Analysis of Village Income and Expenditure in Aceh with Institutional Moderation

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ABSTRACT

This study examines the financial dynamics of village governance in Aceh Province, particularly focusing on how different income sources influence village expenditure and the role of institutional factors in this relationship. **The main aim** of this research is to analyze the influence of village original income and transfer income on village spending with institutions as a moderating variable in Aceh Province. **The data** used in this research is secondary data in the form of quantitative data which includes the realization of village original income, the realization of village and institutional expenditure which is proxied as a regional competitiveness index, while transfer income consists of the realization of village funds, the realization of revenue sharing for district/city taxes and levies, the realization of village fund allocations, the realization of provincial financial assistance, and the realization of district/city financial assistance. The data in this research was obtained through the Central Statistics Agency and the National Research and Innovation Agency. **The research results** show that first, the flypaper effect has an impact on village spending with an increase in transfer income that is higher than the increase in original village income; second, institutions have a negative and significant effect on the relationship between transfer income and village expenditure. **This means** that institutions with good governance can be more effective in reducing income transfers for village spending. By reducing transfer income, institutions will try to optimize the village's original income based on the potential of the village area developed through BUMDes, so that it will have an impact on increasing village spending.

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1. INTRODUCTION

Law No. 33 of 2004 concerning Financial Balance between the Central Government and Regional Governments primarily regulates fiscal relations between central and subnational governments, with a particular focus on provincial and district/city levels. This regulation establishes the foundation for intergovernmental fiscal transfers, including revenue sharing, general allocation funds, and special allocation funds, which collectively shape the fiscal capacity of local governments. Although this law does not explicitly govern village administration, its implications extend to the village level through fiscal decentralization mechanisms implemented at the district level. Complementing this framework, Law No. 6 of 2014 concerning Villages provides a comprehensive legal basis for village governance, including the structure and management of village finances [1]. According to this law, village income is derived from several sources: (1) original village income; (2) revenue sharing from regional taxes and regency/city levies; (3) a portion of central and regional financial balance funds received by districts/cities; (4) allocations from the State Budget (APBN); (5) financial assistance from provincial and district/city budgets (APBD); and (6) non-binding grants and donations from third parties [2, 3]. This diversified revenue structure is designed to reduce fiscal disparities across villages and ensure the availability of financial resources to support autonomous and sustainable development.

Within this framework, villages are entitled to receive a portion of intergovernmental fiscal transfers distributed through districts, commonly referred to as the Village Fund Allocation. The management of these funds through village treasury systems or village accounts represents a critical component of village financial governance. As noted by [4], the inclusion of village fund allocations in the Village Revenue and Expenditure Budget (APBDes) signifies a fundamental shift in the role of villages from passive recipients of centralized policies to active actors with authority over planning, budgeting, and implementation processes. This shift not only increases fiscal responsibility at the village level but also demands higher standards of transparency, accountability, and administrative capacity.

The enactment of Law No. 6 of 2014 marks a pivotal transition toward village autonomy, encompassing both governance and financial management dimensions. Through decentralization, village governments are empowered to design and implement development programs that are more responsive to local needs and contextual challenges. The overarching objective of village development is to improve community welfare, enhance quality of life, and reduce poverty through the provision of basic services, infrastructure development, strengthening of local economic potential, and sustainable utilization of natural resources. These development priorities are inherently aligned with the Sustainable Development Goals (SDGs), particularly Goal 1 (No Poverty), Goal 8 (Decent Work and Economic Growth), Goal 9 (Industry, Innovation, and Infrastructure), and Goal 11 (Sustainable Communities) [5, 6]. The integration of SDGs into village governance, often operationalized through the SDGs Desa framework, ensures that development efforts are not only growth-oriented but also inclusive, equitable, and environmentally sustainable [7, 8].

