



THE POTENTIAL, STRUCTURE, AND EFFECTIVENESS OF THE LOCAL TAX SYSTEM IN STRENGTHENING LOCAL OWN-SOURCE REVENUE (PAD) IN KOTABARU REGENCY

Ismar Hamid¹, Mizan Ikhlasul Rahman¹, Rurien Srihardjanti², Rachmat Hidayat², Sri Hidayah¹, Muh. Arqam¹, Fajar Baihakki¹, Wardihan Sabar^{3*}

¹Universitas Lambung Mangkurat, Indonesia

²Badan Perencanaan Pembangunan, Riset dan Inovasi Daerah, Kabupaten Kotabaru, Indonesia

^{3*}Universitas Islam Negeri Alauddin Makassar, Indonesia

*e-mail: wardihan.sabar@uin-alauddin.ac.id

Article History: Received: November 29, 2025; Revised: December 22, 2025; Accepted: December 25, 2025

ABSTRACT

Local own-source revenue (PAD) represents a core component of regional fiscal capacity and an essential indicator of subnational fiscal sustainability. This study examines the potential, revenue structure, and performance of local taxes in strengthening the local fiscal capacity of Kotabaru Regency. The analysis is based on secondary data on local tax revenues for the 2020–2024 period obtained from the Regional Revenue Agency of Kotabaru Regency. The empirical approach combines an assessment of tax composition and sectoral contributions, an evaluation of revenue target achievement, and trend and medium-term projection analysis using a logarithmic specification. The findings reveal that the local tax revenue structure in Kotabaru Regency is highly concentrated in Street Lighting Tax, Non-Metal and Rock Mineral Tax, and the Land and Building Rights Acquisition Duty (BPHTB), indicating a strong sectoral dependence on energy and extractive activities. While aggregate tax performance appears relatively strong, with average realizations exceeding annual targets, considerable heterogeneity is observed across tax instruments. Service-based and locally embedded taxes exhibit comparatively weak performance, pointing to untapped local tax capacity. The logarithmic trend estimates suggest a deceleration in revenue growth, consistent with diminishing returns in mature tax bases. These results imply that future fiscal strengthening should prioritize potential-based revenue planning, administrative efficiency and compliance enhancement, and diversification of the local tax base to improve regional fiscal resilience.

Keywords: regional fiscal capacity; local taxation; revenue structure; tax performance; fiscal sustainability.

INTRODUCTION

Local Own-Source Revenue (Pendapatan Asli Daerah–PAD) constitutes a fundamental pillar of subnational fiscal capacity and serves as a key indicator of fiscal autonomy within decentralized governance systems. PAD enables local governments to finance public services and development programs in accordance with local needs, while reducing excessive dependence on intergovernmental transfers from the central government. In the framework of fiscal decentralization,



a strong PAD base also enhances fiscal accountability by strengthening the link between taxation and public service delivery (Oates, 1972; Bird & Slack, 2004). In developing countries, the ability of local governments to mobilize PAD further reflects their fiscal capacity and resilience in responding to economic shocks (Bird & Vaillancourt, 2008).

Local taxes represent the most critical component of PAD because they directly reflect the real fiscal capacity of local governments. Revenue from local taxes is highly dependent on local economic activities, administrative efficiency, and taxpayer compliance. The public finance literature emphasizes that the optimization of local taxation not only increases revenue but also strengthens fiscal governance and long-term local financial sustainability (Bahl & Bird, 2008). However, in practice, increases in local tax revenue do not always indicate the effective exploitation of tax potential.

Empirical studies in Indonesia reveal that although the nominal contribution of local taxes to PAD has increased over time, local tax potential remains underutilized due to limited administrative capacity, weak databases of tax objects and subjects, and low compliance in certain economic sectors (Mardiasmo, 2018; Saputri, 2023). This condition generates a gap between tax capacity and actual revenue, commonly referred to as the administrative gap or tax effort gap in the fiscal literature (Bahl, 2003). Consequently, high revenue realization does not necessarily reflect an improvement in the structural fiscal capacity of local governments.

