

Resource Boom and Fiscal Dependence in an Archipelagic Province: Evidence from North Maluku, Indonesia

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Abstract

This study aims to identify and interpret the paradox between exports, GRDP, and fiscal capacity in island provinces, which has not been widely researched in Indonesian fiscal literature. This study uses a quantitative descriptive analysis approach based on official secondary data, including the North Maluku Provincial Economic Report (Bank Indonesia, August 2025 edition) and the Regional Fiscal Review (KFR) for the first quarter of 2025 (Ministry of Finance). All data were analyzed at the quarterly level (Q1-Q2 2025) and compared with national economic performance to provide a comparative context. This study found several findings. First, North Maluku's economic growth in 2025 confirms the central role of nickel downstreaming as the driving force behind the GRDP. Economic dependence on the mining and manufacturing sectors dominates the economic structure, shifting the contribution of the agricultural industry and the role of domestic consumption. Second, a comparative analysis between exports and GRDP reveals structural imbalances. The phenomenon of exports exceeding GRDP indicates a very high level of economic openness as well as excessive dependence on global markets. Third, the gap becomes even more apparent when comparing exports with regional fiscal capacity. This fact confirms that, despite North Maluku being the center of Indonesia's nickel exports, the budgetary benefits received by the region are minimal. These findings support Lewis' (2023) criticism of Indonesia's weak fiscal decentralization, as well as the conclusions from Ahmad et al. (2024) that island provinces receive a smaller share of transfers due to a land-biased formula. Fourth, high logistics costs, market fragmentation between islands, and the concentration of growth in large industrial areas have widened the gap between regions. Small islands continue to face high prices for necessities and limited fiscal capacity, despite collectively recording large export surpluses. The results of this study confirm that North Maluku faces a double paradox: it is an "export giant" but "fiscally weak." Spectacular economic growth due to nickel downstreaming has not translated into fiscal independence and inclusive prosperity. Therefore, there is a need for national fiscal policy reforms that are more equitable for the islands, an increase in the share of mining revenue, diversification of the local revenue base, and downstreaming policies that are more integrated with local socio-economic needs. Without these measures, North Maluku risks being trapped in an island version of the resource curse.

Keywords: *Resource boom; Fiscal dependency; Archipelagic economy; Revenue Sharing Fund (DBH); Nickel downstreaming; Fiscal inequality.*

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INTRODUCTION

The mineral downstreaming policy (Law 3/2020) marks a new milestone in the transformation from an agrarian economy to an industrial economy in regions rich in natural resources in Indonesia, including North Maluku, which requires businesses to increase added value through the construction of smelters and a ban on the export of raw minerals. Its implementation since January 1, 2020, has triggered a massive influx of foreign direct investment (FDI) into the Weda Bay Industrial Park (IWIP) and several other smelters. The Ministry of Energy and Mineral Resources notes that total investment in the mineral sector in North Maluku will reach IDR 55 trillion by the end of 2024, making North Maluku province the epicenter of national nickel downstreaming.

This investment flow has not only increased nickel production capacity but also driven the expansion of downstream processing industries such as nickel matte, mixed hydroxide precipitate (MHP), and nickel sulfate, which are linked to the global electric vehicle supply chain. The flow of capital-intensive investment has implications for economic restructuring. Bank Indonesia data indicate a shift in 2020–2024, with North Maluku's GRDP growth increasing at an average rate of more than 20% per year until 2024. This surge in growth is supported by two main sectors, namely mining and quarrying, and manufacturing. Before 2020, the agriculture, forestry, and fisheries sectors still contributed the most to North Maluku's GRDP, but after downstreaming, the economic structure shifted dramatically. In 2024, the contribution of the manufacturing industry is expected to reach nearly 40% of the GRDP, while agriculture is projected to decline to around 10%, marking a fundamental shift from an agrarian economy to an extractive and downstream industry-based economy.

