

The Fiscal Illusion: A Regional Paradox of Mining Resources (Study on Regencies/Cities in North Maluku)

Muhammad Dwi Reza¹, Johan Fahri², Suratno Amiro³, Abdul Chalid Ahmad⁴

Khairun University^{1,2,3,4}

Jl. Yusuf Abdurahman Campus II Gambesi, South Ternate District, Ternate City Postal
Code: 97719, Indonesia

Email Correspondence: muhammadwir94@gmail.com

ORCID ID: 0009-0008-2568-4193

ARTICLE INFORMATION

ABSTRACT

Publication information

Research articles

HOW TO CITE

Reza, Muhammad Dwi., Fahri, Johan., Amiro, Suratno., Ahmad, Abdul Chalid. (2024). The Fiscal Illusion: A Regional Paradox of Mining Resources (Study on Regencies/Cities in North Maluku). *Journal of International Conference Proceedings*, 7(2), 620-636.

DOI:

<https://doi.org/10.32535/jicp.v7i2.3749>

Copyright @ 2024 is owned by the Author.
Published by JICP



This is an open access article.
License: Attribution-Noncommercial-ShareAlike (CC BY-NC-SA)

Received: 21 September 2024

Accepted: 23 October 2024

Published: 25 November 2024

This study aims to determine the fiscal illusion of the mining area paradox in North Maluku Regency/City which is affected by the flypaper effect by regression on Regional Original Revenue, General Allocation Fund and Revenue Sharing Fund on Regional Expenditure. The data collection method uses census techniques. There are 10 districts/cities in this study with a total of 50 observations from 2018-2022. The technique used in this study is a multiple linear regression analysis technique using the E-Views 12 statistical test tool. The results of this study Fiscal illusions in North Maluku can include a variety of aspects related to perceptions or beliefs that may not correspond to the actual economic reality. Revenue from the mining sector, dependence on central transfer funds, increased revenue from massive investment are gaps in the occurrence of fiscal illusions in districts/cities in North Maluku Province. Regional Original Revenue, General Allocation Fund and Profit Sharing Fund affect regional expenditure and there is a flypaper effect symptom in districts/cities in North Maluku province.

Keywords: Fiscal Illusion, Flypaper Effect, Regional Expenditure, PAD, DAU and DBH

INTRODUCTION

The central government in the context of decentralization issued Law Number 23 of 2014 concerning regional autonomy so that local governments are obliged and have the right to regulate all local government activities and take care of all interests of their local communities (Hambali and Naode, 2019; Saipuloh et al., 2023). In implementing this autonomy, local governments prepare the Regional Expenditure Budget (APBD). The central government provides central transfer funds to the regions in accordance with Government Regulation Number 12 of 2019 with the aim of increasing the equitable distribution of regional growth, so it is hoped that the central transfer will be an incentive for local governments to increase their own income through filling posts that are considered to have potential in increasing regional growth.

In the regional revenue component, the central government provides central transfer funds to the regions with the aim of increasing the equitable distribution of regional growth, so it is hoped that the central transfer will be an incentive for local governments to increase their own revenue through the filling of posts that are considered to have potential in increasing regional growth. In addition to transfer income, local governments have their own sources of funding (PAD). Government Regulation Number 12 of 2019 Article 201, PAD and transfer revenue are used for development to increase regional growth. In this case, the local government must be able to place these budget posts so that the expenditure carried out by the local government is effective and efficient so that it is able to increase growth in its region. Although the system of regional autonomy and fiscal decentralization gives local governments the power to manage their own financial resources, dependence on TKD is frequent (Ahmad et al., 2024).

Table 1. North Maluku Provincial Budget 2021-2022 (*in millions of rupiah*)

DESCRIPTION	AMOUNT (RP BILLION)		CHANGE
	APBD 2021	APBD 2022	
INCOME	2.849,04	2.912,97	2,24%
Regional Original Income	563,92	751,93	33,34%
Transfer Revenue	2.247,75	2.108,96	-6,17%
Other Legitimate Regional Income	37,36	52,08	39,39%
SHOP	3.335,96	3.024,28	-9.34%
Operating Expenses	1.839,18	1.916,87	4,22%
Capital Expenditure	1.338,21	848,25	-36,61%
Unexpected Shopping	25,00	35,00	40,00%
Transfer	133,58	224,16	67,82%

Source : North Maluku Province DJPb Regional Office, North Maluku Provincial Government (2022)

The table above shows that the dominant role of the central government in funding a region compared to optimizing PAD in local government spending actually does not provide good guidance for the government on the funding flow itself. This is in accordance with the findings by Nurhayati and Septiana (2018) that the proportion of regional original revenue is only able to contribute 20% in regional expenditure financing. The findings show the level of dependence of local governments on funding outside the PAD. Based on empirical evidence conducted by the IMF, it shows that the high dependence of local governments on the central government will have a negative impact on the independence of a region (Mello and Barenstein, 2001).

