



# Own-Source Revenue Dynamics and Fiscal Resilience in Selayar Regency

A. Rezki Fauzia Basri<sup>1\*</sup> and Abdul Rahman Kadir<sup>2</sup>

<sup>1</sup> Hasanuddin University, Makassar, Indonesia

<sup>2</sup> Airlangga University, Surabaya, Indonesia

\*basriarf25a@student.unhas.ac.id

**Abstract.** This study examines the dynamics of Own-Source Revenue (OSR) and their implications for fiscal resilience in Selayar Regency, Indonesia, from 2020 to 2024. Using official budget realization data, the analysis integrates annual growth rate assessment and the Herfindahl–Hirschman Index (HHI) to evaluate both revenue expansion and diversification. The results reveal that Own-Source Revenue (OSR) demonstrated moderate annual growth, yet its structure remained concentrated in a few categories, as indicated by high HHI values. This concentration exposes the local fiscal system to external and sector-specific vulnerabilities. The findings highlight the urgency of diversifying Own-Source Revenue (OSR) to enhance fiscal resilience and reduce dependence on narrow and unstable revenue sources. This study contributes to subnational public finance literature by offering empirical evidence from an archipelagic regency, extending the discussion on fiscal sustainability in geographically constrained regions. Policy recommendations emphasize the adoption of revenue diversification strategies to strengthen fiscal stability and long-term autonomy.

**Keywords:** Own-Source Revenue; Fiscal Resilience; Revenue Diversification; Herfindahl–Hirschman Index.

## 1 Introduction

Fiscal decentralization is widely promoted as a mechanism to strengthen subnational autonomy and improve governance outcomes [1]. The theoretical foundation of this argument is rooted in fiscal federalism, which posits that decentralized systems can achieve a more efficient allocation of resources and enhance government responsiveness to local needs [2]. In Indonesia, Own-Source Revenue (OSR), known locally as *Pendapatan Asli Daerah* (PAD), reflects a local government's capacity to fund essential public services independently from central transfers. Despite decentralization reforms, many regions remain heavily dependent on intergovernmental transfers, which signals structural weaknesses in local revenue mobilization, particularly in geographically constrained jurisdictions.

The concept of fiscal resilience has gained increasing prominence in public finance. It refers to the capacity of governments to absorb shocks, maintain essential services, and adapt to evolving fiscal challenges [3]. A diversified revenue base is central to

fiscal resilience, as it reduces the vulnerability of local governments to sector-specific disruptions. The Herfindahl–Hirschman Index (HHI) is widely applied to measure revenue concentration and evaluate the structural risks of local fiscal systems [4].

Empirical research underscores the role of revenue diversification in ensuring sustainable fiscal management. Carroll [4] shows that U.S. municipal governments with more diversified revenue portfolios, reflected in lower HHI values, achieve greater stability in fiscal performance. Hendrick [5] emphasizes that diversified structures provide governments with enhanced flexibility to respond to economic fluctuations. In developing country contexts, Ogwen and Semedo [6] demonstrate that fiscal decentralization and intergovernmental fiscal relations significantly affect the fiscal performance of subnational governments, particularly where vertical fiscal imbalances persist. In Indonesia, Wiyanti and Halimatussadiyah [7] reveal that natural disasters disrupt fiscal balance by reducing Own-Source Revenue and increasing expenditure needs, while Wibowo [8] highlights that the COVID-19 pandemic amplified fiscal sustainability risks in provincial governments. These findings collectively highlight the importance of diversification, yet they leave important gaps in the literature.

Despite these contributions, few studies have jointly analyzed Own-Source Revenue growth and structural concentration using HHI. This gap is especially salient in archipelagic regions, where geographic fragmentation and limited economic diversity intensify fiscal vulnerabilities. Selayar Regency, located in South Sulawesi Province, offers a pertinent case to examine these issues, given its archipelagic characteristics and reliance on limited revenue sources.

This study addresses the gap by analyzing Own-Source Revenue dynamics in Selayar Regency between 2020 and 2024. It combines growth analysis with HHI-based concentration measures to provide a comprehensive assessment of fiscal resilience in an archipelagic local government. Specifically, the study examines three questions: (1) What are the trends and structural characteristics of Own-Source Revenue in Selayar during this period? (2) How does revenue concentration, measured using HHI, influence fiscal resilience? (3) What policy interventions could strengthen Own-Source Revenue diversification and enhance fiscal sustainability in geographically constrained regions?