Furthermore, the law mandates a significant delegation of authority from the central government to village administrations. First, village governments are granted autonomy in organizing administrative functions to enhance the efficiency and effectiveness of public service delivery. Second, they are authorized to manage village finances and identify legitimate sources of revenue. This dual mandate creates both opportunities and challenges. On one hand, it allows villages to innovate and optimize local economic potential; on the other hand, it requires strong governance capacity to ensure efficient budget allocation and sustainable financial management. This is closely related to SDG Goal 16, which emphasizes the importance of strong institutions characterized by transparency, accountability, and participatory governance [9]. In this regard, institutional quality becomes a critical determinant of how effectively villages can utilize available financial resources.

Despite the comprehensive regulatory framework and increased fiscal transfers, empirical evidence from Aceh Province reveals a persistent imbalance in village revenue structures. Data from 2016 to 2023 indicate that village expenditures are predominantly financed by transfer income, while the contribution of original village income remains minimal [10]. This condition reflects a structural dependency on external funding sources and indicates that villages have not yet fully optimized their local revenue potential. Sources such as village-owned enterprises (BUMDes), asset management returns, and community-based economic initiatives remain underdeveloped [11]. As a result, village governments tend to rely heavily on intergovernmental transfers, which may weaken fiscal independence and limit incentives to explore innovative revenue-generating strategies [12].

From a theoretical perspective, this phenomenon can be explained by the flypaper effect, which suggests that government spending is more responsive to transfer income than to locally generated revenue. In such a situation, increases in transfer funds lead to disproportionately higher increases in expenditure compared to equivalent increases in original income. This behavior indicates a tendency for local governments, including villages, to depend on external funds rather than strengthening internal revenue capacity. While the flypaper effect has been widely documented at regional government levels, empirical investigations at the village level remain relatively limited, particularly in developing country contexts such as Indonesia.

In addition, the role of institutional factors in shaping this relationship has not been extensively explored. Institutional quality, encompassing governance effectiveness, transparency, accountability, and administrative capability, is expected to influence how villages respond to both transfer income and locally generated revenue [13]. Strong institutions can mitigate dependency on transfer funds by promoting more efficient resource allocation, enhancing financial discipline, and encouraging the development of local economic initiatives. Conversely, weak institutions may exacerbate inefficiencies and reinforce reliance on external funding.

To address these challenges, strategic efforts are required to strengthen village economic capacity and institutional performance. These include developing new village-based enterprises, optimizing the utilization of village assets, improving managerial capabilities, and fostering community participation in economic activities. Strengthening these aspects not only enhances local revenue generation but also contributes to achieving SDG Goal 8 (Decent Work and Economic Growth) and Goal 12 (Responsible Consumption and Production).

Based on these considerations, this study aims to analyze the influence of village original income and transfer income on village expenditure, with institutional factors serving as a moderating variable in the context of Aceh Province [14, 15]. This study contributes to the existing literature by extending the analysis of the flypaper effect to the village level while incorporating institutional dimensions and linking the findings to the broader agenda of sustainable development [16].

As shown in Table 1, village expenditures in Aceh Province during the period 2016–2023 are predominantly financed by transfer income, while the contribution of village original income remains relatively low [17].

Table 1. Village Original Income and Transfer Income to Village Expenditures in Aceh Province 2016-2023 (in thousand rupiah)

Year	**Village Original Income (thousand rupiah)**	**To Total Village Expenditures (%)**	**Transfer Income (thousand rupiah)**	**To Total Village Expenditures (%)**
2016	21,678,306	0.43	5,115,411,524	100.31
2017	14,402,096	0.27	5,618,203,146	105.58
2018	24,546,343	0.44	5,813,409,732	104.20
2019	35,808,174	0.58	6,325,658,977	102.66
2020	57,113,815	0.85	6,825,257,573	101.28
2021	26,174,748	0.41	6,494,195,280	101.20
2022	24,259,493	0.39	6,131,459,300	97.51
2023	24,955,433	0.40	6,207,065,300	100.29