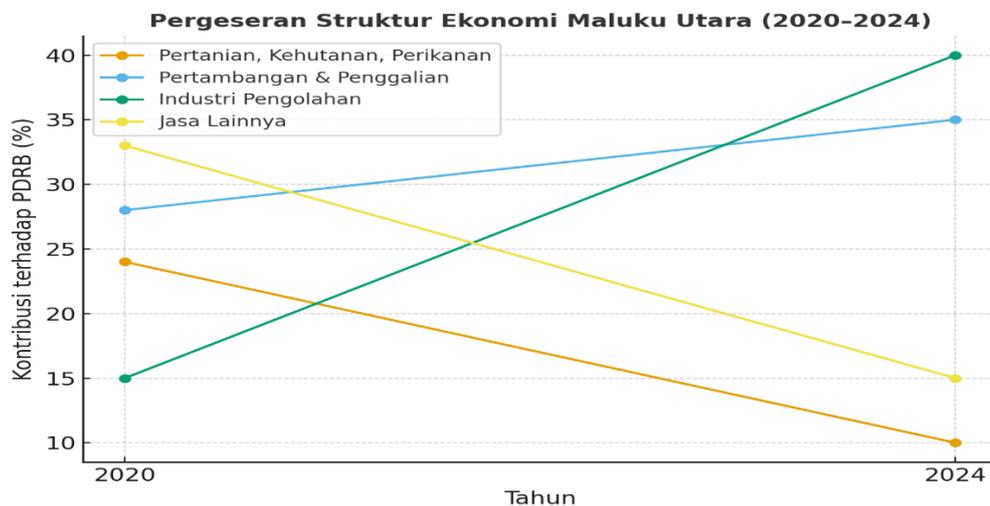


Figure 1. Graph of Economic Structure Shift in North Maluku, 2020-2024

Source: Processed data, 2025

This economic structural change has had dual implications. On the one hand, downstreaming has successfully placed North Maluku on the national economic stage as the province with the highest growth. However, on the other hand, the dominance of mining and the mining industry has created a new dependence on

global commodities and eroded the traditional agricultural base that previously supported food security and local employment.

This structural transformation reveals the paradoxical face of an “industrialized periphery”: regions rich in natural resources are growing rapidly but face the risks of resource dependence and the unsustainability of the primary sector. Regional fiscal capacity reflects the ability of local governments to finance development needs with their own sources of revenue, primarily from local revenue, plus a portion of central government transfers (DBH).

High fiscal capacity means that regions are more independent and less dependent on central transfers. According to Bahl & Linn (1992), a region's fiscal capacity is determined by its economic base; the more substantial the GDP growth, the greater the local fiscal potential through taxation and levies. The theoretical relationship between development and fiscal capacity, as explained by Musgrave (1959), is that the fiscal function of local governments is greatly influenced by revenue capacity. Economic growth expands the tax base, thereby increasing PAD. Meanwhile, according to Oates (1972), fiscal federalism theory suggests that decentralization is effective when regions have adequate fiscal capacity, one source of which is local economic growth. Rodden (2006, Fiscal Dependency Theory) reinforces this point, stating that without economic growth, regions fall into soft budget constraints, depending on central government transfers.

Empirical evidence from the results of research on the impact of economic growth on PAD increases, as presented in Arwati & Kuncoro (2020, Economic Modelling), a panel data study in Indonesia, suggests that GRDP growth has a significant positive effect on PAD, particularly on local taxes. However, the effect is more potent in developed provinces (Java, Sumatra) than in eastern provinces (Maluku, Papua). Prakoso et al. (2021, International Journal of Public Administration) show that the elasticity of PAD to GRDP in Indonesia ranges from 0.6 to 0.8, meaning that a 1% increase in the economy's growth rate increases PAD by approximately 0.6 to 0.8%. In line with the views of Arwin & Kuncoro, the phenomenon in North Maluku, which recorded a double-digit growth rate and the highest growth in Southeast Asia (World Bank, 2024), did not have a significant impact on increasing PAD, and its fiscal capacity remains in the moderate category. This is supported by the results of research by Resosudarmo & Vidyattama (2021, Regional Science Policy & Practice), which explains that in provinces rich in natural resources (Riau, East Kalimantan), high GRDP does not automatically increase PAD proportionally because the economic base is dominated by the mining sector, which contributes little to PAD. While Haley & Tsur (2022, Resources Policy) emphasize that the resource curse effect on natural resource-based growth creates fiscal inequality because more revenue goes to the central government's DBH (revenue sharing) rather than to regional PAD.

Growth & Fiscal Transfer, from the findings of Rinaldi & Sutopo (2023), found that rapid economic growth in the islands (North Maluku, Central Sulawesi) increased public spending needs faster than the increase in PAD. Fiscal capacity remained fragile, dependent on DAU and DAK. In line with the findings of the World Bank (2024), even though growth in North Maluku is >20% (due to nickel downstreaming), the ratio of PAD to total regional revenue is still <10%. This indicates that growth does not automatically increase fiscal capacity unless it is accompanied by regional tax reform. The phenomenon of abundant natural

resources not accompanied by widespread prosperity is known as the resource curse (Auty, 2020; Sachs & Warner, 1995). The case of North Maluku serves as a reminder of this paradox: a booming economy, yet high dependence on central government transfers. The purpose of this study is to explore this relationship and review the implications for fiscal policy in island provinces.