Liando and Hermanto (2017) their study in Rosmida (2022) stated that local governments must explore their own sources of regional revenue optimally and have the potential to increase focused and targeted regional development. This authority is a manifestation of the implementation of regional autonomy, so it is hoped that the level of dependence of local governments on the central government will be reduced. (Rumawir, 2019)

Table 2. Distribution of GDP Percentage Based on Applicable Prices by Business Field in North Maluku Province, 2018–2022 (*in millions of rupiah*)

Business Field	2018	2019	2020	2021	2022
Agriculture, Forestry, and Fisheries	22,60	21,92	21,03	17,97	14,29
Mining and Quarrying	10,84	10,93	11,56	14,64	17,55
Processing Industry	7,41	7,08	11,45	20,48	29,21
Wholesale and Retail Trade; Car and Motorcycle Repair	17,45	17,87	15,89	13,24	11,07
Government, Defense, and Compulsory Social Security Administration	15,15	15,13	15,03	12,14	9,73

Source : BPS Processing Data in Numbers (2023)

Based on the table above, the economic structure of North Maluku in 2022 was mostly dominated by the processing industry at 29.21 percent, followed by the mining and quarrying sector at 17.55 percent. Meanwhile, the Agriculture, Forestry, and Fisheries sector in 2018 had a contribution of 22.60, slowly decreasing every year until in 2022 the contribution to this sector was 14.60. Meanwhile, in the Wholesale and Retail Trade sector; Car and Motorcycle Repair is in fourth place, followed by the Government Administration, Defense, and Compulsory Social Security sectors. From this data, most of the revenue comes from mining products, which can create the illusion that revenue from the mining sector can be the main source of regional revenue without considering the risk of commodity price fluctuations or policy changes that can affect these revenues.

Sasana (2011) and Andriani and Mahi (2017) stated in their findings that the increase in the growth of a region is accompanied by an increase in the gross regional domestic product (GDP) in the area. Sasana (2011) found that the allocation of regional revenue to potential sectors is able to boost growth in these sectors, so that both central and regional governments also benefit from the growth of the GDP. Local governments can collect taxes or profits from the results of blood wealth management and profit sharing with the central government, both tax and non-tax/natural resources DBH. So that the central government redistributes the results of the DBH association to each region in the form of a central transfer to fulfill autonomy and equitable regional development. Sometimes, local governments may experience fiscal illusions by relying too much on transfer funds from the central government. They may assume that transfer funds will continue or even increase from year to year, without considering the possibility of changes in national policies or unstable economic conditions. So that the illusion creates a fiscal illusion that is the basis for the flypaper effect phenomenon.

The flypaper effect phenomenon has a wide influence on the APBD in spending itself. The transfer of the central government will result in an increase in regional spending, however, the increase is not as large as the PAD itself. This phenomenon occurs when local governments do not have the ability to utilize regional revenue budgets in allocating to sectors that have the potential to increase regional growth. This inability has an impact on the independence of a region. So that it allows local governments to have

dependence on the central government. The incident is not in accordance with the goal of regional autonomy.

The implication is wider if the central government transfers the central transfer funds to posts that are considered more priority, so that local governments will look for other sources of revenue. Tax increases are one way to increase regional revenue revenue. However, if the PAD is considered unable to keep up with the APBD in the use of the budget, the local government will automatically look for other sources of revenue. Loans/Debts are an alternative to local government revenues in financing these needs. It is important to understand that fiscal illusions can affect economic policies and local government budgets, so decision-making based on a proper understanding of actual economic conditions and various risks is crucial to achieving sustainable and independent economic development in North Maluku.

Previous researchers such as Nurhayati and Septiana (2018) researched in Sumatra, Tuaputimain (2019) researched Maluku, Malik and Inuzula (2021) researched in Bireun, Fahriani and Syafrudin (2022) researched in Central Kalimantan, Indasari and Kholvieyana (2021) researched in Riau, and Ishak et al. (2019) researched in Parepare obtained results, namely PAD did not significantly affect regional spending, so that the incident caused a flypaper effect. The implication is that if there has been an allocation of funds by the central government to other funding posts due to unexpected events, resulting in local governments will use regional loans as an alternative financing for their fiscal operations.

Different research findings were carried out by Rosmida (2022) in North Maluku, Dewi (2017) in several districts/cities in Indonesia, Ardiansyah (2019) in Central Java, research conducted by Kurniati and Devi (2022) in Lampung identified that the findings were free from the symptoms of the Flypaper effect. Because the region has been able to manage limited resources and the ability of PAD to finance the needs of local governments is greater than the funding transferred by the central government to the regions.

In the research gap above, the researcher concluded that each region has its own characteristics, both in terms of economy, geography and even the resources it has. So, the financing ability of each region is different. The issue of regions that have mining resources is an interesting discussion to be further researched. In addition, the proportion of local governments' dependence on DAU which is greater than PAD in regional expenditure is the main reason for the researcher to review the flypaper effect by associating the fiscal illusion as the cause of this phenomenon and finding out the influence of PAD, DAU and DBH on regional expenditure using different objects, namely districts/cities in North Maluku Province.

LITERATURE REVIEW

Regional Autonomy

Regional autonomy based on Article 1 Paragraph (6) of Law No. 23 of 2014 concerning Regional Government, explains that regional autonomy has rights, authority, and obligations in regulating and managing the government. Based on this definition, there

are three elements that form regional autonomy, namely: Rights; Authority; Obligations of Autonomous Regions.

In practice, local governments will be responsible for finding their own financial resources by utilizing and optimizing the management of resources available in their regions, supported by funding from the central government for the benefit of the community (Suparmoko, 2002). This situation allows the regions to actualize all sectors (resources) that are considered potential optimally (Safitri, 2016). So that the mandate of regional autonomy authority is based on the principle of decentralization in the form of broad, real, and responsible autonomy (Mardiasmo, 2005).

Fiscal Illusion

Amilcare Puviani (1903), the inventor of the theory of fiscal illusion from Italy, described a financial manipulation engineering carried out by authorized institutions in making decisions so as to influence interested parties in certain judgments or actions (Dyahningtyas et al., 2019). So that this action can encourage the community to contribute more in terms of tax payments or retributions and also encourage the central government to allocate funds in large portions. The fiscal illusion is a measurement that an area is affected by the flypaper effect.