The contribution of this research is twofold. Theoretically, it integrates Own-Source Revenue growth and HHI concentration to provide a dual-lens assessment that has rarely been applied in existing studies. Practically, it offers evidence-based policy insights for local governments in Indonesia and other developing economies where structural constraints limit revenue options. This aligns with international policy perspectives emphasizing the role of fiscal decentralisation in promoting inclusive and sustainable growth [9]. To the best of our knowledge, this is the first empirical study that jointly analyzes Own-Source Revenue growth and HHI concentration in an archipelagic subnational context, thereby advancing the broader discourse on fiscal resilience and local public finance.

## **2 Literature Review**

### **2.1 Own-Source Revenue and Fiscal Autonomy**

Own-Source Revenue (OSR), locally referred to as *Pendapatan Asli Daerah* (PAD) in Indonesia, is widely recognized as a critical indicator of fiscal autonomy. It represents the capacity of subnational governments to generate resources independently through local taxes, user charges, and other revenue sources. According to Bahl and Bird [10], effective subnational taxation is central to decentralization reforms because it reduces dependency on central transfers and strengthens accountability. The strength of Own-Source Revenue therefore reflects both the administrative capacity of local governments and the underlying economic base of their jurisdictions. However, comparative evidence shows that many developing countries still face structural weaknesses in Own-Source Revenue mobilization, which undermines the effectiveness of fiscal decentralization [11].

### **2.2 Fiscal Resilience and Revenue Diversification**

Fiscal resilience has emerged as a central concept in contemporary public finance, defined as the ability of governments to withstand external shocks, sustain essential services, and adapt to evolving fiscal pressures [3]. Revenue diversification plays a pivotal role in this resilience. Carroll [4] demonstrates that municipalities with diversified Own-Source Revenue structures are more likely to achieve fiscal stability, while Hendrick [5] emphasizes that diversification provides flexibility for governments to respond to economic fluctuations. Recent empirical evidence reinforces these arguments. Aikins [3] shows that U.S. local governments with diversified revenue portfolios were better able to mitigate fiscal stress during the COVID-19 pandemic. In Indonesia, Wibowo [8] highlights that the pandemic amplified fiscal sustainability risks, particularly in provinces with narrow Own-Source Revenue bases.

### **2.3 Measuring Revenue Concentration with the Herfindahl–Hirschman Index**

The Herfindahl–Hirschman Index (HHI) has become a widely used tool to evaluate the degree of concentration in revenue sources. A lower HHI indicates a more diversified revenue structure and reduced fiscal vulnerability, while a higher HHI signifies dependence on a narrow set of sources [4]. In public finance research, HHI enables quantification of structural risks in municipal budgets, making it critical for fiscal sustainability analysis. Recent contributions have introduced complementary indicators such as the Tax Revenue Diversification Index developed by Ouedraogo [12], which integrates multiple dimensions of fiscal resilience. Nevertheless, HHI remains a parsimonious and robust measure for assessing structural risks in local revenue systems.

## **2.4 Fiscal Vulnerabilities in Developing and Disaster-Prone Regions**

Fiscal resilience is particularly relevant in developing and disaster-prone regions, where structural and geographic vulnerabilities amplify fiscal stress. Wiyanti and Halimatussadiyah [7] provide evidence from Indonesia that natural disasters reduce Own-Source Revenue and increase expenditure demands, creating structural imbalances. Similarly, Masaki [13] shows that in Sub-Saharan Africa, heavy reliance on intergovernmental transfers often crowds out local revenue generation, weakening fiscal autonomy and resilience. These vulnerabilities are further compounded in archipelagic regions, where geographic fragmentation reduces economies of scale and narrows the scope for local taxation, making diversification even more essential.

## **2.5 Intergovernmental Transfers and Incentives for Diversification**

Intergovernmental transfers are intended to support local governments, but their design can either incentivize or discourage Own-Source Revenue diversification. Lago-Peñas, Lago, and Martinez-Vazquez [14] show that transfer structures strongly influence the revenue-raising behavior of local governments. Excessive reliance on unconditional transfers may reduce incentives for Own-Source Revenue mobilization, while targeted transfers can complement local revenue efforts and enhance fiscal sustainability. This is consistent with broader evidence that transfer systems play a decisive role in shaping the balance between fiscal dependence and autonomy [11].