The resource curse was first proposed by Auty (1993; Frankel, 2010) as a paradox: great natural resource wealth is often accompanied by low economic growth due to economic and institutional channels (e.g., currency appreciation or unproductive investment). Recent empirical studies have yielded mixed results. In Indonesia, Hilmawan and Clark (2021) report that resource dependence at the district level is positively correlated with economic growth, with institutional quality serving as a mediator. However, the case of island provinces may be unique due to geographical factors. Ahmad et al. (2024) show that fiscal transfers to island provinces are relatively low due to a land area-based allocation formula. The lack of infrastructure transfer funds (DAK) and revenue sharing (DBH) can exacerbate fiscal inequality.

Perez-Sebastian and Raveh (2016) even found that fiscal decentralization without stabilizing mechanisms can deepen inequality in resource-rich regions. Lewis (2023) highlights that Indonesia's Fiscal Decentralization Law reform has not fully addressed regional income inequality. Local studies (e.g., Jambi: Ariansyah et al., 2014) demonstrate that low PAD leads to high dependence on the central government. In the context of North Maluku, low PAD despite high growth raises concerns about the Dutch disease effect (decline in the non-nickel sector) and social conflict (inequality between regions) (Sovacool et al., 2024). This underscores the importance of proactive policies, such as establishing a resource reserve fund, increasing local tax capacity (Ministry of Finance, 2023), and enhancing the transparency of transfer distribution. This study takes a systematic approach to examine the latest regional data within the framework of these theories.

Fiscal Capacity and Disparities

The fiscal capacity of a region is primarily measured by the local government's ability to generate revenue through PAD (Local Own-Source Revenue) and a portion of DBH (Revenue Sharing Fund). However, fiscal capacity does not solely reflect the wealth of natural resources owned. Kuncoro & Ariefianto (2021, Regional Studies) emphasize that regions rich in natural resources do not automatically have high fiscal capacity because DBH revenue is highly dependent on global commodity price fluctuations. This phenomenon is particularly relevant to North Maluku, which has experienced remarkable growth in the last three years due to a surge in nickel smelter investment. Although the gross regional domestic product (GRDP) has increased sharply, regional fiscal revenue remains unstable because it depends on DBH, which is tied to the international nickel price cycle. Thus, resource-based economic expansion does not necessarily increase long-term fiscal capacity.

Dependence on DBH also poses fiscal risks. Commodity price fluctuations make regional fiscal capacity vulnerable to erosion during downturns. In North Maluku, when nickel prices decline, the direct impact is felt in DBH revenue, while public spending must continue. This reinforces the argument that SDA-based fiscal capacity creates dangerous fiscal vulnerability, especially in island regions that already face higher development costs than mainland regions.

Within the framework of fiscal federalism theory, Rodden (2006, *Fiscal Federalism*) introduced the concept of fiscal gap theory, which posits that a gap exists between a region's fiscal capacity and its spending needs. This gap must be closed through central transfers. In Indonesia, the most severe fiscal gap is found in island regions, including North Maluku. A relatively small PAD is unable to cover expenditure needs that increase in line with population growth, multi-island infrastructure development, and the high Construction Cost Index (CCI). This situation shows that without significant central transfers, development in North Maluku will be hampered.

This fiscal disparity problem widens the gap between regions. Continental regions, such as East Java, can rely on PAD for more than 30% of their regional income, while North Maluku has around 7–8%. This condition shows structural asymmetry: island regions with high expenditure burdens actually have weak fiscal bases. In line with this, research by Resosudarmo & Vidyattama (2021, *Regional Science Policy & Practice*) found that growth in regions rich in natural resources, such as North Maluku, is not sufficient to reduce disparities because fiscal capacity remains low. This means that natural resource-based development in the islands tends to create growth without fiscal independence. Fiscal capacity and disparities in island regions cannot be understood solely from the perspective of PAD + DBH. There needs to be an affirmative fiscal transfer policy that considers the costs of multi-island public services, geographical remoteness, and the volatility of natural resource revenues. Without this, North Maluku and other island provinces will continue to be trapped in fiscal dependency, with fiscal disparities widening compared to continental regions.

