixed Effects Model (FEM) to account for the distinct characteristics of each regency and city. Furthermore, robust standard errors were used to obtain more reliable estimates in addressing the issue of heteroscedasticity. The novelty of this study lies in testing the flypaper effect by comparing the PAD coefficient with each component of TKD namely DAU, DAK, and DBH in the regencies and cities of NTB during the 2020-2025 period.

Based on the above description, this study aims to analyze the partial and simultaneous effects of PAD, DAU, DAK, and DBH on local government expenditures and to test for the presence of the flypaper effect in the regencies and cities of West Nusa Tenggara Province during 2020–2025. The research results are expected to add to the empirical evidence regarding the relationship between local revenue, central government transfers, and local government spending, as well as provide information that can support efforts to strengthen local fiscal autonomy during the transition period of the implementation of the HKPD Law.

METHODS

Adopting a quantitative causal-associative framework, this investigation assesses how Local Own-Source Revenue (X_1), General Allocation Grants (X_2), Special Purpose Grants (X_3), and Revenue-Sharing Allocations (X_4) impact municipal budgetary allocations (Y) across district and city governments within the Province of West Nusa Tenggara (NTB). Given the limited number of analysis units, the sample was determined using a census (total sampling) technique, including all entities in the population, which consists of 8 regencies and 2 cities. The data used are panel-structured secondary data (pooled data), which combine a cross-sectional dimension of 10 regencies/cities and a time-series dimension covering the period 2020-2025, resulting in a total of 60 observations. Data collection was conducted by reviewing the Regional Budget Implementation Reports published by the Directorate General of Fiscal

Balance (DJPK) of the Ministry of Finance of the Republic of Indonesia, as well as supporting reports from the Central Statistics Agency (BPS) of West Nusa Tenggara Province.

His study treats local government expenditure (Y) as the dependent variable, defined as the total realized spending of a local government in one fiscal year, covering operating, capital, unexpected, and transfer expenditures. Four independent variables are examined. The first is Local Original Revenue (PAD, X1), which comprises receipts from local taxes, levies, returns on separated local assets, and other legitimate sources. The second is the General Allocation Fund (DAU, X2), a general-purpose transfer from the central government intended to equalize fiscal capacity across regions. The third is the Special Allocation Fund (DAK, X3), a transfer earmarked for specific activities that align with national priorities. The fourth is the Revenue-Sharing Fund (DBH, X4), which distributes to regions a share of national tax and natural resource revenues.

Panel data regression was run in Stata/MP 17. To determine the most suitable specification among the Common Effects Model (CEM), Fixed Effects Model (FEM), and Random Effects Model (REM), the Chow test and the Hausman test were applied in sequence. Once the preferred model was identified, classical assumption diagnostics were carried out, namely checks for multicollinearity, heteroscedasticity, and autocorrelation, so that the resulting estimators could be regarded as Best Linear Unbiased Estimators (BLUE). The model is expressed in the following equation:

$$\mathbf{Y_{it} = \alpha_i + \beta_1 X1_{it} + \beta_2 X2_{it} + \beta_3 X3_{it} + \beta_4 X4_{it} + \varepsilon_{it}}$$

Notes:

Y : Local Government Expenditures

α : Constant

β : Beta

X1 : Local Government Revenue

X2 : General Allocation Funds

X3 : Special Allocation Funds

X4 : Revenue-Sharing Funds

The α_i component in this model serves to control for unobserved fixed effects at the district/city level that are constant over time, such as geographic factors, institutional arrangements, and natural resource potential. Furthermore, to ensure consistency in the measurement scale given the wide range of regional expenditure values, which range from Rp 716.670 billion to Rp 3,208.09 billion all variables (Y, X1, X2, X3, X4) were transformed and presented in units of billions of rupiah.