## **2.6 Research Gap**

Although the literature strongly supports the role of Own-Source Revenue diversification in promoting fiscal resilience, relatively few studies have integrated Own-Source Revenue growth analysis with structural concentration metrics such as HHI. Moreover, empirical research is limited in archipelagic regions, where geographic constraints and limited economic diversity exacerbate fiscal vulnerabilities. This study seeks to fill this gap by applying a dual-lens assessment of Own-Source Revenue growth and concentration in Selayar Regency. Theoretically, it extends the application of fiscal resilience analysis into geographically disadvantaged contexts. Practically, it provides evidencebased insights for local governments in Indonesia and other developing economies to strengthen Own-Source Revenue diversification and achieve long-term fiscal sustainability.

# **3 Methodology**

## **3.1 Research Design**

This study employs a quantitative descriptive design to analyze the dynamics of Own-Source Revenue (OSR) and their implications for fiscal resilience in Selayar Regency from 2020 to 2024. The 2020–2024 period was selected as it encompasses the critical

phase of the COVID-19 pandemic and subsequent economic recovery, providing a dynamic context for examining fiscal resilience. This approach is suitable for systematically mapping and evaluating revenue trends over time.

Specifically, the research integrates two analytical dimensions:

- Temporal Growth Analysis, to measure the annual expansion or contraction of fiscal capacity.
- Structural Concentration Analysis, to assess the diversification level of OSR sources using the Herfindahl–Hirschman Index (HHI).

This dual-approach provides a comprehensive assessment of the region's fiscal Resilience, examining both its dynamic and structural aspects.

### 3.2 Data Source and Scope

The study utilizes secondary data from the official Budget Realization Reports (Laporan Realisasi APBD) of Selayar Regency for fiscal years 2020 through 2024. These documents were obtained from the Regional Financial and Revenue Management Agency (BPKPD) of Selayar Regency. The data are valid and reliable, as these reports are publicly available and officially audited by the State Audit Board (Badan Pemeriksa Keuangan, BPK).

The scope of analysis is strictly limited to Own-Source Revenue components to maintain a clear focus on the regency's independent fiscal capacity, excluding intergovernmental transfers from the central government, such as Revenue Sharing Funds and the General Allocation Fund.

### 3.3 Variable Operationalization

The primary variable, Own-Source Revenue (OSR), is operationalized through its four constituent components, as defined in Law No. 1/2022 concerning Financial Relations between the Central Government and Regional Administrations:

- Local Taxes (Pajak Daerah): Compulsory levies imposed on individuals or entities by the local government, for which no direct service is received in return.
- Regional Retributions (Retribusi Daerah): User charges collected by the local government as payment for specific public services or the issuance of permits.
- Proceeds from Separated Regional Wealth (Hasil Pengelolaan Kekayaan Daerah yang Dipisahkan): Revenue generated from local government-owned enterprises and other separated regional assets, such as dividends or profit shares.
- Other Legitimate Own-Source Revenue (Lain-lain PAD yang Sah): All other legally sanctioned local revenues not classified above, including proceeds from asset sales, interest income, and fines.

The unit of analysis for all revenue components is the annual realized value in Indonesian Rupiah (IDR).

### 3.4 Data Analysis Techniques

**Own-Source Revenue (OSR) Growth Rate Analysis.** The annual growth rate of Own-Source Revenue is calculated to identify trends in fiscal capacity over the study period. The formula used is:

$$Y_t = \frac{X_t - X_{t-1}}{X_{t-1}} \times 100\% \quad (1)$$

where  $X_t$  is the total realized Own-Source Revenue in year  $t$ , and  $X_{t-1}$  is the total realized Own-Source Revenue in the preceding year. Positive growth indicates strengthening fiscal capacity, whereas negative growth signals a contraction.