Beyond tax potential, the structure of local tax revenue plays a crucial role in determining the quality and sustainability of PAD. A tax structure that is highly concentrated in specific sectors particularly energy, mining, and other resource-based activities tends to increase revenue volatility and fiscal vulnerability to economic cycles and commodity price fluctuations (Ahmad & Brosio, 2015; OECD, 2019). Hartini and Nur (2022) demonstrate that variations in the contribution of different types of local taxes in Indonesia reflect local economic structures and significantly influence the stability of PAD.

Local tax effectiveness is commonly measured by comparing actual revenue with budgeted targets. Revenue realization exceeding 100 percent is often interpreted as an indicator of successful tax collection. Nevertheless, public finance studies caution that such outcomes may not necessarily represent genuine improvements in fiscal performance, but rather reflect underestimation bias in target setting driven by administrative or political considerations (Shah, 2007; Prasetyo & Wibowo, 2021). Therefore, the effectiveness of local taxes must be evaluated in conjunction with tax potential and revenue structure to avoid misleading conclusions regarding fiscal performance.

Empirically, the trend of local tax revenue in Kotabaru Regency during the 2019–2024 period exhibits pronounced volatility, characterized by contraction during the early pandemic period, an exceptional revenue surge in certain years, followed by sharp corrections in subsequent periods. Such fluctuations suggest that local tax performance is strongly influenced by sector-specific and temporary

factors rather than by sustained improvements in structural fiscal capacity. Given Kotabaru's strong economic dependence on the energy and mining sectors, this structural reliance may create an illusion of strong fiscal performance in certain periods while simultaneously exposing the region to significant fiscal vulnerability in the medium to long term (Siregar, 2020).

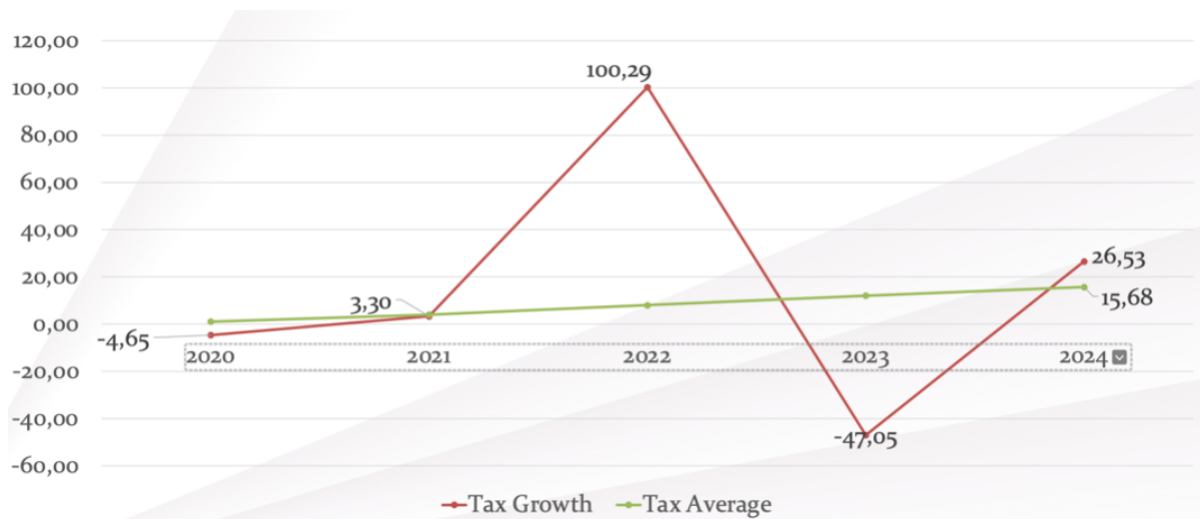


Figure 1. Trends in Local Tax Revenue Realization and Growth in Kotabaru Regency, 2020–2024.

Source: Regional Revenue Agency of Kotabaru Regency; data processed (2025).