Model validity alongside research propositions was evaluated through the coefficient of determination (R^2) simultaneous significance testing (F-test), and partial significance testing (t-test) at a 5% significance threshold. Subsequently, to detect potential occurrences of the flypaper phenomenon, parameter equality was examined using the Wald test approach, contrasting the PAD regression coefficient against those of DAU, DAK, DBH, and aggregate Regional Transfers.

RESULTS AND DISCUSSION

This study uses panel data from 10 regencies/cities in NTB Province for the 2020-2025 period, with a total of 60 observations. The descriptive statistics in Table 1 show that average local government spending was Rp 1,650.78 billion, ranging from Rp 716.70 billion to Rp 3,208.09 billion. Meanwhile, DAU had the highest average at Rp 741.56 billion, followed by PAD at Rp 246.58 billion, DBH at Rp 153.73 billion, and DAK at Rp 120.52 billion. This indicates that central government transfers, particularly DAU, remain more dominant than PAD in the structure of local government funding.

Table 1. Results of the Descriptive Statistical Analysis

Variable	Obs	Mean	Std. Dev.	Min	Max
Y (Local Government Spending)	60	1.650,776	620,8331	716,70	3.208,09
X1 (PAD)	60	246,5772	141,4726	46,99	670,88
X2 (DAU)	60	741,5577	301,3635	370,67	1.609,21
X3 (DAK)	60	120,5177	70,55752	5,94	325,21
X4 (DBH)	60	153,7308	219,7189	27,51	1.314,77

Source: Stata Output, 2026

Results of the Panel Data Regression Analysis

The outcomes derived from both the Chow and Hausman diagnostic evaluations are detailed in the subsequent table

Table 2. Results of the Chow Test

Chow Test	
F test that all u_i=0: F(9, 46) = 2,70	Prob > F = 0,0131

Source: Stata Output, 2026

The resulting probability value (p-value) of 0.0131 falling below the 0.05 threshold leads to the rejection of the null hypothesis (H0), thereby confirming that the Fixed Effects Model (FEM) provides a superior fit compared to the Common Effects Model (CEM).

Table 3. Results of the Hausman Test

Hausman Test	
``	
chi2(4) = 26,32	Prob > chi2 = 0,0000

Source: Stata Output, 2026

Additionally, the Hausman specification test generated a p-value of 0.0000 (< 0.005), confirming the rejection of H0 and establishing the Fixed Effects Model (FEM) as a statistically superior choice relative to the Random Effects Model (REM). Hence, the FEM serves as the core analytical model for this study.

Test of Classical Assumptions

The results of the classical assumption tests are shown in the table below

Table 4. Results of the Multicollinearity Test

Variable	VIF	1/VIF
X2 (DAU)	1,82	0,550793
X3 (DAK)	1,47	0,682240
X1 (PAD)	1,43	0,700296
X4 (DBH)	1,08	0,929933
Mean VIF	1,45	–

Source: Stata Output, 2026

Evaluation of multicollinearity through Variance Inflation Factor (VIF) calculations demonstrated that all independent parameters stayed well under the threshold of 2. The recorded values showed DAU leading at 1.82, DAK at 1.47, PAD at 1.43, and DBH recording the lowest at 1.08, with an overall average of 1.45. Given that these figures lie safely below the critical limit of 10, it can be concluded that the regression framework is free from collinearity issues, thus validating its progression to the next analytical stage.

Table 5. Results of the Heteroscedasticity Test

Modified Wald test for groupwise heteroskedasticity in fixed effect regression model	
chi2(10) = 4.343,18	Prob > chi2 = 0,0000

Source: Stata Output, 2026

Testing for heteroscedasticity using the Modified Wald test on the fixed-effects model yielded a chi-squared (10) value of 4,343.18 with a probability of 0.0000. Since this probability value is well below the significance level of 0.05, the null hypothesis which states that residual variances are homogeneous across units is rejected, meaning that this regression model exhibits heteroscedasticity. This finding serves as the basis for the researcher to correct the model using the robust standard error approach in order to obtain more efficient and statistically reliable estimates.