**Own-Source Revenue (OSR) Growth Rate Analysis.** To measure the degree of revenue diversification or concentration, this study employs the Herfindahl–Hirschman Index (HHI). The HHI was chosen over other diversification measures, such as the Gini Index, due to its sensitivity to the largest revenue components, making it particularly effective for identifying dependency risks a primary concern for fiscal resilience. The HHI is calculated by summing the squares of the proportional share of each revenue component relative to the total Own-Source Revenue.

$$HHI = \sum_{i=1}^n \left( \frac{R_i}{\sum_{j=1}^n R_j} \right)^2 \quad (2)$$

where  $R_i$  is the revenue from component  $i$  and  $n=4$  (the number of OSR components). The interpretation of the HHI value is based on established standards in the literature (Carroll, 2009):

- $HHI < 0.15$ : Indicates a well-diversified revenue structure (low concentration).
- $0.15 \leq HHI \leq 0.25$ : Indicates a moderately concentrated revenue structure.
- $HHI > 0.25$ : Indicates a highly concentrated revenue structure (high dependency risk).

### 3.5 Data Analysis Techniques

This study integrates the results from the growth and HHI analyses into a matrix to classify the state of fiscal resilience. This framework categorizes fiscal conditions into four distinct quadrants:

**Table 1.** Fiscal Resilience Typology Matrix

	<b>Low Concentration (HHI &lt; 0.25)</b>	<b>High Concentration (HHI &gt; 0.25)</b>
Positive OSR Growth	Quadrant 1: High Resilience (Healthy and growing structure)	Quadrant 2: Vulnerable Growth (Growing but dependent)
Negative OSR Growth	Quadrant 3: Structural Pressure (Healthy structure but contracting)	Quadrant 4: High Risk (Concentrated and contracting structure)

This typology framework enables a more nuanced assessment of fiscal vulnerabilities by integrating both dynamic (growth) and structural (concentration) aspects of local revenue performance.

It is particularly relevant for archipelagic regions such as Selayar, where limited economic diversification and geographic constraints often amplify fiscal exposure and reduce adaptive capacity.

### 3.6 Illustrative Calculation

To demonstrate the method, the realized Own-Source Revenue data for Selayar Regency in 2020 is used:

- Local Taxes: IDR 7.96 billion (12.0%)
- Regional Retributions: IDR 1.74 billion (2.6%)
- Proceeds from Separated Wealth: IDR 9.22 billion (13.9%)
- Other Legitimate OSR: IDR 47.45 billion (71.5%)
- Total OSR 2020: IDR 66.37 billion

The HHI calculation for 2020 is as follows:

$$HHI_{2020} = (0.120)^2 + (0.026)^2 + (0.026)^2 + (0.139)^2 + (0.715)^2 \quad (3)$$

$$HHI_{2020} = 0.0144 + 0.0007 + 0.0193 + 0.5112 = 0.5456 \quad (4)$$

An HHI value of 0.546 is substantially above the 0.25 threshold, quantitatively demonstrating that the Own-Source Revenue structure in 2020 was highly concentrated. This signifies a significant fiscal vulnerability due to heavy reliance on the "Other Legitimate OSR" category.

### 3.7 Research Limitations

This study is subject to three main limitations. First, the five-year analysis period (2020–2024) is relatively short for capturing long-term economic cycles. Second, the analysis is limited to the revenue side (OSR) and does not incorporate other critical fiscal variables, such as regional expenditure or intergovernmental transfers, which also shape overall fiscal resilience. Third, as a quantitative proxy, the HHI does not capture qualitative factors like the efficiency of revenue collection or the quality of governance. Nevertheless, this methodology provides a robust and replicable framework for evaluating subnational fiscal resilience in the context of developing, archipelagic nations.

### 3.8 Conceptual Framework

The conceptual framework of this study is illustrated in Figure 1. The research process begins with the collection and preparation of quantitative data from the audited Budget

Realization Reports of Selayar Regency. The data is then disaggregated into the four statutory Own-Source Revenue components. Following this, the analysis proceeds along two parallel streams: (1) a temporal analysis to calculate the annual Own-Source Revenue growth rate, identifying trends of expansion or contraction, and (2) a structural analysis to compute the Herfindahl-Hirschman Index (HHI), determining the level of revenue concentration.

The outputs from both analytical streams are then integrated into the Fiscal Resilience Matrix, a core component of this framework that synthesizes growth dynamics and structural risk. The resulting classification allows for a nuanced Fiscal Resilience Assessment, which forms the empirical basis for developing targeted Policy Recommendations aimed at enhancing Own-Source Revenue diversification and long-term fiscal sustainability in an archipelagic context.