As shown in Table 1, village expenditures in Aceh Province during the period 2016–2023 are predominantly financed by transfer income rather than village original income. The contribution of transfer income consistently exceeds 97% of total village expenditures, even reaching above 100% in several years, indicating a very high dependence on external funding sources [18]. In contrast, the contribution of village original income remains extremely low, ranging only between 0.27% and 0.85% of total expenditures. This significant gap highlights the limited capacity of villages to generate their own revenue and reflects an imbalance in the structure of village finances [19, 20]. Furthermore, although there is a slight fluctuation in village original income over time, the overall contribution remains insignificant compared to transfer income, suggesting that local economic potential has not been optimally developed [21].

The dominance of transfer income relative to village original income, as presented in Table 1, indicates a high level of dependency on external funding in financing village government expenditures. Such a condition does not provide a strong foundation for sustainable fiscal independence [22]. International empirical evidence suggests that excessive reliance on intergovernmental transfers is negatively associated with government performance [10, 23]. This implies that village governments tend to be more cautious in utilizing locally generated revenue compared to transfer income received from higher levels of government [24].

This phenomenon is widely recognized in the literature as the flypaper effect, which describes the condition where "money sticks where it hits." In this context, transfer income tends to have a greater stimulatory effect on public spending compared to an equivalent increase in local revenue. Empirical studies indicate that local governments respond more strongly to transfer funds than to their own-source revenue, leading to higher expenditure levels. However, empirical studies examining the flypaper effect at the village level remain limited, particularly in the Indonesian context, as highlighted by previous studies such as [17, 25, 26].

Furthermore, [27] argue that regions operating under restrictive fiscal institutions tend to allocate more spending from intergovernmental transfers compared to those with less restrictive frameworks. This suggests that institutional factors play a significant role in shaping fiscal behavior. In addition, political dynamics, alongside economic considerations, may also influence the magnitude of the flypaper effect. Therefore, understanding the role of institutions is essential in explaining how transfer income affects village expenditure [28].

Based on the above discussion, this study aims to analyze the influence of village original income and transfer income on village expenditure, with institutions acting as a moderating variable in Aceh Province. The novelty of this study lies in incorporating institutional factors into the flypaper effect framework at the village level, which has received limited attention in previous research [23]. Furthermore, this paper is structured as follows: Section introduction presents the introduction, Section literature reviews the relevant literature, Section research method describes the data and methodology, Section discusses the empirical results, and Section concludes with policy implications [29].

2. LITERATURE REVIEW

This section reviews the theoretical and empirical literature on village financial management, focusing on village expenditure, village original income, transfer income, and institutional factors [30]. These variables explain village fiscal behavior and are closely related to the concept of the flypaper effect, which describes the stronger influence of transfer income on government expenditure. This review also aims to provide a foundation for the proposed research model [31].

2.1. Village Expenditure

Regulation of the Minister of Home Affairs of the Republic of Indonesia Number 113 of 2014 concerning Village Financial Management defines village expenditure as all disbursements from the village account that constitute village obligations within one fiscal year and cannot be recovered [32]. These expenditures are allocated to finance the implementation of village authority. The classification of village expenditure includes five main sectors is administration of village government, implementation of village development, community development, community empowerment, and disaster management, emergency, and urgent situations at the village level [33].

2.2. Village Original Income

Law No. 6 of 2014 states that village original income consists of revenues generated from village business activities, asset utilization, community self-help and participation, mutual cooperation, and other legitimate sources of income [34]. This reflects the expectation that villages should gradually strengthen their financial independence through local economic activities.

Further clarification is provided in the Minister of Home Affairs Regulation (Permendagri) Number 20 of 2018 concerning Village Financial Management. According to this regulation, village original income includes is village business results, particularly profit-sharing from Village-Owned Enterprises (BUMDes), proceeds from village assets such as village treasury land, markets, irrigation systems, public facilities, and other assets based on village authority, revenues derived from community participation, including voluntary contributions and mutual cooperation, and other legitimate income, such as village levies. These components highlight the importance of optimizing local resources and community involvement in generating sustainable village revenue.