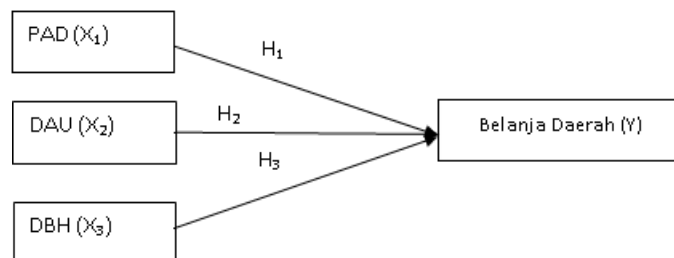
Flypaper Effect

The flypaper effect is defined as a condition in which the spending response uses more central transfers or grants than using local original revenue (PAD) in a blood (Maimunah, 2006; Fiorentina, 2021). Based on Oktavia (2014:191) explained that in the flypaper effect phenomenon there are irregularities in the relationship between central transfer and regional revenue, then when the government receives a grant, the local government will increase its expenditure (regional spending) without being accompanied by an increase in PAD. Budiarmo and Lembut (2013) explained that the conditions for the occurrence of this phenomenon are caused by:

1. There is a difference between the coefficients of DAU and PAD where in this difference DAU is more dominant than PAD.
2. There was no significance in the PAD variable.

Mindset

Figure 1. Mindset



RESEARCH METHODS

Types and Data Sources

This type of research is quantitative sourced from the APBD realization report obtained from the BPK RI representative office in North Maluku using data collection techniques in the form of documentation.

Research Population and Sample

This study was conducted in 10 regencies/cities in North Maluku Province using a saturated sample or census technique using all samples in the population.

Data Processing Engineering

This study aims to determine the indication of fiscal illusion through the flypaper effect and the comparison of *the cross-section effect* of each district/city as well as the value of the independent variable coefficient. In addition, it measures the influence of local revenue, general allocation funds and Revenue Sharing Funds on regional spending. For this reason, this study uses multiple linear regression techniques, with the Chow, Hausman, and LM tests to obtain a suitable model, classical assumption tests and Panel Data regression analysis tests using an analysis aid tool, namely Eviews 12 with the following equation model:

$$BDit = \alpha + \beta_1 PADit + \beta_2 DAUit + \beta_3 DBHit + \epsilon it$$

Information:

BDit = Regional expenditure (variable bound individual unit cross section for the period to time)

α = Constant

$\beta_1, \beta_2, \dots, \beta_n$ = Regression coefficient

PAD, OIL, DBHit = Variable free to- unit cross section for the period to time

ϵ = error term

RESULT

Table 3. Descriptive Statistical Analysis (*in millions of rupiah*)

Construct	Min.	Max.	M	SD
Regional Spending	510,211	1,585,860	863,553	218,405
Regional Original Income	8,848	146,600	54,905	35,651
General Allocation Fund	33,102	766,195	480,764	124,330
Profit Sharing Fund	15,328	371,760	82,657	78,388

Note. M = Mean, SD = Standard Deviation.

Based on table 3, Regional Expenditure (Y) has the lowest value of 510,211,617,874 and the highest value of 1,585,860,000,000. The lowest value of regional spending was owned by the Taliabu Island district in 2020 and the highest value was owned by South Halmahera district in 2022. The average sample of Regional Expenditure of districts/cities in North Maluku province is 863,553,538,131 with a standard deviation of 218,405,058,878.

Regional Original Revenue (X1) has the lowest value of 8,848,000,000 and the highest value of 146,600,000,000. The lowest value of PAD was owned by Taliabu Island in 2018 and the highest was owned by Central Halmahera district in 2022. The average sample size of PAD for districts/cities in North Maluku Province is 54,905,562,703 with a standard definition of 35,651,250,181.

The General Allocation Fund (X2) has the lowest value of 33,102,830,000 and the highest value of 766,195,544,000. The lowest value of DAU was owned by Taliabu Island district in 2020 and the highest value was owned by South Halmahera district in 2019.

The average sample size of district/city DAU in North Maluku province is 480,764,543,800 with a standard definition of 124,330,058,014.

The Profit Sharing Fund (X3) has the lowest value of 15,328,000,000 and the highest value of 371,760,000,000. The lowest value of DBH was owned by the City of Tidore Islands in 2019 and the highest value was owned by East Halmahera district in 2022. The average sample size of DBH in districts/cities in North Maluku province is 82,657,660,000 with a standard definition of 78,388,692,754.

Model Selection

In the results of the chow test, the probability of Cross-section F < 0.05 was obtained, which is 0.0010, so it can be concluded that the more appropriate model to use is the fixed effect model rather than the common effect model. In the table below, the results show a probability value of > 0.05, which is 0.0634, which shows that in this test, the more appropriate model to use is the random effect model.

Table 4. Chow Test and Hausman Test

Chow Test		Hausman Test	
Effects Test	Prob.	Test Summary	Prob.
Cross-section F	0.0010	Cross-section random	0.0634

Source: Eviews Data Processing Results 12, 2024

Based on the results of the chow test and the hausman test above, it can be concluded that this study is more appropriate to use a random effect model.

Classic Assumptions

1. Multicollinearity Test

The multicollinearity test aims to test the correlation between independent variables in a regression model. A good model should not have symptoms of multicollinearity. The problem of multicollinearity occurs when the correlation of the coefficient of the free variable > 0.8. From the results of the multicollinearity test in this study, there was no multicollinearity because the correlation value between independent variables was not more than 0.8.