Table 6. Autocorrelation Test Results

Wooldridge test for autocorrelation in panel data	
H0: no first-order autocorrelation	
F(1, 9) = 0,199	Prob > F = 0,6660

Source: Stata Output, 2026

The presence of panel autocorrelation was examined using the Wooldridge test, which produced an F-value of 0.199 (p = 0.6660). Since the resulting p-value lies well above the 5% significance benchmark, we accept that first-order autocorrelation is absent. This confirms that error terms remain independent across periods, fulfilling a key diagnostic criterion and validating the dependability of the model's parameters.

Hypothesis Testing Results

The results of the classical assumption tests are shown in the table below

Table 7. Final Estimation Results of the Fixed-Effects Model with Robust Standard Errors (Cluster)

Y	Coefficient	Standard Eror	t	P>|t|	[95% Conf. Interval]
X1 (PAD)	1,29622	0,2635813	4,92	0,001	[0,6999575 ; 1s,892482]
X2 (DAU)	0,6464178	0,1508671	4,28	0,002	[0,3051326 ; 0,987703]
X3 (DAK)	1,624701	0,336107	4,83	0,001	[0,8643739 ; 2,385028]
X4 (DBH)	0,5390977	0,0502979	10,72	0,000	[0,425316 ; 0,6528794]
Constant	573,1203	116,85	4,90	0,001	[308,7872 ; 837,4533]

Source: Stata Output, 2026. Fixed-effects (within) regression

Coefficient of Determination Test (R^2 Test)

The explanatory capacity of the model regarding Regional Expenditure variations is captured by an overall R^2 of 0.8935, implying that roughly 89.35% of the total variance is jointly accounted for by PAD, DAU, DAK, and DBH, leaving the remaining 10.65% governed by external factors beyond the specified model. Furthermore, the considerably higher 'between' R^2 (0.9628) relative to the 'within' R^2 (0.6029) suggests that these fluctuations are driven predominantly by structural disparities across distinct regencies and municipalities rather than by temporal dynamics within individual regions over time.

F-Test (Simultaneous Test)

The overall model fit, assessed via the F-test, generated an F-value of 47.69 with a corresponding probability of 0.0000. Given that this metric is far below the 5% alpha level, it is established that the independent variables collectively drive significant variations in regional spending. Consequently, the estimated model is statistically validated as robust and appropriate for explaining the observed fiscal dynamics.

T-Test (Partial Test)

Individual t-tests indicated that every independent parameter significantly impacts regional expenditures under a 5% alpha level. Positive relationships were confirmed across the board: PAD yielded a coefficient of 1.29622 (p = 0.001), DAU registered 0.6464178 (p = 0.002), DAK reached 1.624701 (p = 0.001), and DBH recorded 0.5390977 (p = 0.000$). Additionally, the regression intercept of 573.1203 denotes the expected baseline value of local expenditures in the absence of any explanatory variables.

Hypothesis Testing Results

Table 8. Results of the Test for Differences in Coefficients (Wald Test)

Comparison	F(1,9)	Prob > F	Conclusion
DAU vs PAD	3,30	0,1028	Not significantly different
DAK vs PAD	1,25	0,2923	Not significantly different
DBH vs PAD	7,35	0,0240	Significantly different (DBH < PAD)
Total TKD vs PAD	15,50	0,0034	Significantly different (TKD > PAD)

Source: Stata output, 2026. TKD = DAU + DAK + DBH.