2.3. Transfer Income

Based on Law No. 6 of 2014, transfer income represents a significant component of village revenue and includes allocations from the State Budget (APBN), shares of regional taxes and levies, village fund allocations derived from district/city balancing funds, and financial assistance from provincial and district/city budgets.

This is further elaborated in Permendagri Number 20 of 2018, which categorizes transfer income into several components are village funds (Dana Desa), revenue sharing from regional taxes and levies, village fund allocations, financial assistance from provincial governments, and financial assistance from district/city governments. The dominance of transfer income in village finances indicates the continued reliance of villages on external funding sources, particularly in regions where local revenue generation remains limited.

2.4. Institutions

In the context of local public economics, institutional factors play a crucial role in shaping government spending behavior. [15, 27] argue that the stickiness of transfer funds in recipient regions arises from an imbalance of power between the median voter and bureaucratic agents in public decision-making processes. Their model, based on direct voting over public goods provision, suggests that bureaucrats possess informational advantages that allow them to influence budget outcomes through agenda control.

Furthermore, [35] explain that when budget agendas are dominated by political agents, decision-making outcomes may be influenced by strategic behavior, including the use of threat mechanisms, which can lead to higher levels of public spending than desired by the median voter. Expanding on this perspective, [14] introduces a model in which elected officials operate under uncertainty and aim to maximize political support by designing budget policies that enhance voter utility.

Despite these theoretical developments, empirical literature examining the relationship between institutional quality and the flypaper effect remains limited. [12] suggests that the flypaper effect may arise due to uncertainty in managing grant revenues, combined with risk-averse behavior among public officials. Additionally, [22] propose that interest groups, rather than voters, may play a dominant role in budget determination. The varying influence of these groups across expenditure categories can result in differences in the magnitude of the flypaper effect.

2.5. Flypaper Effect

The flypaper effect is a well-documented phenomenon in public finance literature. Theoretically, an increase of $1 in local income should have the same impact on public spending as a $1 increase in intergovernmental transfers, as both expand the budget constraint equivalently. However, empirical evidence suggests otherwise. Funds received in the form of transfers tend to "stick where they hit," meaning they are more likely to increase government spending compared to locally generated income [3], [20].

This observation is supported by [28], who find that government expenditure tends to respond more strongly to transfer income than predicted by standard economic theory. In many cases, the marginal propensity to spend out of transfers approaches 100%, indicating a strong tendency for governments to allocate additional funds toward expenditure rather than reducing taxes or increasing savings. This phenomenon implies that local governments often exhibit higher spending levels driven by external funds rather than internal revenue sources.

3. RESEARCH METHOD

This study employs a quantitative research approach using secondary data to analyze the influence of village original income and transfer income on village expenditure, with institutions as a moderating variable. The data used in this study include village financial realization, such as village original income, transfer income, and village expenditure, while institutional variables are proxied by the regional competitiveness index. The data were obtained from the Central Statistics Agency and the National Research and Innovation Agency.

3.1. Data and Sample

The population of this study consists of all districts/cities in Aceh Province. This research applies a census approach using panel data, combining time series data from 2016 to 2023 (8 years) and cross-sectional data from 23 districts/cities. Thus, the dataset forms a balanced panel, allowing for more comprehensive analysis by capturing both time variation and cross-sectional differences.

3.2. Variables and Measurement

This study uses four main variables: village expenditure (BD) as the dependent variable, village original income (PAD) and transfer income (PT) as independent variables, and institutions (INS) as a moderating variable. Village expenditure reflects total village spending within a fiscal year. Village original income represents revenue generated from local sources, while transfer income includes funds received from central and regional governments. The institutional variable is proxied by the regional competitiveness index. Additionally, an interaction variable between transfer income and institutions (PT $\times$ INS) is included to test the moderating effect.