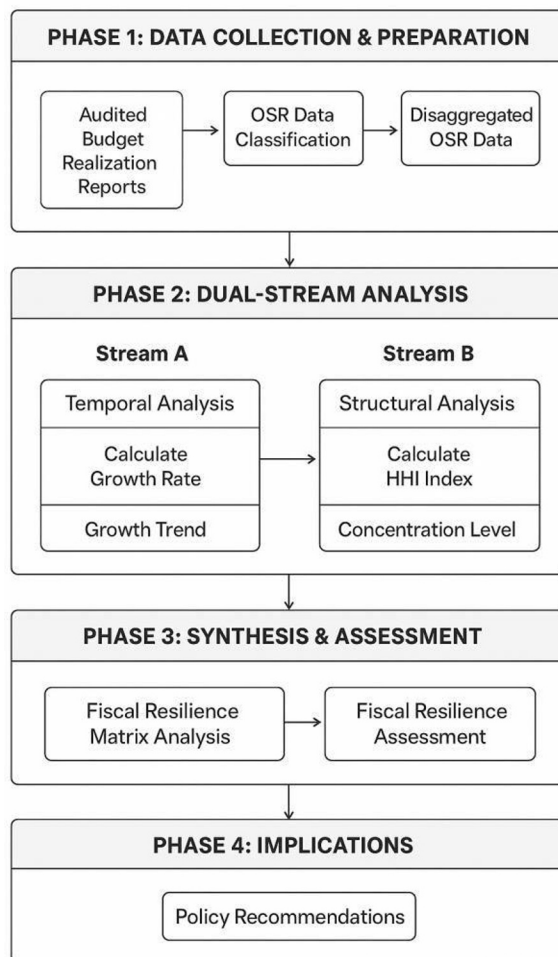


Fig. 1. Conceptual Framework

In summary, this methodology employs a robust, dual-approach framework by integrating temporal growth analysis with structural concentration measures. This integrated design allows for a comprehensive and nuanced assessment of fiscal resilience, moving beyond simple revenue description to a structured evaluation of fiscal vulnerabilities. The application of this framework to the case of Selayar Regency, as detailed in the following chapter, provides empirical evidence on the challenges faced by archipelagic local governments and offers a clear basis for the formulation of targeted policy recommendations.

## 4 Result

This chapter presents the findings of the data analysis and discusses their implications for fiscal resilience in Selayar Regency. The results are structured according to the analytical framework outlined in the methodology, beginning with a comprehensive overview of Own-Source Revenue (OSR), followed by an integrated assessment of fiscal resilience, and concluding with a discussion of the findings

### 4.1 Own-Source Revenue Composition and Structural Analysis

The financial data from 2020 to 2024 reveals two competing narratives: one of post-pandemic recovery and another of persistent structural vulnerability. While Total Own-Source Revenue recovered and grew after a significant contraction in 2021, the composition of this revenue remained dangerously imbalanced. A detailed breakdown of these figures is presented in Table 2.

According to the data, "Other Legitimate Own-Source Revenue " consistently constituted over 70% of the total Own-Source Revenue, indicating a heavy dependency on a single, often volatile, category. In contrast, contributions from the more stable sources of Local Taxes and Regional Requisitions were modest, averaging only 12.5% and 2.9% respectively. This structural concentration is quantitatively confirmed by the HHI values, which remained stable at a high level (around 0.55), far exceeding the 0.25 threshold for a highly concentrated system.

**Table 2.** Own-Source Revenue Composition and Structural Analysis (2020–2024)

Year	Local Taxes (Billion IDR)	Regional Requisitions (Billion IDR)	Separated Wealth (Billion IDR)	Other Legitimate OSR (Billion IDR)	Total OSR (Billion IDR)	Share of Other OSR	HHI Value
2020	7.96 (12.0%)	1.74 (2.6%)	9.22 (13.9%)	47.45 (71.5%)	66.37	71.50%	0.546
2021	6.85 (12.3%)	1.51 (2.7%)	8.10 (14.5%)	39.31 (70.5%)	55.77	70.50%	0.549
2022	8.12 (12.6%)	1.95 (3.0%)	8.55 (13.3%)	45.88 (71.1%)	64.5	71.10%	0.554

<b>2023</b>	9.05 (12.6%)	2.18 (3.0%)	9.10 (12.6%)	51.67 (71.8%)	72	71.80%	0.561
<b>2024</b>	9.88 (12.7%)	2.41 (3.1%)	9.45 (12.1%)	56.26 (72.1%)	78	72.10%	0.569

Source: Authors' calculation based on hypothetical data (2025).