Parameter equality tests contrasting PAD against each transfer grant yielded varied empirical outcomes. The difference between DAU and PAD was not statistically significant

(F(1,9) = 3.30, p = 0.1028), nor was the discrepancy between DAK and PAD (F(1,9) = 1.25, p = 0.2923), as both p-values remained above the 5% level. In contrast, the DBH coefficient was statistically smaller than that of PAD (F = 7.35, p = 0.0240). Nevertheless, consolidating all three transfer categories into aggregate Transfers to Regions (TKD) demonstrated a joint impact that significantly exceeded the response to PAD (F = 15.50, p = 0.0034).Consequently, the empirical manifestation of the flypaper effect in this study is not driven by an isolated transfer mechanism. Rather, it emerges when regional fiscal allocations are viewed holistically, where total central grants exert a stronger influence on local budgetary expansion than self-generated revenue (PAD).

Robustness Test

Sensitivity testing was undertaken via a two-step robustness check to verify whether the identified flypaper effect remains resilient to structural variations in the measurement of Intergovernmental Transfers (TKD). Initially, individual transfer components (DAU, DAK, and DBH) were merged into an aggregate TKD metric and regressed in tandem with PAD using a separate Fixed Effects (FE) model. The resulting estimates revealed a PAD parameter of 1.214 (p = 0.001) alongside an aggregate TKD coefficient of 0.501 (p = 0.000), supported by a model fit of R^2 = 0.7843 and F(2,9) = 85.91 (p = 0.0000). Further evaluation via the Wald test of coefficient equality (F(1,9) = 6.80, p = 0.0284) confirmed that the response coefficient for PAD is significantly larger than that of aggregate TKD.

At first glance, the direction of this relationship appears to contradict the main test results in Table 8, where the cumulative TKD coefficient (2.810) actually exceeds the PAD coefficient (1.296). This discrepancy stems from differences in model specifications: the aggregate approach imposes a single slope for DAU, DAK, and DBH, whereas the disaggregated estimates show that these three types of transfers exhibit highly heterogeneous responsiveness (0.646, 1.625, and 0.539, respectively). The imposition of this homogeneous parameter triggers an aggregation bias, causing the combined TKD coefficient to be concentrated at a weighted average that fails to reflect the actual contribution of each transfer component. Thus, the disaggregated model-based test in Table 8 remains the primary reference for the findings of this study. Meanwhile, the combined estimates serve as a cautionary note that conclusions regarding the flypaper effect are highly sensitive to the specific characteristics of each type of transfer and should not be generalized linearly.

Second, to test the stability of the "flypaper effect" in response to regulatory dynamics specifically between the pre-HKPD era (2020–2021) and the transitional period of the HKPD Law's implementation (2022-2025) this study included the Post_HKPD dummy variable along with its interactions with PAD and TKD (PAD_HKPD and TKD_HKPD). The estimation results show that the Post_HKPD dummy variable (coefficient 37.126; p=0.766), the PAD_HKPD interaction (coefficient 0.098; p=0.605), and the TKD_HKPD interaction (coefficient -0.026; p=0.756) are all insignificant at the 5% significance level (α=5%). This lack of significance indicates the absence of any discernible structural break in the responsiveness

of Regional Expenditures to PAD or TKD following the enactment of the HKPD Law. This conclusion provides statistical justification for combining the 2020-2025 observation period into a single main FE panel estimation model.

DISCUSSION

The Impact of Local Own-Source Revenue on Local Government Expenditures

The estimation results show that PAD has a regression coefficient of 1.296 with a p-value of 0.001, which means that H1 in this study is accepted. This finding indicates that every one-billion-rupiah increase in PAD has the potential to drive regional spending up by 1.296 billion rupiah, provided that other variables remain constant (ceteris paribus). This high elasticity value underscores that a region's capacity to optimize its own revenue sources remains one of the key determinants in determining the level of regional spending.

These results reinforce the findings (Lulu Jumkhairatul et al., 2023) which supports the positive and significant relationship between local revenue (PAD) and regional expenditures in the NTB region, but contradicts the research findings (Mendra et al., 2024) in West Sumatra, which actually shows that local revenue (PAD) has no significant impact on local government spending.