Fiscal Burden of the Islands

The fiscal needs of island regions are structurally higher than those of mainland regions. Firman (2020, *Habitat International*) emphasizes that the cost of basic infrastructure development in Eastern Indonesia can be 30–40% more expensive than in Java. The primary reason for this is inter-island transportation, which incurs additional logistics costs, ranging from the delivery of construction materials to the distribution of goods and services. For North Maluku, this condition is clearly evident in the construction of roads, connecting bridges, and public facilities on small islands such as Hiri, Bacan, or Morotai, where procurement and distribution costs are consistently higher than the national standard. The fiscal vulnerability of island regions also stems from their geographical characteristics, which necessitate that local governments provide public services across multiple islands. Budiati et al. (2021, *Marine Policy*) emphasize the structural disadvantage for regional governments in island regions, noting that the cost of public services in the education, health, and logistics sectors is significantly higher because every inhabited island requires schools, health facilities, and a minimum level of transportation. North Maluku, with over 800 islands, faces a fiscal dilemma where the population on many islands is relatively small, yet infrastructure and services must still be provided. This creates a fiscal diseconomy of scale that is not experienced by continental regions.

An empirical indicator of the heavier fiscal burden in the islands can be seen from the Construction Cost Index (IKK). The World Bank (2024, *Indonesia Public Expenditure Review*) notes that the IKK in Papua, Maluku, and NTT reaches >1.2,

while in Java it is only around 1.0. This means that every Rp1 billion spent in Java is equivalent to Rp1.2–1.4 billion in Papua or Maluku to produce the same physical output. For North Maluku, the high IKK indicates that, despite increased regional budgets and central government transfers, real fiscal capacity continues to be eroded by higher construction costs. In other words, under the same nominal conditions, North Maluku gets “less value for money” compared to the continental provinces.

This fact reinforces the argument that the national fiscal transfer formula, which excludes the IKK variable and the number of inhabited islands, is biased against the interests of island regions. Although transfer funds have increased in aggregate, the real needs of regions such as North Maluku are often not met because the cost of public services exceeds the national standard. This explains why, despite North Maluku's highest national economic growth over the last five years, the quality of basic infrastructure and public services still lags behind that of mainland provinces. The implication is that without affirmative fiscal policy design, island regions such as North Maluku will continue to face fiscal stress. The high costs of development and public services will make their real fiscal capacity lower than their nominal capacity. Therefore, reforming the fiscal transfer formula to integrate the IKK factor, the number of inhabited islands, and logistics costs is a strong academic argument for addressing the structural fiscal problems of island nations.

Fiscal disparities in Indonesia stem not only from economic capacity inequalities but are also greatly influenced by geographical factors. Resosudarmo & Vidyattama (2021, *Regional Science Policy & Practice*) show that island provinces with high GRDP still face low fiscal capacity because their fiscal costs are more expensive than those of continental regions. North Maluku is a notable example: GRDP growth has exceeded 20% per year due to nickel downstreaming, but the region's fiscal capacity has not increased proportionally. This occurs because high logistics and construction costs cause most public spending to be drained to cover basic development costs, resulting in a narrower real fiscal space compared to continental provinces. Thus, high growth does not necessarily reduce fiscal disparities when geographical factors become a structural burden.

This problem is exacerbated by the design of the national fiscal transfer formula, which is still biased towards the mainland. Sodik et al. (2023, *Bulletin of Indonesian Economic Studies*) emphasize that Indonesia's DAU formula is still based on variables such as population, land area, and poverty rate. Key variables such as the number of inhabited islands, sea area, and construction cost index are not taken into account at all. As a result, the fiscal needs of island regions are systematically underestimated, causing them to remain underdeveloped despite receiving large transfers. North Maluku, with more than 800 inhabited islands, does not receive proportional fiscal recognition for the cost of public services, which is much more expensive than in mainland provinces.

The bias in the fiscal formula is also evident in the Village Fund. Rinaldi & Sutopo (2023, *Journal of Asian Public Policy*) criticize that the allocation of the Village Fund is based entirely on population size and poverty levels. This creates structural injustice: an island village with only 200 inhabitants on a small island receives a lower allocation than a mainland village with thousands of inhabitants, even though the cost of public services in island villages is higher due to their geographical remoteness and the associated high logistics costs. This phenomenon exacerbates the underdevelopment of island villages in North Maluku, where small-

scale and isolated communities mean that the transfers received are insufficient to meet their real needs.