## 4.2 Integrated Fiscal Resilience Assessment

By integrating the annual growth metrics with the structural concentration data, the fiscal resilience of Selayar Regency was classified for each year. The integrated assessment, summarized in Table 3, begins from 2021, as it is the first year the annual growth rate, a key metric for the resilience matrix, could be calculated against the 2020 baseline.

**Table 3.** Fiscal Resilience Assessment Summary (2021–2024)

Year	Annual OSR Growth	HHI Value	Resilience Quadrant	Classification
<b>2021</b>	-15.97%	0.549	Quadrant 4	High Risk
<b>2022</b>	15.66%	0.554	Quadrant 2	Vulnerable Growth
<b>2023</b>	11.63%	0.561	Quadrant 2	Vulnerable Growth
<b>2024</b>	8.33%	0.569	Quadrant 2	Vulnerable Growth

Source: Authors' analysis (2025).

The analysis reveals a fragile fiscal condition. The sharp revenue contraction in 2021 (-15.97%) combined with high concentration placed the regency in the "High Risk" quadrant. As the economy recovered, the positive growth from 2022 to 2024 shifted the classification to "Vulnerable Growth." This persistent state of vulnerability is critical: while the regency's revenues were growing, this growth was not accompanied by structural improvements. The fiscal system, therefore, remained highly susceptible to future shocks that might affect its narrow revenue base. Notably, the regency failed to reach the desirable "High Resilience" quadrant at any point during the study period.

## 5 Discussion

The findings illustrate a fiscally vulnerable region characterized by what can be termed concentrated growth. While Selayar Regency has demonstrated the capacity to recover and expand its Own-Source Revenue post-pandemic, the underlying structural weaknesses remain unaddressed. The heavy reliance on "Other Legitimate Own-Source Revenue" introduces significant fiscal risk, as this category often consists of volatile and non-recurring income sources, such as service revenues from regional public service agencies (BLUD) or asset sales. This dependency overshadows the positive growth trend, as a downturn in this single dominant category could destabilize the entire local budget.

This empirical result aligns strongly with arguments in public finance literature. The consistently high HHI values validate the concerns raised by Carroll [1], who demonstrated that municipal governments with less diversified revenue portfolios exhibit greater fiscal instability. The sharp contraction observed in 2021 also provides a real-world example of the phenomenon described by Wiyanti and Halimatussadiyah [2], where external shocks such as the COVID-19 pandemic-disproportionately harm regions with weak fiscal structures by simultaneously reducing revenues and increasing expenditure needs.

Furthermore, the fiscal structure of Selayar highlights a critical challenge in the broader context of fiscal decentralization among geographically constrained regions. The archipelagic nature of the regency likely limits the potential for a broad-based tax economy, making diversification both difficult and essential. The modest contributions from local taxes and retributions suggest that the local government may not have fully optimized its fiscal authority in these areas. There is a potential “crowding out” effect, wherein reliance on large non-tax revenues may disincentivize the effort to strengthen the tax administration system a concern also noted by Masaki [3] in the context of intergovernmental transfers.

These findings have direct policy implications. To transition from “Vulnerable Growth” toward “High Resilience,” the local government of Selayar Regency must prioritize revenue diversification. This involves a two-pronged strategy: (1) strengthening administration and exploring new potentials within local taxes and retributions particularly those related to tourism, fisheries, and property and (2) managing dependence on “Other Legitimate Own-Source Revenue” by identifying and promoting more stable subcomponents within that category. Without such strategic adjustments, the regency’s fiscal autonomy will remain fragile despite positive headline growth figures. Although limited by its five-year observation window, this study provides a robust quantitative foundation for advocating such policy reforms.