Table 6. Multicollinearity Test

	PAD	DAU	DBH
PAD	1	0.362161	0.205075
DAU	0.362161	1	0.029117
DBH	0.205075	0.029117	1

Source: Eviews Data Processing Results 12, 2024

Hypothesis Testing

Table 7. Multiple Linear Regression Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	17.29109	1.499415	11.53189	0.0000
PAD	0.120122	0.030754	3.905907	0.0003
DAU	0.166330	0.047008	3.538365	0.0009
DBH	0.111270	0.022658	4.910885	0.0000
R-squared	0.548648			

Adjusted R-squared	0.519212
Prob(F-statistic)	0.000000

Source: Eviews Data Processing Results 12, 2024

Table 7 shows that the test results obtained from the probability value for the PAD variable (X1) of 0.0003 means less than or less than 0.05. The results show that the variable PAD (X1) has a positive effect on regional expenditure (Y), which means that the first hypothesis is accepted.

Furthermore, the results of the second hypothesis seen in table 8 above show that the probability value for the DAU variable (X2) is 0.0009, meaning that it is less than or less than 0.05. The results show that the DAU variable (X2) has a positive effect on regional expenditure (Y), which means that the second hypothesis is accepted.

The results of the third hypothesis seen in table 8 above show that the probability value for the DBH variable (X3) is 0.0000, meaning that it is less than or less than 0.05. The results show that the DBH variable (X3) has a positive effect on regional expenditure (Y), which means that the third hypothesis is accepted.

The fourth hypothesis can be seen in the comparison between the coefficient of the PAD and DAU variables in table 8. The results showed that the coefficient of the PAD variable (X1) of 0.120122 was smaller than the coefficient of the DAU variable (X2) of 0.166330. In addition, Pad (X1) has a positive and significant effect on regional spending. Then supported by the results of the analysis of the ratio calculation, this precipitated the regency/city in North Maluku province to experience the Flypaper effect phenomenon, which means that the fourth hypothesis is accepted.

Based on table 8 in the model 1 equation above, it can be seen that the adjusted R square value is 0.519212 or 51.92%. The results explained that the independent variables consisting of Regional Original Revenue, General Allocation Fund and Profit Sharing Fund were able to explain the regional expenditure variable by 51.92%, while the remaining 48.08% (100 – Adjusted R-squared value) were explained by other variables that were not included in this study.

Table 8. Cross-section Effect Analysis

It	Using DBH (PAD Coefficient Value = 0.12, DAU=0.16)		No DBH (PAD Coefficient Value = 0.14, DAU=0.17)	
	Regency/City	Effect	Regency/City	Effect
1	South Halmahera	0.153842	South Halmahera	0.163712
2	West Halmahera	0.097484	West Halmahera	0.055169
3	Tidore Islands City	0.008024	Morotai Island	-0.02145
4	Ternate City	0.00587	East Halmahera	-0.02245
5	Morotai Island	0.005286	North Halmahera	-0.02371
6	Sula Islands	-0.036542	Taliabu Island	-0.02419
7	North Halmahera	-0.042348	Tidore Islands City	-0.02581
8	Taliabu Island	-0.059798	Central Halmahera	-0.03096
9	East Halmahera	-0.063545	Ternate City	-0.03417

10	Central Halmahera	-0.068273	Sula Islands	-0.03615
----	-------------------	-----------	--------------	----------

Source: Eviews Data Processing Results 12, 2024

From the table above, you can see a comparison of the cross-section effect using and without DBH. The second test was carried out to see the effectiveness of the influence of DBH as a control variable on regional expenditure in each district/city. This is obtained from the value of the constant coefficient of each district/city in the cross-section random effect analysis, where the greater the influence value, the greater the level of influence of the independent variable on the dependent variable, and vice versa.

From the results of the cross-section random effect analysis above, it can be concluded that all districts/cities in North Maluku still have symptoms of the flypaper effect. However, the amount of effect obtained by each district/city varies. Central Halmahera, East Halmahera, Taliabu Island, North Halmahera, Sula Islands have a negative coefficient value (-), which indicates that these districts/cities have a smaller influence on measurements using DBH. Meanwhile, in the measurement test without DBH of the Sula Islands, Ternate City, Central Halmahera, Tidore Islands, Taliabu Island, North Halmahera, East Halmahera, Morotai Island had a small (negative) cross-section effect coefficient value. So that the influence obtained is smaller, so it indicates that the area does not depend on profit-sharing funds.

DISCUSSION

The Phenomenon of Fiscal Illusion in North Maluku Regencies/Cities

Fiscal lusi in North Maluku can include various aspects related to perceptions or beliefs that may not be in accordance with the actual economic reality. North Maluku has abundant natural resources, such as mineral or gas mines, local governments may have a tendency to assume that income from this sector is quite stable and can last in the long term. This can create the illusion that revenues from the mining sector can be the main source of regional revenues without considering the risk of fluctuations in commodity prices or policy changes that could affect those revenues. In addition, dependence on central transfer funds can also create fiscal illusions in North Maluku, this happens because the local government considers that transfer funds will continue or even increase from year to year, without considering the possibility of changes in national policies or unstable economic conditions. In addition, large investment is also a gap in the creation of fiscal illusions in North Maluku, Fiscal illusions can also arise when local governments expect massive investment in infrastructure projects or other developments to directly increase regional revenues. However, these projects may not always produce the expected economic impact or do not provide a suitable return on investment in the short term.

Regions that have a strong and stable PAD tend to be more independent in their fiscal management, and vice versa. Regions that have good PAD development planning can usually reduce the symptoms of fiscal illusion, so that the positive development of PAD can reduce the risk of fiscal illusion by increasing the financial independence of a region by strengthening and optimizing the leading sectors of each region. The following are the developments of the leading sectors in North Maluku districts/cities.