It can be concluded that the fiscal transfer formula, which does not account for the island factor, exacerbates the horizontal fiscal disparity between provinces. Mainland provinces with substantial local revenue and low development costs are becoming increasingly independent, while island provinces remain dependent on transfers. This reinforces the academic argument that Indonesia's current fiscal policy is not yet entirely aligned with its constitutional status as an archipelagic state. This confirms the need for reform of the fiscal transfer formula based on island groups, rather than solely on population and land area. By including variables such as the number of inhabited islands, sea area, and construction cost index, fiscal transfers can better reflect the real needs of island regions. In the context of North Maluku, this reform is urgent in order to bridge the gap between high economic growth and low fiscal capacity, while strengthening the principle of fiscal justice between regions.

Fiscal Under-Service in Island Regions

The limitations of the national fiscal formula, which is biased towards mainland areas, have direct implications for what is known as fiscal under-service in island regions. Kawung et al. (2022, *Asian Journal of Comparative Politics*) assert that the design of Indonesia's fiscal transfer formula actually creates a double burden for island provinces. First, their own-source revenue tends to be small due to a narrow tax base, especially in areas with populations scattered across small islands that lack extensive formal economic activity. Second, although transfers from the center are substantial in nominal terms, the formula does not account for variables such as the number of islands and sea area, resulting in real fiscal needs not being accurately reflected in budget allocations.

This phenomenon is clearly evident in North Maluku. With more than 800 islands, many of which have a population of only a few hundred, the potential for local taxation is minimal. Local taxes are generally collected primarily from the urban sectors in Ternate or Tidore, while other island regions contribute almost nothing to local revenue. Meanwhile, fiscal transfers distributed based on population and land area are unable to cover the costs of inter-island public services. As a result, local governments struggle to provide equitable basic services, such as inter-island sea transportation, secondary schools on remote islands, or health centers with permanent medical staff. This condition of fiscal under-service further exacerbates regional welfare disparities. Mainland provinces with strong PAD and appropriate transfer formulas can finance public services more efficiently, while island provinces such as North Maluku continue to struggle with budget constraints. This creates structural injustice in which regions with heavier fiscal burdens receive relatively less fiscal support in real terms.

Conceptually, this phenomenon demonstrates the failure of the principle of fiscal equity. As Musgrave (1959) emphasized, one of the primary functions of public finance is distribution, specifically ensuring the equitable allocation of resources among regions. However, in practice, Indonesia's fiscal transfer allocation ignores the disparities in service costs between regions, resulting in systematic underservice in the islands. The academic argument is that reforming the fiscal transfer formula is not only a matter of increasing the amount of funds, but also of redefining the allocation variables to suit the real needs of an archipelagic country. Without this,

regions such as North Maluku will continue to be trapped in a cycle of fiscal dependence and limited public services, despite experiencing rapid economic growth due to the expansion of the nickel industry.

METHODOLOGY

This study employs a quantitative descriptive analysis approach, utilizing official secondary data. The primary data sources include the North Maluku Province Economic Report (Bank Indonesia, August 2025 edition) and the Regional Fiscal Review (KFR) for the first quarter of 2025 (Ministry of Finance). Macroeconomic data were obtained from the Central Statistics Agency (GRDP by industry and expenditure) and APBD performance data (local revenue, central transfers, and local expenditure) from the Ministry of Finance. All data were analyzed quarterly (Q1–Q2 2025) and compared with national economic performance to provide a comparative context.

A descriptive approach was chosen for two main reasons. First, regional fiscal and economic data are aggregate and limited to specific periods, making descriptive analysis more suitable for describing trends and structural imbalances. Second, the purpose of this study is exploratory, namely to identify and interpret the paradox between exports, GRDP, and fiscal capacity in island provinces, which has not been widely studied in Indonesian fiscal literature. The descriptive method allows researchers to highlight extreme empirical phenomena, such as exports that exceed GRDP and are thousands of times greater than DBH, and to interpret their implications through a conceptual framework.

The analysis was conducted in the form of quantitative comparisons using graphs, ratios, and contribution tables to assess the proportion of exports to GRDP, the contribution of the regional budget (APBD) to GRDP, and the disparity between exports and DBH in the mining sector. The empirical findings were then interpreted through relevant theoretical frameworks, including the resource curse literature (Auty, 2020), fiscal decentralization in developing countries (Lewis, 2023; Hilmawan & Clark, 2021), and the concept of archipelago economics (Kusumastanto, 2020). The study seeks not only to describe the empirical conditions but also to make a conceptual contribution to the discourse on fiscal governance in archipelagic countries.