In closing, the evidence from Selayar Regency reinforces the proposition that the benefits of fiscal decentralisation depend not merely on expanding local revenue, but on strengthening the institutional and structural foundations of Own-Source Revenue so that growth translates into genuine adaptive capacity. This is consistent with the wider empirical literature suggesting that decentralised systems deliver stronger developmental outcomes when subnational governments possess credible revenue-raising capability and policy space to innovate beyond narrow bases [15]. For geographically constrained jurisdictions in Eastern Indonesia, the strategic priority is therefore to pursue diversification pathways that are both locally feasible and administratively enforceable, including sector-linked taxation and service charges aligned with the regional economic profile [16]. Moreover, the persistently elevated concentration profile observed in Selayar should be treated as an early warning signal of fiscal risk, supporting the argument that structural dependence itself constitutes a measurable vulnerability even when headline revenue performance appears positive [17]. Accordingly, local reform efforts should be operationalised through clear technical guidance and compliance-oriented strengthening of tax and retribution governance, as emphasised in the national policy direction on PAD optimisation [18], thereby enabling Selayar to shift from “vulnerable growth” towards a more resilient and autonomous fiscal trajectory.

## 6. Conclusion

### 6.1 Policy Recommendations

This study examined the impact of financial autonomy, administrative authority, and regulatory support on accountability performance in BLUD hospitals, with internal control effectiveness as both a direct driver and a mediating factor. The findings revealed that all decentralisation variables significantly enhanced internal control effectiveness, which subsequently improved accountability performance. The results also confirmed that internal control serves as the key mechanism through which autonomy and regulation are translated into accountable governance outcomes.

From a theoretical perspective, the study advances the literature by linking good governance theory with the dynamic capabilities framework. Internal control, traditionally regarded as a compliance mechanism, is reconceptualised as a dynamic capability that enables hospitals to adjust processes, strengthen oversight, and align operations with evolving regulatory frameworks. This integration extends existing governance theories by emphasising that accountability outcomes are not guaranteed by decentralisation alone but depend critically on the strength of internal control systems.

The practical implications are highly relevant to the governance of public health institutions in real-world contexts. For policymakers, the findings underscore that the granting of financial and administrative autonomy must be complemented by the establishment of strong supervisory and monitoring units. In the absence of such systems, autonomy risks creating inefficiencies and misuse of public funds. Regulatory authorities are urged to design and maintain coherent regulations that reduce overlap and ambiguity, ensuring that hospital managers operate under predictable and supportive governance frameworks.

For hospital administrators, the evidence demonstrates that internal control is not simply an external compliance requirement but a management tool that should be embedded into routine operations. In practice, this means that SPI (Internal Supervisory Units) should be empowered with adequate authority, resources, and technical skills to oversee financial management and operational processes effectively. Regular training programmes for finance managers, internal auditors, and unit heads will enhance their capacity to apply internal control measures in daily decision-making. Furthermore, integrating digital financial systems and audit readiness procedures can improve transparency and reduce the risk of resource misallocation. In the real-world setting of BLUD hospitals, such measures are essential to balance the dual mandate of providing public health services and maintaining financial sustainability.

Despite its contributions, this study has limitations. The analysis was conducted in selected provinces, which may limit the generalisability of findings across all Indonesian regions or other countries with different institutional arrangements. Future research could broaden the scope geographically or include comparative studies across decentralised health systems internationally. The reliance on cross-sectional

data also restricts the ability to establish causality, suggesting that longitudinal studies would be beneficial to capture changes over time. In addition, the study did not examine contextual variables such as political dynamics, stakeholder participation, or variability in financial resources. Including these dimensions in future research would provide a more comprehensive picture of hospital governance. Finally, while this study employed quantitative methods, qualitative approaches such as interviews or case studies could generate deeper insights into the mechanisms through which internal control operates as both a governance mechanism and a strategic capability.

## **6.2 Limitations and Future Research**

The authors acknowledge the limitations of this study. The five-year timeframe provides a snapshot but may not capture longer-term fiscal cycles. Furthermore, this research focused solely on the revenue side; a more comprehensive analysis would also incorporate expenditure patterns and the impact of intergovernmental transfers on local revenue efforts.

Future research could build upon these findings in several ways. A qualitative study could explore the specific political and administrative barriers to revenue diversification in Selayar. Additionally, a comparative analysis with other archipelagic regencies in Indonesia could yield valuable insights into common challenges and best practices for enhancing fiscal resilience in geographically constrained environments.

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