Table 7. Development of Regency/City Leading Sectors in North Maluku Province

It	Regency/City	Featured Sectors	Development (in billions)				
			2018	2019	2020	2021	2022
1	West Halmahera	Agriculture, Forestry, and Fisheries	812.74	862.14	900.89	955.13	1,011.16
2	Central Halmahera	Mining and Quarrying	394.54	417.60	540.07	2,347.91	6,090.24
		Processing Industry	227.78	147.49	841.88	5,289.73	12,799.17
3	Sula Islands	Agriculture, Forestry, and Fisheries	907.65	997.19	1,054.30	1,130.34	1,270.72
		Wholesale and Retail Trade; Car and Motorcycle Repair	343.29	379.95	362.67	378.70	407.83
		Government Administration, Defense and Compulsory Social Security	362.18	388.19	379.15	369.52	401.60
4	South Halmahera	Agriculture, Forestry, and Fisheries	1,668.36	1,724.16	1,751.38	1,821.65	2,000.21
		Mining and Quarrying	710.92	1,059.27	1,212.28	1,739.25	2,319.91
		Processing Industry	1,432.90	1,655.03	2,960.06	4,515.88	6,839.55
5	North Halmahera	Agriculture, Forestry, and Fisheries	1,204.15	1,277.82	1,327.17	1,386.39	1,427.46
		Mining and Quarrying	1,722.90	1,626.23	1,702.10	1,874.69	2,055.47
6	East Halmahera	Mining and Quarrying	954.69	1,090.30	1,113.13	1,419.40	1,515.34
		Agriculture, Forestry, and Fisheries	661.04	695.33	729.76	760.32	784.75
		Wholesale and Retail Trade; Car and Motorcycle Repair	423.07	455.15	458.82	480.93	521.84
7	Morotai Island	Agriculture, Forestry, and Fisheries	678.23	696.69	723.99	765.66	800.42
8	Taliabu Island	Agriculture, Forestry, and Fisheries	781.82	812.11	837.32	866.31	967.94
9	Ternate City	Construction	2,550.30	2,822.50	2,610.50	2,696.00	3,068.40
		Corporate Services	1,566.80	1,740.80	1,987.00	2,023.30	2,135.50
		Wholesale and Retail Trade; Car and Motorcycle Repair	1,611.20	1,772.00	1,378.10	1,410.10	1,822.80
		Provision of Accommodation and Meals	748.10	804.80	862.80	939.40	1,021.50
		Information and Communication	662.80	709.20	770.60	888.90	996.80
10	Tidore Islands City	Agriculture, Forestry, and Fisheries	648.56	691.56	708.10	739.96	781.57

It	Regency/City	Featured Sectors	Development (in billions)				
			2018	2019	2020	2021	2022
		Government Administration, Defense and Social Security	966.17	1,058.25	1,135.19	1,142.07	1,235.22

(Source: BPS Data Processing Results, 2024)

Based on the table above, regions with high revenues have superior sectors in mining and quarrying as well as in the processing industry. However, only Central Halmahera and South Halmahera districts are able to utilize and maximize the processing industry sector. This resulted in East Halmahera and North Halmahera districts experiencing a decrease in PAD. This means that the leading sectors in the area have not been able to boost other sectors.

In the Agriculture, Forestry, and Fisheries sectors, there was a steady increase, but in the overall development of PAD, the increase occurred only in South Halmahera Regency which has a consistent development trend increasing every year. Meanwhile, other districts that excel in this sector tend to experience increases and decreases and tend to be relatively stable. The decline occurred on average in 2020, where in that year PSBB (Large-Scale Social Restrictions) was imposed so that Covid-19 became an obstacle to development in this sector.

The government administration, defense and social security sectors are the flagship sectors of Sula Islands and Tidore Islands City. In this sector, the increase occurred in Tidore Islands City while in Sula Islands Regency experienced an increase and decrease so that its development tended to be less stable.

In the large and retail trade sectors; car and motorcycle repairs, there was an increase in Sula Islands Regency, and in the city of Ternate there was an increase and decrease which made the increase in this sector less stable. This triggered the instability of the development of PAD in Ternate City. However, the results experienced by Ternate City in the construction sector; service companies; provision of accommodation and meals; As well as, information and communication which have increased which tend to be stable. This is due to the fact that the sector is able to compete during the Covid-19 pandemic. Meanwhile, in the trade sector, large and retail trade; car and motorcycle repairs have not been able to be maximized.

In addition to optimizing revenue in the sectors that are favored in the area, local governments should try to grow and optimize other sectors so that economic growth increases in various sectors. This increase is the foundation of regional autonomy where the government is able to explore the sources of regional revenue. Regions that are able to have a better per capita income must have a positive PAD growth rate. So that economic growth in a region can have a positive influence. The ability of local governments to manage finances and optimize their regional revenue sources indicates that a region is becoming more independent or less dependent on the central government in responding to central transfers to regions.

The results of this study found that most of the North Maluku PAD revenues were supported by the processing and mining industry sectors, while other sectors experienced an increase that tended to be stable. However, the stability of the increase does not guarantee fiscal independence. Ideally, local governments should be able to use public funds to increase fiscal independence by stimulating growth in various sectors of the economy, rather than relying solely on the mining sector. However, in these cases,

inefficient allocation of funds or being stuck in the mining sector can be a paradox. Although this sector makes a significant economic contribution, there is no significant diversification in the use of public funds to drive overall economic growth in North Maluku.

In this context, the mining sector in North Maluku needs to be considered. The mining sector can make a significant contribution to the economic growth of a region, as happened in South Halmahera and Central Halmahera. For example, the revenue generated from the mining sector can increase national income and expand local employment. However, there is a risk that dependence on one particular sector of the economy (e.g., mining) could make regional economies more vulnerable to fluctuations in commodity prices or policy changes. Economic development and increasing allocation efficiency are potential solutions that must be implemented in districts/cities of North Maluku province, especially areas that have a leading sector of mineral mining. Local governments need to encourage economic diversification to reduce dependence on the mining sector. This can be done by allocating public funds for infrastructure to support other sectors such as tourism, agriculture, or the manufacturing industry, in addition, it is also necessary to improve the efficiency of the use of public funds in order to have a greater and sustainable impact on regional economic growth.