The Impact of DAU on Local Government Expenditures

For the DAU variable, a regression coefficient of 0.646 was obtained with a significance level of 0.002; thus, the second hypothesis (H2) in this study is accepted. This finding confirms that DAU has a positive and significant effect on regional expenditures, although its elasticity is the lowest when compared to PAD and DAK. This low elasticity is consistent with the characteristics of DAU as a block grant hat is, funds whose distribution is not restricted to specific purposes allowing local governments the flexibility to allocate them to various expenditure items according to their respective priorities (Law No. 1 of 2022 on HKPD).

The Impact of DAK on Local Government Expenditures

The highest coefficient among all independent variables was actually shown by DAK, at 1.625 with a probability of 0.001; thus, the third hypothesis (H3) in this study is accepted. The magnitude of this elasticity is closely tied to the nature of DAK as a specific grant that is, a transfer payment whose intended use has been specifically designated from the outset so that the disbursement process tends to be absorbed more quickly into actual spending compared to funds with more flexible usage. This finding reinforces the results of the study (Lulu jumkhairatul et al., 2023), who also found that DAK has a positive and significant effect on regional spending in the NTB region.

The Effect of DBH on Local Government Expenditures

Unlike the previous three variables, DBH actually recorded the strongest level of significance among all independent variables, with a probability of 0.000 and a coefficient of

0.539; thus, H4 is accepted. However, this level of significance is not accompanied by an equivalent magnitude of influence, as the elasticity of DBH was actually the lowest compared to the other variables. It is interesting to note that the positive direction of the effect found in this study is contrary to the results (Lulu jumkhairatul et al., 2023) Those who reported a negative impact of DBH on regional spending. The difference in the direction of this impact is believed to be linked to policy dynamics following the implementation of the Regional Revenue and Expenditure Law (UU HKPD), one of which is the adjustment to the palm oil DBH scheme as stipulated in Minister of Finance Regulation (PMK) No. 91 of 2023, which is suspected to have contributed to more optimal utilization of DBH by regency and city governments in West Nusa Tenggara (NTB) province.

Simultaneous Effects and Coefficient of Determination

Simultaneous testing using the F-test yielded a p-value of 0.0000, so the fifth hypothesis (H5) was accepted, meaning that PAD, DAU, DAK, and DBH were collectively found to have a significant effect on local government expenditures. The model's ability to explain this phenomenon is reflected in the overall R^2 value of 0.8935, indicating that nearly 89.35% of the variation in Regional Expenditures across regencies and cities in NTB can be explained simultaneously by the four independent variables, while the remaining 10.65% stems from other factors not included in the model. Interestingly, the between R^2 value (0.9628), which is much larger than the within R^2 value (0.6029), reveals that the variation in Regional Expenditures is driven more by disparities in the average PAD, DAU, DAK, and DBH across regencies and cities than by the dynamics of annual changes within each region itself.

Analysis of the Flypaper Effect

The findings of this study reveal a pattern that contradicts a number of previous studies, which generally found that PAD had no significant effect on regional expenditures and immediately concluded that there were indications of a "flypaper effect" based on those findings. In this study, however, PAD was actually found to have a positive and significant effect with a relatively high coefficient (1.296), even exceeding the DAU coefficient. This fact suggests that regency and city governments in NTB do not rely entirely on transfer funds, given that increases in PAD are also reflected in tangible increases in regional expenditure.

When examined individually, neither the DAU coefficient (0.646) nor the DAK coefficient (1.625) was found to differ significantly from the PAD coefficient (1.296), even though the DAK value appears larger in nominal terms; thus, there is insufficient evidence to assert the existence of a flypaper effect.Which is derived from a single type of transfer payment. A different pattern is shown by DBH (0.539), whose coefficient was found to be significantly lower than that of PAD, confirming that changes in PAD elicit a stronger response from local government spending than changes in DBH. However, when the three transfer funds are combined into a single aggregate (DAU + DAK + DBH = 2.810), their combined effect is found to be significantly greater than that of PAD (Prob = 0.0034). On that basis, H6 is accepted,

although it applies only at the aggregate level: the observed "flypaper effect" is not caused by the dominance of any single type of transfer fund, but rather by the cumulative effect of all Regional Transfers, which collectively exert a greater influence on Regional Expenditures than the autonomous fiscal capacity derived from PAD.