3.3. Model Specification

To analyze the relationship between variables, this study employs a panel data regression model. Following previous studies, the village expenditure function can be expressed as:

$$BD_{it} = f(PAD_{it}, PT_{it}, INS_{it}) \quad (1)$$

To improve estimation and reduce scale differences, the model is transformed into a logarithmic form as follows:

$$\log BD_{it} = \alpha_0 + \alpha_1 \log PAD_{it} + \alpha_2 \log PT_{it} + \alpha_3 INS_{it} + \alpha_4(\log PT_{it} \times INS_{it}) + e_{it} \quad (2)$$

Where:

- $\log BD$ = Village Expenditure
- $\log PAD$ = Village Original Income
- $\log PT$ = Transfer Income
- INS = Institutions (regional competitiveness index)
- $\log PT \times INS$ = Interaction term
- i = Cross-section (district/city)
- t = Time series
- e = Error term

The interaction term is used to test the moderating role of institutions. Institutions are considered a moderating variable if the coefficient α_4 is statistically significant.

3.4. Data Analysis Technique

This study uses panel data regression analysis to examine the relationships between variables. To determine the most appropriate model, the Chow test is first conducted to choose between the common effect model and the fixed effect model. Subsequently, the Hausman test is applied to select between the fixed effect model and the random effect model. Furthermore, this study employs Moderated Regression Analysis (MRA) to test the moderating role of institutions. The existence of the flypaper effect is identified by comparing the coefficients of transfer income (α_2) and village original income (α_1). The flypaper effect is considered to occur if the coefficient of transfer income is greater than that of village original income. Conversely, if the coefficient of transfer income is smaller, the flypaper effect does not occur.

4. RESULTS AND DISCUSSION

4.1. Model Selection

Before processing the data, determining the best model for estimating panel data must be done first. Model choices include common effect, fixed effect and random effect. The technique used to determine the most appropriate model is the chow test to choose between a common effect or fixed effect model. Next, the Hausman test is used to select the best model between the fixed effect and random effect models in estimating panel data regression.

Table 2. Chow Test

Effects Test	**Village Expenditure**		
	Statistic	**d.f.**	**Prob.**
Cross-section F	7.611226	(22,157)	0.0000

Source: EViews 10 output (processed data)

Based on Table 2, the probability value of 0.0000 is lower than the 0.05 significance level, indicating that the null hypothesis is rejected. Therefore, the fixed effect model is more appropriate than the common effect model, suggesting the presence of significant cross-sectional heterogeneity in the data.

Table 3. Hausman Test

Test Summary	Village Expenditure		
	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	106.226899	4	0.0421

Source: EViews 10 output (processed data)

Based on Table 3, the probability value of 0.0421 is lower than the 0.05 significance level, indicating that the null hypothesis is rejected. This confirms that the fixed effect model is preferred over the random effect model. Therefore, the fixed effect model is selected for further analysis.

4.2. Moderation Test (MRA)

To examine the role of institutions in the relationship between transfer income and village expenditure, this study employs MRA. This method tests whether the institutional variable (INS) moderates the effect of transfer income (PT) on village expenditure (BD).

The moderating effect is represented by an interaction term (LogPT $\times$ INS) in the regression model. The significance of this term indicates whether institutions influence the relationship, where a positive coefficient strengthens the effect, while a negative coefficient weakens it. Furthermore, MRA provides insights into how governance quality, proxied by the institutional index, affects the impact of fiscal transfers on village expenditure. The estimation results are presented in Table 4.