The Effect of Regional Original Revenue on Regional Expenditure

The results of hypothesis testing show that local revenue has an effect on regional spending. This shows that the higher the PAD in a region, the higher the regional expenditure. This means that the revenue obtained by the regency/city government in North Maluku Province is intended to finance part of regional expenditure for the implementation of development programs in the local government. so it can be said that the local government has tried to increase the source of regional revenue sourced from PAD.

The ability of the local government is the basis of regional autonomy where the government is able to explore the sources of regional revenue. Regions that are able to have a better per capita income must have a positive PAD growth rate. So that economic growth in a region can have a positive influence. The ability of local governments to manage finances and optimize their regional revenue sources indicates that a region is becoming more independent or less dependent on the central government in responding to central transfers to regions. This is in accordance with the goals of regional autonomy (Kuncoro, 2007).

The government policy is a reference to increase the amount of expenditure in the following year with a reference to increasing regional revenue. So that PAD revenue is very important as a component of the APBD. The optimization of PAD should be based on the potential of each region. So that it makes it easier for local governments to classify local government work programs. This potential is a strength that must be optimized in each region. In addition, development must also be in other sectors that have potential but have not been optimized. The development must be based on geographical factors, political factors, historical factors, social and economic factors. These factors result in the difference in the amount of PAD revenue in each region (Ardanawati et al., 2019).

Judging from the geographical factor, North Maluku is located in the Maluku archipelago, most of which is in the form of waters, allowing marine resources as a potential owned by each district/city in North Maluku Province. For historical factors, the Maluku Islands have been famous since the 14th century thanks to spices that are sought after all over the world. As for the social and economic factors of North Maluku, most of the people live in coastal areas and live as fishermen, besides that some people garden with spice

commodities such as nutmeg and cloves, copra farmers and the rest of the seasonal fruit commodities.

However, there are several districts that excel in the mineral mining sector, namely Central Halmahera, South Halmahera, North Halmahera and East Halmahera Regencies. Not a few have succeeded in optimizing the mining potential in the district, so that several districts can escape the symptoms of the flypaper effect and prove that they have successfully carried out the mandate of regional autonomy. However, it is feared that the area will again experience the symptoms of the flypaper effect if it is too dependent on the mining sector without digging and developing in other sectors. This is because the use of the mining sector is a limited resource, so it must have an alternative substitute as a reference for other superior potentials.

The results of this study are in line with what was researched by Nurhayati and Diana Septiana (2018); Purnomo (2010); Malik and Inuzula (2021); Indrasari and Kholvieyana (2021); Ardiansyah (2019); Citra and Jatmiko (2017) examined the influence of PAD on regional spending, the researchers found that PAD had a positive and significant effect on regional spending.

The Effect of General Allocation Funds on Regional Expenditure

The results of this study show that the General Allocation Fund has a positive and significant effect on regional spending. This shows that the higher the DAU allocated by the central government to the regions, the larger the portion of local government spending. This means that almost all district/city governments are still dominant in utilizing the DAU budget in efforts to fund salaries and allowances, local government operations, and improve public service facilities and infrastructure, both basic and general services.

This is because the dominance of DAU is higher than that of PAD which results in local governments prioritizing revenues sourced from DAU because the amount of PAD has not been able to work optimally because the potential of each region has not been properly utilized. This behavior is in accordance with the explanation of the bureaucratic model proposed by Niskanen (1971) maximizing the budget by bureaucrats who are more likely to spend transfer funds than increasing their local income.

However, this study found that the dominance of DAU occurred because regional needs exceeded the available regional revenue potential. However, if the distribution of DAU and its optimal utilization in managing the increase in regional revenue tends to be better than regions that do not have the ability to collect their revenue sources optimally. Thus, the core goal of PAD is to suppress DAU transfers so that the allocation of transfer funds can be gradually reduced in line with regional fiscal independence and ultimately be able to avoid the flypaper effect.

This research is in line with what was researched by Purnomo (2010); Dewi (2017); Citra and Jatmiko (2017); Nurhayati and Diana Septiana (2018); Ardiansyah (2019); Indrasari and Kholvieyana (2021); Rosmida (2022) found that general allocation funds have a positive effect on regional spending. This means that the larger the DAU, the higher the regional expenditure and vice versa, the lower the DAU, the more careful the government will be in utilizing the transfer funds in accordance with the fiscal needs of the region.

The Effect of Revenue Sharing Funds on Regional Expenditure

The results of this study show that profit-sharing funds have a positive and significant effect. This shows that the higher the DBH in a region, the higher the portion of regional

spending. The results of this discovery can also reduce the dominance of DAU on regional spending and also have the opportunity to suppress the symptoms of the flypaper effect. So that local governments can reduce their dependence on DAU budgeted by the central government.

The amount of DBH is received based on the amount of taxes, excise, and natural resources in the area which are deposited to the central government which is then returned to the region as a form of economic equity or regional autonomy. so that this results in the amount of DBH in each region is different because it is in accordance with the contribution of national revenue. The allocation of DBH makes recipients or producers who have greater tax/non-tax potential get a larger portion of the budget than other regions that have smaller potential.