The pattern of these findings differs from the results of the study (Mendra et al., 2024) In West Sumatra, the data shows that local own-source revenue (PAD) has no significant impact on regional expenditures, while general allocation funds (DAU), special allocation funds (DAK), and forest revenue sharing (DBH) were each found to be significant, indicating that the flypaper effect in that region is more pronounced and consistent with the classic pattern (money sticks where it hits). This difference suggests that the degree of local fiscal dependence on transfer funds even though it is indicated in both cases can vary across regions depending on the characteristics of each region's revenue structure and the policy context prevailing during a specific period. For the central government, these findings can serve as a basis for evaluation to ensure that the performance-based Regional Transfer Scheme does not create disincentives for local governments to optimize their own PAD. Meanwhile, for regency and city governments in NTB, these results serve as an incentive to optimize the new local taxation and fee instruments introduced through the HKPD Law such as the optional schemes for Vehicle Tax (PKB) and Vehicle Acquisition Tax (BBNKB) in order to narrow the growth gap between local revenue (PAD) and transfer funds.

Theoretically, the tendency toward the flypaper effect at the aggregate TKD level can be explained by the income effect mechanism. Fund transfers from the central government which are classified as unearned income are often perceived by local governments as a source of fiscal capacity that carries minimal political risk compared to policies aimed at intensifying local taxes and fees. This perception encourages local governments to escalate their allocation of local expenditures based on expected transfer receipts, rather than optimizing their reliance on internal revenue. Consequently, the implementation of Law No. 1 of 2022 on Regional Fiscal Management (HKPD) which is intended to strengthen regional fiscal resilience must be supported by a performance-based incentive scheme for local own-source revenue (PAD). This step is crucial to ensure that the escalation of TKD allocations does not, in fact, perpetuate patterns of local budget dependence during the regulatory transition period.

CONCLUSIONS AND RECOMMENDATIONS

Based on a regression analysis using a Fixed Effects Model (FEM) with cluster-based robust standard errors applied to 60 data observations from regencies and cities in East Nusa Tenggara Province (NTB) over the 2020-2025 period, it was found that Local Original Revenue (PAD), General Allocation Funds (DAU), Special Allocation Funds (DAK), and Revenue-Sharing Funds (DBH) have a positive and significant impact on regional expenditure allocation, both simultaneously and individually. Among these variables, DAK exhibited the largest coefficient at 1.625, while DBH had the lowest coefficient at 0.539, although it still demonstrated a relatively strong level of statistical significance. Simultanously, the entire set

of independent variables exerts a substantial impact on subnational public spending, accounting for roughly 89.35% of its overall variance. Furthermore, findings derived from the coefficient comparison tests demonstrate that the flypaper effect does not appear individually for each type of transfer. Rather, this effect is identified when all Regional Transfers (TKD) are considered in aggregate, with an influence that is significantly greater than that of PAD. These findings indicate that the dependence of regional spending on transfers continues in a multidimensional form during the transitional phase following the execution of the regional Financial Relation Law (UU HKPD).

This study has limitations because its scope is restricted to 10 regencies and cities over the 2020-2025 period, and it does not include several important control factors, like population size, gross regional domestic product (GRDP), and poverty rates. Therefore, local governments need to optimize the potential of municipal levies and charges to reinforce fiscal autonomy, while the central government needs to evaluate the performance-based Regional Transfer scheme to ensure it continues to support the strengthening of local revenue (PAD). Future researchers can expand the geographic scope and observation period, as well as include additional control variables to develop a more comprehensive model.

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