RESULTS AND DISCUSSION

The economic dynamics of North Maluku in 2025 exhibit a distinct pattern for an archipelagic province experiencing a commodity boom. Bank Indonesia data shows that the gross regional domestic product (GRDP) based on current prices reached Rp28.7 trillion in the first quarter of 2025 and increased to Rp31.5 trillion in the second quarter of 2025.

Table 1. Development of Exports, GRDP, and APBD, Q1 and Q2, 2025

Description	Export	GRDP	Realization of APBD
Quarter-1 2025	Rp 47.9 trillion	Rp 28,7 trillion	Rp 4,05 trillion
Quarter-2 2025	Rp 55,1 trillion	Rp 31,5 trillion	Rp 4,20 trillion

Source: Processed data, 2025

This increase is in line with nickel downstreaming activities, which are the main driver of the economy. The relatively high quarter-on-quarter GDP growth indicates that Maluku Utara occupies a unique position as the epicenter of national growth, with the manufacturing and mining sectors serving as the primary drivers.

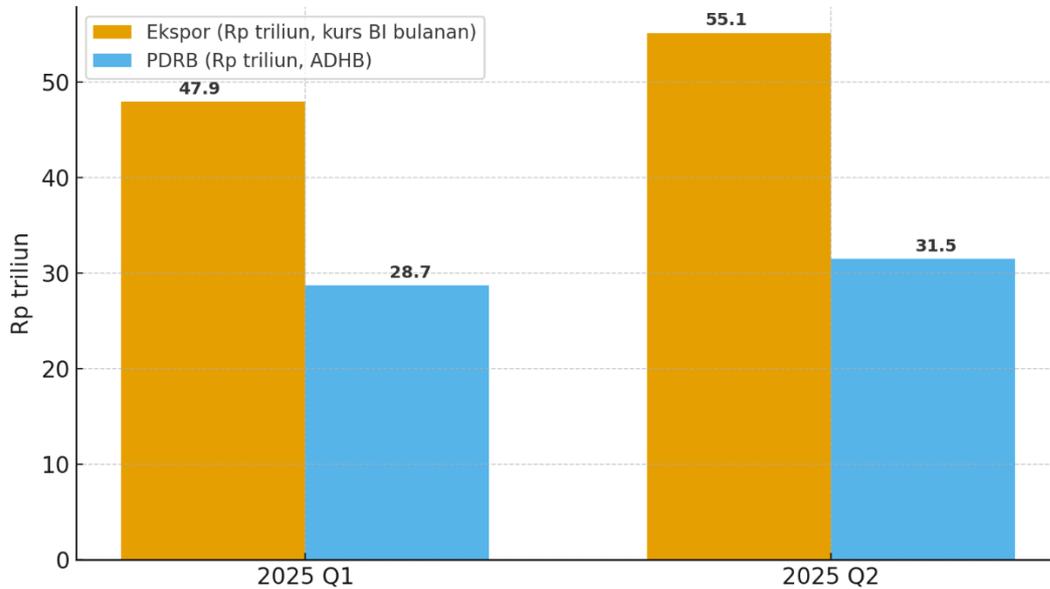


Figure 2. Graph Comparison of Export Value and North Maluku GRDP in Q1 and Q2, 2025

Source: Processed data, 2025

From the graph, when compared with export data, a more striking fact emerges. The value of North Maluku's exports, calculated based on Bank Indonesia's monthly middle rate in the first quarter, reached Rp47.9 trillion, or 166.7% of the total GRDP (Rp28.7 trillion). In contrast, in the second quarter, the value of exports increased to Rp55.1 trillion, equivalent to 175% of the GRDP (Rp31.5 trillion).

This phenomenon illustrates that North Maluku's economy is "driven from outside" rather than by domestic production capacity, which can be explained in the framework of open economy dependence (Salvatore, 2016), where excessive dependence on exports makes the economic structure highly vulnerable to external fluctuations. In research findings (Auty, 2020), explaining the resource curse, this situation shows "over-exposure" to commodities, where exports that exceed GRDP do not automatically increase local economic capacity.