Table 4. Main Effects Model

Dependent: LogBD	
Variables	**Coefficient**
C	5.3912 (0.0000)
LogPAD	0.0080 (0.0356)
LogPT	0.3409 (0.0000)
INS	0.6327 (0.0001)
R-squared	0.9181
Prob (F-Statistic)	0.0000

Source: Processed data via EViews 10
*Note: *Significant at 5%*

Based on Table 4, village original income (PAD) has a positive and statistically significant effect on village expenditure (BD), as indicated by a coefficient of 0.0080 and a probability value of 0.0356. However, the relatively small magnitude of the coefficient suggests that the contribution of PAD to village expenditure remains limited. In contrast, transfer income (PT) demonstrates a positive and highly significant effect on village expenditure, with a coefficient of 0.3409 and a probability value of 0.0000. The larger coefficient of PT compared to PAD indicates that village expenditure is more responsive to transfer income, thereby confirming the existence of the flypaper effect in Aceh Province.

Furthermore, the institutional variable (INS) is found to have a positive and significant effect on village expenditure, with a coefficient of 0.6327, implying that better governance contributes to more effective financial management and increased spending. However, the interaction term between transfer income and institutions (LogPT $\times$ INS) shows a negative and statistically significant coefficient of -0.0730. This finding indicates that institutions weaken the positive relationship between transfer income and village expenditure, suggesting that stronger institutional quality can reduce the dependence of village expenditure on transfer income.

4.3. Regional Analysis of Village Revenue Structure

To provide a deeper understanding of village financial conditions, this study further examines the structure of village revenue across four regional classifications in Aceh Province, namely Basajan-Pidie Jaya, North-East, Central, and West-South regions. This analysis focuses on comparing the contribution of village original income (PAD) and transfer income to village expenditure.

Table 5 presents the distribution of village original income across regions during the 2016–2023 period. The results indicate that the contribution of PAD to village expenditure remains relatively low in all regions. Although certain regions, such as Basajan-Pidie Jaya, show relatively higher values, the overall proportion of PAD is still minimal. This condition suggests that villages have not yet fully optimized their internal revenue sources, including village-owned enterprises (BUMDes), asset management, and community-based economic activities.

Table 5. Village Original Income Against Village Expenditures (2016–2023) (in thousand rupiah)

Year	Pidie Jaya		East-North		Middle		West-South	
	Village Original Income	**To Total Village Expenditures (%)**	**Village Original Income**	**To Total Village Expenditures (%)**	**Village Original Income**	**To Total Village Expenditures (%)**	**Village Original Income**	**To Total Village Expenditures (%)**
2016	10,377,679	0.87	2,093,710	0.12	3,362,889	0.40	5,844,028	0.44
2017	8,478,081	0.56	2,956,738	0.15	607,076	0.07	4,140,699	0.31
2018	8,003,462	0.56	8,340,043	0.42	2,585,387	0.29	6,192,714	0.48
2019	8,719,089	0.57	9,925,842	0.46	876,552	0.09	17,208,177	1.13
2020	12,196,350	0.70	2,791,315	0.12	1,368,304	0.13	16,710,831	1.09
2021	40,540,014	2.47	6,172,884	0.28	865,280	0.08	3,182,882	0.20
2022	14,993,372	0.92	2,247,499	0.11	722,846	0.07	6,114,606	0.39
2023	135,066,388	8.32	2,446,809	0.12	951,412	0.10	5,963,141	0.40

Source: BPS, 2023 (processed)

Table 5 demonstrates that the contribution of Village Original Income (PAD) to total village expenditures across all regions remains relatively low and unstable throughout the 2016–2023 period, indicating limited fiscal capacity at the village level. Among the regions, Pidie Jaya shows comparatively higher contributions, with notable increases in 2021 (2.47%) and a sharp rise in 2023 (8.32%), suggesting potential improvements in local revenue optimization, such as better management of village-owned enterprises or assets. However, this upward trend is not consistent over time, indicating that such improvements may not yet be sustainable. In contrast, the East-North region exhibits consistently low and stagnant contributions, generally below 0.5%, reflecting limited diversification of revenue sources and underutilized local economic potential. The Middle region records the lowest and most fluctuating contribution levels, in some years falling below 0.1%, which highlights a very high dependence on external funding and weak local economic activity. Meanwhile, the West-South region performs slightly better than East-North and Middle, with contributions exceeding 1% in 2019 and 2020, although this increase is not maintained in subsequent years. Overall, the data reveal that no region consistently achieves a strong contribution from PAD, and observed increases tend to be sporadic rather than structural. These findings imply that villages remain highly dependent on transfer income as their primary source of financing, while the potential of internal revenue sources has not been fully optimized. Therefore, strengthening local economic capacity, improving financial management, and enhancing the role of village-owned enterprises are essential steps toward achieving greater fiscal independence at the village level.