The results of this study found that the allocation of DBH and optimizing the productivity of potential sources of local government revenue has the potential to have an impact on the level of independence of a region. The ability of local governments to manage finances and optimize their regional revenue sources indicates that a region is becoming more independent or less dependent on the central government in responding to central transfers to regions. This is in accordance with the goals of regional autonomy (Kuncoro, 2007).

The results of this study are in line with what was researched by Ardiansyah (2019), Amalia (2017), who found that profit-sharing funds have a positive effect on regional spending. This means that the larger the DBH, the higher the regional expenditure and vice versa, the lower the DBH, the more careful the government will be in using the transfer funds in accordance with the fiscal needs of the region. The results of this study also found that several districts/cities can suppress the dominance of DAU, especially in districts/cities that prioritize revenue in the mining sector. This is a novelty of previous research which found that DBH has no effect as stated by Rosmida (2022); Citra and Jatmiko (2017); Izzadieny (2019) and Ardanawati, et al (2019).

Regencies/cities in North Maluku experience the Flypaper Effect

The results of this study show that districts/cities in North Maluku experience flypaper effect symptoms . This is shown by the dominance of the DAU budget used by local governments rather than their own local revenue (comparison of the value of the DAU and PAD variable coefficients). This means that most districts/cities in North Maluku Province rely more on central transfers in the form of DAU than their PAD. This is based on the lack of optimal utilization of revenue sources that are considered potential and then the needs of each region that exceed the ability of local regional revenue, so it is very difficult if local governments are more inclined to utilize their PAD.

This finding is in line with the findings of Budiarto and Lembut (2013) on the first point regarding the conditions for the flypaper *effect* phenomenon, namely when the influence of DAU on regional spending is greater than that of PAD and both variables are equally significant. This means that when local governments experience dependence on receiving *grants* or grants, it causes a lack of motivation for local governments to optimize the resources available in their regions. This impact is due to deviations in the theory of unconditional government assistance, as stated by Rahmatul and Bustaman (2016) in (Fiorentina, 2021) that central transfers can actually increase consumption expenditure on public goods, but cannot increase regional taxes (PAD).

This behavior is in accordance with the fiscal illusion theory of Amilcare Puviani (1903), and the theory of the bureaucratic model of Niskanen (1971) which is the cause of the

flypapaer effect. The fiscal illusion occurs when decision-makers in a government create the illusion of financial arrangements by matching the work programs of local governments using priority scales. This action causes ignorance or indifference of the community regarding the decision. This usually happens if there is an increase in the amount of taxes paid by the community and is not balanced with the services provided by the local government, so that the response of the local government in closing the gap uses central transfer funds to meet the needs of the community in the form of regional spending.

Meanwhile, in the theory of the bureaucratic model, it occurs when transfer funds are maximized for satisfaction, including salaries, the number of employees, and social reputation. So that in practice a bureaucrat in the process of preparing a budget is more likely to produce goods and services that are larger than they should be and therefore inefficient in the use of the budget (Kusuma, 2017). In this model, *the flypaper effect* can occur because the power of government officials or local authorities understands the budget and government transfers. In fact, this model supports the flypaper effect, due to the actions of administrative staff who are free to spend money (regional spending) without developing the region's original revenue (investment).

CONCLUSION

Fiscal illusions in North Maluku can include a variety of aspects related to perceptions or beliefs that may not correspond to the actual economic reality. Revenue from the mining sector, dependence on central transfer funds, increased revenue from massive investment are gaps in the occurrence of fiscal illusions in districts/cities in North Maluku Province

Regional original revenue has a positive effect on regional spending, so it can be said that local governments have tried to increase regional revenue sources sourced from PAD which are intended to finance part of regional expenditures for the implementation of development programs in local governments.

General allocation funds have a positive effect on regional spending, this is because the dominance of DAU is higher than that of PAD which results in local governments prioritizing revenues sourced from DAU because the amount of PAD has not been able to work optimally because the potential of each region has not been properly utilized.

The profit-sharing fund has a positive effect on regional spending, this is because several districts/cities can suppress the dominance of DAU, especially in districts/cities that prioritize revenue in the mining sector.

There is a flypaper effect phenomenon in districts/cities in North Maluku Province, this is because the dominance of DAU is higher than that of PAD so that local governments are more dependent on the transfer funds. However, in this study, it was found that several districts/cities were predicted to be independent of the symptoms of the flypaper effect, namely Central Halmahera, South Halmahera and East Halmahera which were able to suppress the dominance of DAU by optimizing revenue in the mining sector.

LIMITATION

This study discusses the Fiscal Illusion: a regional paradox of mining resources case study in North Maluku regencies/cities, so it does not include the measure of the elasticity/response of regional spending to the general transfer of the central government

and PAD, the variables of economic growth in the regions to see the effectiveness of utilization and efficiency in the utilization of income in sectors in the regions, so it is recommended for future researchers to include these variables in this study. In this study, the data used is panel data with a time series in five years, so the data used has not yet described the results of comprehensive analysis and comparison related to regional original revenue, general allocation funds, profit-sharing funds and regional expenditures, so that in the future it is necessary to use a longer period of time to produce more comprehensive and accurate data.

CONFESSION

Thank you to all parties who provide assistance and support both directly and indirectly, so that the research can be completed. May God Almighty bless and repay every good thing done.

DECLARATION OF CONFLICT OF INTEREST

The authors do not have any conflict of interest with any party.