The gap between export value and GRDP has important implications for understanding regional fiscal matters. In regional economic theory, if the export value is much greater than the GRDP, there is a strong indication that most of the added value from these exports is not recorded or absorbed in the domestic economy of Maluku Utara. Most of the profits, dividends, and revenues actually flow out of the region, either to the central government or to foreign investors. This situation reflects a fiscal version of the resource curse phenomenon, where mineral resource wealth is not proportional to improvements in the fiscal and social welfare of the local community. Meanwhile, the comparison between exports and the regional budget (APBD) confirms the deepening regional fiscal paradox. In the first quarter of 2025, the APBD realization was only Rp. 4.05 trillion, or around 14.1% of the GRDP.

When compared to exports, the value is only about 8.4% of the total export value. A similar condition occurred in the second quarter, where the APBD of Rp. 4.20 trillion was only 13.3% of the GRDP and equivalent to 7.6% of exports. In other words, the value of North Maluku's exports is about 7-8 times greater than the region's fiscal capacity.

This finding reveals a large gap between external economic performance and internal fiscal capacity, in line with Lewis' (2023) finding that Indonesia's fiscal decentralization has failed to strengthen the fiscal base of resource-rich regions. From a fiscal perspective, this condition is further exacerbated by the low performance of Local Own-Source Revenue (PAD). The Regional Fiscal Review Report (Ministry of Finance, 2025) shows that the share of PAD in the North Maluku Regional Budget (APBD) structure is still below 10%, while more than 90% of regional revenue depends on central transfers, mainly the General Allocation Fund (DAU) and the Nickel Revenue Sharing Fund (DBH). This means that, despite North Maluku's export value in the first half of 2025 exceeding Rp100 trillion, the actual contribution to regional coffers was minimal. This gap creates a fiscal paradox: the highest economic growth nationally, but weak regional fiscal capacity.

The gap becomes even more extreme when comparing exports with the mining sector's Revenue Sharing Fund (DBH). In the two quarters of 2025, the export value was 23,965–27,565 times greater than the mining DBH revenue (only Rp0.2 trillion per quarter). This fact shows that, despite Maluku Utara being the backbone of Indonesia's nickel exports, the fiscal revenue returning to the region is minimal. A study by Perez-Sebastian and Raveh (2016) proves that without a fair fiscal distribution mechanism, decentralization actually widens the gap between resource-rich regions and local communities that receive few benefits. This is particularly relevant to North Maluku, where the downstream nickel industry generates huge foreign exchange earnings, but regional revenue is not commensurate.

Disparities between exports, GRDP, APBD, and DBH are analyzed from the perspective of island provinces. Ahmad et al. (2024) assert that Indonesia's fiscal transfer formula is land-biased, resulting in island provinces receiving a relatively small share of transfers, despite their higher logistics and development costs. This explains why North Maluku's APBD is relatively small compared to its exports, not due to a lack of potential, but rather because of the limitations of fiscal decentralization policies that fail to account for the geographical characteristics of the islands. These findings are also in line with Kusumastanto's (2020) study in Marine Policy, which emphasizes the importance of the maritime dimension in designing fiscal policies for island countries.

From a policy perspective, both theoretically and empirically, these findings underscore the importance of fiscal reform based on spatial and sectoral justice. Exports that exceed the GRDP indicate extraordinary economic potential; however, if they generate a regional budget equivalent to only 8% of exports, then the benefits of growth are not inclusive. More specifically, the gap between exports and DBH indicates a weak fiscal distribution mechanism in producing regions. Therefore, policies are needed to strengthen PAD through environmental levies and local royalties, as well as improvements to the TKD formula to make it more archipelago-sensitive. Without these steps, North Maluku will continue to face a paradox: becoming a national “export giant” but “small” in terms of regional fiscal capacity.

CONCLUSION

The results of this study reveal several key findings. First, North Maluku's economic growth in 2025 confirms the central role of nickel downstreaming as the driving force behind the GRDP. Bank Indonesia data shows that in the first and second quarters of 2025, the GRDP (ADHB) reached Rp28.7 trillion and Rp31.5 trillion, respectively, with the highest growth rate in the country. However, these findings also confirm the economy's dependence on the mining and processing industries, which dominate the economic structure and shift the contribution of the agricultural sector and domestic consumption.

Second, a comparative analysis between exports and GRDP reveals structural imbalances. The value of exports in the first quarter was Rp47.9 trillion (166.7% of GRDP) and in the second quarter was Rp55.1 trillion (175% of GRDP). The phenomenon of exports exceeding GDP indicates a very high level of economic openness, as well as excessive dependence on global markets. This aligns with the resource curse theory (Auty, 2020) and the study by Sovacool et al. (2024), which suggests that commodity-based growth often fails to create a multiplier effect in the local economy.