Table 6 shows that transfer income plays a dominant role in financing village expenditures across all regions during the 2016–2023 period. The proportion of transfer income consistently remains very high, generally above 95% and in several cases even exceeding 100%. This indicates that village expenditures are overwhelmingly financed by external sources, particularly transfers from central and regional governments. In regions such as East-North and Middle, the proportion exceeding 100% suggests not only full dependence on transfers but also possible effects of budget timing, accumulation, or fiscal adjustments in reporting. Overall, this pattern clearly reflects the strong reliance of villages on external funding sources.

Table 6. Transfer Income to Village Expenditures in the Pidie Jaya, East-North, Middle and West-South Regions (2016–2023) (in thousand rupiah)

Year	Pidie Jaya		East-North		Middle		West-South	
	Transfer Income	(%)	Transfer Income	(%)	Transfer Income	(%)	Transfer Income	(%)
2016	1,178,987,256	99.08	1,793,965,187	102.81	828,145,479	99.48	1,332,083,135	98.67
2017	1,498,983,464	98.43	2,011,499,494	101.03	947,824,738	102.91	1,352,492,872	115.17
2018	1,408,527,450	99.14	2,005,009,440	101.83	947,198,199	106.90	1,302,911,828	92.52
2019	1,517,656,682	99.26	2,194,538,163	101.43	1,021,658,331	107.98	1,522,751,130	104.53
2020	1,727,498,779	98.92	2,347,110,331	101.43	1,070,227,770	103.72	1,539,537,705	109.15
2021	1,638,195,630	99.90	2,203,446,405	101.38	1,049,123,890	102.75	1,582,824,617	101.30
2022	1,541,941,521	95.08	2,125,574,153	99.82	973,641,269	99.50	1,558,206,583	96.12
2023	1,571,692,849	96.82	2,142,504,698	101.82	972,381,075	101.14	1,500,118,991	101.12

Source: BPS, 2023 (processed)

Across regions, the level of dependence is relatively uniform, although slight variations can be observed. Pidie Jaya consistently shows a high reliance on transfer income, with proportions remaining above 95% throughout the period. The East-North region demonstrates a similarly strong dependence, frequently exceeding 100%, indicating a structural reliance on external fiscal support. The Middle region exhibits the highest level of dependence, reflecting limited local revenue capacity and a weak economic base. Meanwhile, the West-South region, although slightly more moderate in certain years, still shows a dominant reliance on transfer income, with proportions largely remaining above 95%. These findings highlight the low level of fiscal autonomy among villages and emphasize the need to strengthen internal revenue generation to support more sustainable and independent village financial management.

4.4. Discussion

The findings of this study reveal that village original income (PAD) plays a positive role in supporting village expenditure; however, its relatively limited impact reflects the low fiscal capacity of villages in Aceh Province. This condition indicates that villages have not yet been able to fully optimize their local economic potential, including revenue from village-owned enterprises (BUMDes), asset management, and community-based economic activities. In line with the concept of fiscal decentralization, stronger local revenue should ideally enhance financial independence. However, the empirical evidence suggests that villages still face structural and managerial constraints in generating sufficient internal revenue.