REFERENCE

- Ahmad, A. C., Efendi, N., Budiono, & Hadianito, F. (2024). Fiscal Transfer Redistribution and Regional Inequality Between Island and Non-Island Provinces in Indonesia. *Indonesian Interdisciplinary Journal of Sharia (IIJSE)*, Vol. 7 (2) 2523-2559.
- Amalia, R. (2017). Analysis of the Flypaper Effect on Fiscal Decentralization on Regency/City Regional Expenditure in East Java Province in 2010-2015. Malang: Thesis of Brawijaya University.
- Andriani, T., & Mahi, B. R. (2017). Regional Government Expenditure Efficiency and Its Impact on Regional Economic Growth in 2004-2013. *Journal of Economic Policy*, Vol 11. (1), 83 - 95.
- Ardiansyah. (2019). The Flypaper Effect Phenomenon on Government Regional Expenditure. *Indonesian Scientific Journal of Accounting and Finance*, Vol. 2 (2) 1-14.
- Armawaddin. (2015). Analysis of the Flypaper Effect on Regency/City Regional Expenditure in Southeast Sulawesi. *Journal of Development Economics*, Vol. 26, 13-19.
- Budiarso, N., & Lembut, A. K. (2013). Flypaper Effect on the General Allocation Fund (DAU) and Original Revenue on Regional Expenditure (Bd) in the North Sulawesi Provincial Government. *Journal of Accountability*, Vol. 2 (1), 1.
- Dewi, S. R. (2017). Flypaper Effect, PAD, DAU, DAK on Regional Spending in Regencies/Cities in Indonesia. *Journal Of Accounting Science*, Vol. 1 (2) 155-174.
- Dyahningtyas, R., Suharsih, S., & Hastuti, S. R. (2019). Regional Financial Performance and Detection of Fiscal Illusions in the Regional Government of Regency/City of the Special Region of Yogyakarta in 2010-2016. *Journal of Economics-Qu (Journal of Economic Sciences)*, Vol. 9 (1) 119-130.
- Fahriani, & Syafrudin, R. (2022). The Effect of Regional Original Revenue (PAD) and General Allocation Fund (DAU) as well as the analysis of the flypaper effect on regional spending. *JIEP: Journal of Economics and Development*, Vol. 5 (1) 42-52 .
- Fiorentina, A. (2021). The Effect of the Flypaper Effect and the Effectiveness of Regional Taxes on Regional Financial Independence. Tasikmalaya: Thesis of Siliwangi University.

- Hambali, I. R., & Naode, I. Y. (2019). Improvement of Village Productive Economy Through Village Funds. *International Journal of Applied Business & International Management (IJABIM)*, Vol. 4 (3) 104-112.
- Indrasari, A., & Kholvieyana, R. (2021). Flypaper Effect and Its Influence On Regional Expenditures, Especially on Regional Original Income (PAD) and General Allocation Funds (DAU). *Journal of Accounting and Auditing Research*, Vol. 8, (2), 1-13.
- Ishak, K., Arafah, R., & Hasnah, M. (2019). Flypaper Effect Of General Allocation Fund (Gaf) And Local Own-Source Revenue (Losr) Towards Regional Expenditure Of Parepare City. *Economos : Journal of Economics and Business*, Volume 2 (2) 51-57.
- Kurniati, H., & Devi, Y. (2022). The Effect of the Flypaper Effect on the General Allocation Fund and Regional Original Revenue on Regional Expenditure in Lampung Province in 2016-2019 in the Perspective of Islamic Economics. *Journal of Sharia Economics*, Vol. 7 (2) 187-208.
- Maimunah. (2006). Flypaper Effect on General Allocation Funds and Regional Original Revenue on Regional Expenditure in Regencies/Cities on Sumatra Island. *Journal of National Symposium on Accounting*.
- Malik, I., & Inuzula, L. (2021). Flypaper Effect on Regional Expenditure in Bireuen Regency. *Negotium: Journal of Business Administration Sciences*, Volume 4, No. 2, 192-216.
- Mardiasmo. (2001). Supervision, Control, and Inspection of Local Government Performance in the Implementation of Regional Autonomy. *Journal of Business and Accounting*, 3(2) 441-456.
- Mello Jr., L., & Barenstein, M. (2001). Fiscal Decentralization and Governance: "A Cross-Country Analysis". *IMF: Washington DC*.
- Nurhayati, & Septiana, D. (2018). Flypaper Effect on Provincial Government Regional Expenditure on the Island of Sumatra. *Economic Media*, Vol. 26 (2) 111-120.
- Oktavia, D. (2014). Flypaper Effect: Serial Phenomenon of Time and Across Urban Regencies in East Java 2003-2013. *Journal of Accounting, University of Jember*, 12(2) 191.
- Government Regulation Number 12 of 2019 concerning Regional Financial Management
- Rosmida. (2022). Flypaper Effect on Regional Expenditure in City Regencies in North Maluku Province in 2015-2020. Ternate: Thesis of Khairun University Ternate.
- Rumawir, J. (2019). The Implementation of Harrod-Domar Economic Growth Model in North Sulawesi, Indonesia. *International Journal of Applied Business & International Management (IJABIM)*, Vol. 4 (1) 19-30.
- Safitri, S. (2016). History of the Development of Regional Autonomy in Indonesia. *Journal of Criksetra*, Vol. 5(9) 79-83.
- Saipuloh, T. I. (2023). The Effect of Audit Findings, Local Government Losses, and Follow-up of Audit Recommendations on the Public Services Quality Through the Audit Opinion of Local Government Financial Statements in Sulawesi. *International Journal of Applied Business and International Management (IJABIM)*, Vol. 8 (3) 1-6.
- Suparmoko, M., 2002. Assessment of Natural Resources and Environment (Concept and Calculation Method) of *BPEF-Yogyakarta Publisher*.
- Tuaputimain, Y. (2019). Flypaper Effect on The General Allocation Funds And Regional Revenue To Regional Expenditure. *Gorontalo Accounting Journal*, Vol. 2 (2) 65-76.
- Law No. 23 of 2014 Article 1 Paragraph (6) concerning Regional Government