Furthermore, deviations of local tax revenue growth from its long-term trend indicate the presence of a diminishing return in efforts to strengthen PAD through local taxation. Without expansion of the tax base and diversification of revenue sources, further increases in PAD are likely to slow and become increasingly difficult to sustain over time (Bird & Vaillancourt, 2008; Bahl, 2003). This condition underscores the importance of viewing local tax performance not merely in terms of short-term revenue gains, but also in terms of structural sustainability.

From a policy perspective, the World Bank (2017) emphasizes that strengthening local tax administration through improved data systems, digitalization of tax collection, and enhanced compliance monitoring is a critical prerequisite for sustainable local revenue mobilization. Nevertheless, empirical studies that simultaneously integrate tax potential, revenue structure, and tax effectiveness particularly at the regency or municipal level and within resource dependent local economies remain limited.

This study addresses this empirical and conceptual gap by analyzing the interaction between tax potential, revenue structure, and tax effectiveness in strengthening PAD in Kotabaru Regency. By adopting an integrated analytical framework, this research aims to contribute to the literature on subnational public finance while providing context-specific policy insights to support sustainable local revenue mobilization and fiscal resilience.

MATERIAL AND METHOD

This study adopts a descriptive-analytical approach using secondary data obtained from the Regional Revenue Agency (Badan Pendapatan Daerah) of Kotabaru Regency. The data analyzed consist of budgeted targets and actual realizations of local taxes by tax type over the period 2020–2024. These data are further utilized to analyze trends and to project local tax revenues for the period 2025–2029. This approach is employed to provide a comprehensive empirical assessment of the potential, structure, effectiveness, and trends of local taxes in strengthening Local Own-Source Revenue (PAD) in Kotabaru Regency.

The analysis of local tax potential is conducted by examining the intertemporal development of actual tax revenue realizations and identifying the presence of a gap between tax capacity and actual revenue, commonly referred to as the administrative gap. Indications of tax potential are assessed through annual growth patterns, fluctuations, and revenue stability across different types of local taxes, which are interpreted as reflections of the region's structural fiscal capacity. The annual growth rate of local tax revenue is calculated using the following formula:

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

Where X_t denotes the realization of local tax revenue in year t , and X_{t-1} represents the realization in the previous year. Subsequently, the average growth rate is calculated to describe the medium-term tendency of local tax revenue performance.

The structure of local tax revenue is analyzed by calculating the contribution ratio of each type of local tax to total local tax revenue. This contribution ratio is used to identify the degree of revenue concentration, the dominance of specific tax types, and the extent of dependency on particular economic sectors. A highly concentrated tax structure is interpreted as an indication of potential fiscal vulnerability and limited sustainability of PAD in the medium term.

Local tax effectiveness is assessed through the ratio of actual revenue realization to budgeted tax targets, which reflects the administrative performance of tax collection. However, the effectiveness ratio is interpreted critically by considering the possibility of underestimation bias in target setting. Therefore, high realization rates are not automatically interpreted as genuine improvements in structural fiscal capacity.

To explain trends in local tax revenue by tax type, this study employs a logarithmic trend model as the primary analytical model. The logarithmic model is selected because it is capable of capturing non-linear and decelerating growth patterns, reflecting structural constraints and indications of diminishing returns in local tax revenue growth. The logarithmic trend analysis is applied to each type of local tax over the period 2021–2024 and subsequently used to project local tax revenues for the period 2025–2029.

Mathematically, the logarithmic model is expressed as:

$$Y = a + \beta \ln(x) \quad (2)$$

where the parameter β is estimated using the following equation:

$$\beta = \frac{n \sum (\ln x \cdot y) - \sum \ln x \sum \ln y}{n \sum (\ln x)^2 - n \sum (\ln y)^2} \quad (3)$$

and the constant term is calculated as:

$$a = \frac{\sum y - \beta \sum \ln x}{n} \quad (4)$$

In this formulation, Y represents the realization of local tax revenue, x denotes the time variable (year), n is the number of observations, and β indicates the logarithmic growth rate. The estimated coefficient β is used to assess whether the growth trend of each local tax type is progressive, stagnant, or exhibiting signs of deceleration. The resulting logarithmic functions are plotted graphically to illustrate the normalized trend of tax revenue by tax type and to serve as the basis for projecting local tax revenues for the period 2025–2029.