On the other hand, the dominant influence of transfer income highlights a persistent dependence on central and regional government funding. This condition strongly supports the flypaper effect hypothesis, where external transfers stimulate public expenditure more significantly than locally generated income. From a theoretical perspective, this phenomenon may arise due to lower accountability pressure on externally sourced funds compared to locally generated revenue. As a result, village governments may have a greater tendency to allocate transfer funds toward expenditure expansion, rather than prioritizing efficiency or long-term revenue generation.

The moderating role of institutions provides an important insight into how governance quality shapes fiscal behavior at the village level. Strong institutions, characterized by transparency, accountability, and effective financial oversight, are able to reduce excessive dependence on transfer income by promoting more responsible and strategic budgeting practices. The negative moderating effect indicates that better governance can mitigate the intensity of the flypaper effect, encouraging villages to shift their focus toward strengthening local revenue sources. Therefore, improving institutional quality is essential not only for enhancing expenditure effectiveness but also for achieving sustainable village financial independence.

5. MANAGERIAL IMPLICATION

The findings of this study provide important managerial implications for village governments, district and provincial policymakers, and BUMDes managers in improving village financial independence. Since village expenditure in Aceh is still highly dependent on transfer income, village managers need to shift from a passive spending orientation toward a more productive and entrepreneurial financial strategy. This can be achieved by strengthening the role of BUMDes, optimizing village assets, improving local revenue planning, and developing community-based economic activities that are aligned with each village's potential. In addition, the negative moderating role of institutions indicates that better governance can reduce excessive dependence on transfer funds. Therefore, village officials should improve transparency, accountability, budgeting discipline, and financial reporting quality to ensure that transfer income is used more strategically. At the policy level, district and provincial governments should provide continuous training, mentoring, and monitoring systems so that villages are not only able to manage external funds effectively but also gradually increase their Village Original Income and achieve more sustainable fiscal independence.

6. CONCLUSION

This study concludes that the flypaper effect exists in village finance in Aceh Province, where transfer income has a greater influence on village expenditure than village original income (PAD). Although PAD has a positive effect on expenditure, its relatively small contribution reflects the limited fiscal capacity of villages in generating internal revenue. These findings indicate that village governments are more responsive to increases in transfer income than to improvements in locally generated revenue, highlighting a structural dependence on external funding sources.

Furthermore, this study finds that institutional quality plays a significant moderating role in the relationship between transfer income and village expenditure. The negative and significant interaction effect suggests that better governance can reduce the dependence of village expenditure on transfer income. Strong institutions, characterized by transparency, accountability, and effective financial management, are able to encourage more efficient allocation of resources and promote greater reliance on village original income. This implies that improving institutional capacity is a key factor in achieving more sustainable and independent village financial management.

Based on these findings, several policy recommendations can be proposed. First, the provincial government should strengthen coordination and alignment of BUMDes policies between central and local governments, including providing training and capacity-building programs for village managers. Second, district and city governments should offer technical assistance and act as facilitators in supporting the establishment, management, and evaluation of BUMDes, while also fostering collaboration with external stakeholders. Third, village governments need to optimize local economic potential without creating unfair competition with existing community businesses. Finally, future research is recommended to incorporate additional variables, such as political factors, fiscal capacity, and community participation, as well as to expand the scope of analysis to other regions in order to provide a more comprehensive understanding of the flypaper effect in village finance.

7. DECLARATIONS

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7.2. Author Contributions

Conceptualization: II; Methodology: ED; Software: II; Validation: ED and II; Formal Analysis: II and ED; Investigation: II; Resources: II; Data Curation: II; Writing Original Draft Preparation: II and ED; Writing Review and Editing: II and ED; Visualization: II; All authors, II and ED have read and agreed to the published version of the manuscript.

7.3. Data Availability Statement

The data presented in this study are available on request from the corresponding author.

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7.5. Declaration of Conflicting Interest

The authors declare that they have no conflicts of interest, known competing financial interests, or personal relationships that could have influenced the work reported in this paper.

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