Third, the gap becomes even more apparent when comparing exports with regional fiscal capacity. The realization of the regional budget is only Rp4.05–4.20 trillion, or around 13–14% of GRDP, and less than 10% of the value of exports. Even more extreme, the value of exports is 23,965–27,565 times greater than the DBH of the mining sector (Rp0.2 trillion per quarter). This fact confirms that, despite North Maluku being the center of Indonesia's nickel exports, the fiscal benefits received by the region are minimal. These findings support Lewis's (2023) criticism of Indonesia's weak fiscal decentralization, as well as the findings of Ahmad et al. (2024) that island provinces receive a smaller share of transfers due to a land-biased formula.

Fourth, from an archipelagic economic perspective, this phenomenon reinforces the urgency of archipelago economics (Kusumastanto, 2020). High logistics costs, market fragmentation between islands, and the concentration of growth in large industrial areas have widened the regional disparity. Small islands continue to face high prices for necessities and limited fiscal capacity, despite the province as a whole recording a substantial export surplus.

Fifth, overall, this analysis concludes that North Maluku faces a double paradox: it is an "export giant" but "fiscally weak." Spectacular economic growth due to nickel downstreaming has not translated into fiscal independence and inclusive prosperity. Therefore, there is a need for national fiscal policy reforms that are more equitable for the islands, an increase in the share of mining revenue, diversification of the local revenue base, and downstreaming policies that are more integrated with local socio-economic needs. Without these measures, North Maluku risks being trapped in an island version of the resource curse.

Policy Recommendations

- Archipelago-Sensitive Fiscal Transfer Formula (TKD) Reform. The current transfer formula remains land-biased (Ahmad et al., 2024), resulting in relatively small transfers for island provinces such as North Maluku, despite significantly higher logistics costs. The central government needs to adopt archipelago variables (number of inhabited islands, maritime logistics costs, inter-island disparities) in the calculation of the General Allocation Fund (DAU)

and the Special Allocation Fund (DAK). This will increase the fiscal capacity of regions to finance basic public services in coastal areas and small islands.

- Increase in the Share of Mining Revenue Sharing (DBH). The extreme imbalance between exports (Rp55.1 trillion in Q2 2025) and mining DBH (only Rp0.2 trillion per quarter) highlights the weakness of the redistribution mechanism. The central government needs to increase the share of nickel DBH for producing regions, at least 3–5 times the current level. In addition, an earmarked DBH scheme is needed for social infrastructure (health, education, and clean water) around mining areas, so that local communities directly benefit from the exports.
- Diversification of Local Own-Source Revenue (PAD) The PAD of North Maluku is still stagnant at <10% of total revenue. Local governments can expand their tax base through:
 - Environmental taxes and mining levies, based on social and ecological impacts.
 - Port logistics fees integrated with the sea toll system.
 - Digital tax innovations for online MSMEs and marine tourism services.
 - This diversification will reduce dependence on TKD and strengthen regional fiscal independence.
- Establishment of a Resource Reserve Fund. To mitigate the impact of global nickel price fluctuations, North Maluku should establish a Regional Nickel Reserve Fund, similar to the Petroleum Fund in Timor-Leste. This fund will be allocated from DBH surpluses and a portion of PAD to finance long-term development, education, and socio-economic risk mitigation in the event of commodity price declines. Thus, global market volatility will not directly affect the regional budget.
- Strengthening the Inclusive Economy on Small Islands. The current surge in exports is concentrated in the Weda Bay industrial area, while other islands continue to lag. Local governments should promote maritime-based economies, including fisheries, marine tourism, and agro-maritime industries. Island-based affirmative fiscal programs can be implemented through special maritime DAK (Regional Development Fund) for sea transportation infrastructure, public docks, and digital connectivity. This will narrow the gap between islands in North Maluku..
- Integration of National-Regional Policies for Sustainable Downstreaming. Nickel downstreaming policies have driven GRDP growth, but must be integrated with fiscal strategies. The central government needs to develop an inclusive downstreaming roadmap, in which mining companies are required to partner with local cooperatives, channel fiscal-based CSR (e.g., additional local taxes), and report value-added contributions transparently. This aligns with Polanyi's (1944) theory of embedded markets, which emphasizes that markets must be grounded in social institutions.

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