RESULTS AND DISCUSSIONS

Local Tax Contribution

Local Taxes under “*Undang-Undang (UU) Nomor 1 Tahun 2022*” are defined as compulsory contributions payable to local governments by individuals or legal entities, which are coercive in nature under statutory provisions, provide no direct quid pro quo, and are utilized to finance local government functions for the greatest welfare of the community. This definition underscores the central role of local taxes as an instrument for strengthening subnational fiscal capacity and local fiscal autonomy.

This analysis aims to explore the potential for optimizing local revenue, particularly through the local tax component, by assessing the extent to which fiscal capacity can be strengthened through improved tax collection effectiveness and the potential expansion of the local tax base. Specifically, the analysis seeks to identify economic sectors that contribute significantly to local tax revenue, as well as opportunities to enhance *Pendapatan Asli Daerah (PAD)* in a manner consistent with the principles of equity and fiscal self-reliance, as mandated under “*Undang-Undang Nomor 1 Tahun 2022 tentang Hubungan Keuangan antara Pemerintah Pusat dan Pemerintah Daerah (UU HKPD)*”.

Due to the absence of publicly available, disaggregated data on local tax objects and tax bases at the regency/municipality level from the Directorate General of Fiscal Balance, Ministry of Finance, the analysis in this section relies exclusively on secondary data obtained from relevant local government agencies

(Organisasi Perangkat Daerah). These data have been consolidated and managed by the Regional Revenue Agency (Badan Pengelola Pendapatan Daerah-Bappenda) of Kotabaru Regency. The dataset used to analyze each type of local tax, in accordance with prevailing regulations, covers the 2020–2024 period.

The current classification of local taxes has been streamlined and systematized by grouping them into two main categories: taxes collected by provincial governments and taxes collected by regency/municipal governments. Furthermore, the implementation of “*Undang-Undang Nomor 1 Tahun 2022 tentang Hubungan Keuangan antara Pemerintah Pusat dan Pemerintahan Daerah (UU HKPD)*” introduces the Opsen scheme, namely additional levies imposed on provincial taxes, the proceeds of which are partially allocated to regency/municipal governments. This scheme includes, among others, the Opsen on motor vehicle taxes and the Opsen on motor vehicle fuel taxes. The introduction of Opsen directly expands the local tax base and, from a structural perspective, creates greater fiscal space for increasing the contribution of local taxes to PAD starting in 2025 and subsequent years.

The types of local taxes analyzed in this study follow the provisions stipulated in “*Peraturan Daerah (Perda) Kabupaten Kotabaru Nomor 10 Tahun 2023*”.

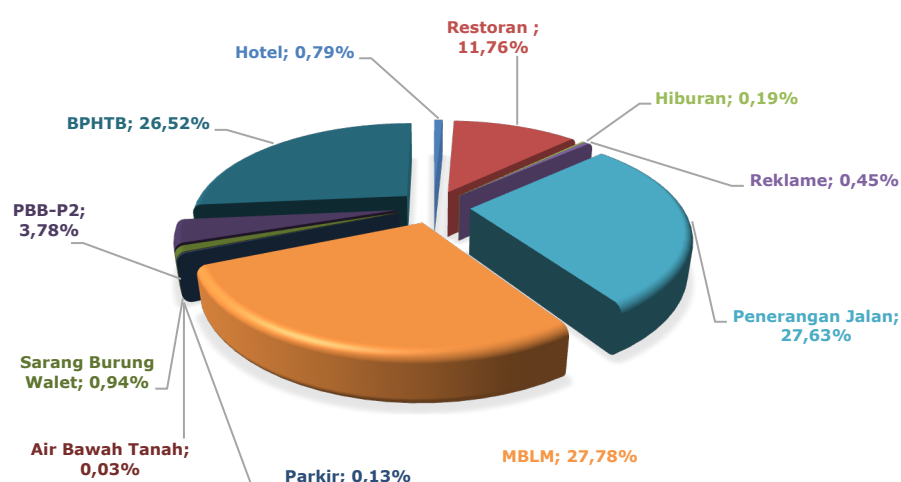


Figure 2. The average contribution of each type of local tax in Kotabaru Regency, 2020–2024

Source: Processed secondary data (2025)

Street lighting tax (Pajak Penerangan Jalan) accounts for 27.63 percent of total local tax revenue, followed by the non-metallic minerals and rocks tax (Pajak Mineral Bukan Logam dan Batuan–MBLB) at 27.78 percent, and the tax on land and building acquisition rights (BPHTB) at 26.52 percent. These three taxes constitute the largest contributors to local tax revenue. This pattern indicates a high degree of dependence on the energy and mining sectors, as well as a favorable indication of active property transactions within Kotabaru Regency.

Restaurant tax represents a moderately significant source of local tax revenue, contributing 11.76 percent to total local tax receipts. This finding is consistent with increased household consumption activity observed during the study period, reflecting the growing role of the service and consumption sectors in supporting local revenue.

Other taxes, such as the rural and urban land and building tax (PBB-P2) at 3.78 percent and the swiftlet nest tax at 0.94 percent, play relatively minor roles in overall local tax revenue, although they continue to provide supplementary income for the local government. Meanwhile, hotel tax (0.79 percent), entertainment tax (0.19 percent), advertisement tax (0.45 percent), parking tax (0.13 percent), and groundwater tax (0.03 percent) exhibit very low contribution levels. This pattern suggests that service-oriented sectors and certain local tax bases remain underutilized, indicating substantial potential for optimization and a greater future contribution to PAD in Kotabaru Regency.

A more in-depth analysis of the contribution of each tax category will be integrated into the subsequent section on performance by tax type. This approach is intended to assess the consistency between revenue performance and the relative contribution of each local tax to overall local tax receipts.

Targets and Realization of Revenue by Type of Local Tax

The analysis of revenue targets and realizations for each type of local tax is of critical importance, both academically and practically, in the context of strengthening Local Own-Source Revenue (PAD) of Kotabaru Regency. From an academic perspective, this analysis serves to assess the level of local fiscal effectiveness, namely the ability of the local government to transform economic potential into actual revenue through the taxation mechanism. In the broader public finance literature, such an assessment is essential for understanding the relationship between tax capacity, administrative performance, and fiscal outcomes at the subnational level.

From a practical standpoint, the comparison between revenue targets and realizations functions as a key instrument for fiscal evaluation and planning. Examining the gap between planned targets and actual collections across different types of local taxes provides valuable insights into the quality of revenue forecasting and tax administration. Specifically, this analysis is able to reveal:

1. the extent to which revenue targets are formulated based on real economic potential rather than being driven primarily by administrative considerations;
2. types of local taxes that still have scope for intensification, through improvements in tax administration systems, enforcement mechanisms, and taxpayer compliance; and
3. types of local taxes that require extensification strategies, such as the expansion of tax objects and tax bases in line with local economic characteristics and development dynamics.

The average ratio of realized local tax revenue to targeted revenue over the last five years exceeded 100 percent; however, a declining trend has been observed since 2022, decreasing from 111.34 percent to 99.71 percent in 2024. This pattern warrants careful attention, as it may indicate a weakening local tax base, particularly if it is not accompanied by the expansion of new taxable objects or the optimization of digital-based tax administration and collection systems.



Figure 3. Trend of PAD Performance by Type of Local Tax in Kotabaru Regency, 2020–2024

Source: Processed secondary data (2025)

Overall, the average realization of local tax revenue in Kotabaru Regency during the 2020–2024 period indicates relatively strong performance, with an average achievement of 110.32 percent of the established targets. This figure suggests that the local government has demonstrated a reasonably effective capacity in local tax collection, including the estimation of tax potential and the realization of fiscal revenue at an aggregate level.

However, a more disaggregated analysis by type of local tax reveals substantial variation in performance across revenue sources, including taxes whose realizations significantly exceeded the targets indicating possible underestimation as well as taxes whose realizations remained far below targets and therefore still exhibit considerable room for optimization.

Despite the generally positive aggregate performance, the findings indicate that this apparent success does not fully reflect an improvement in the structural fiscal capacity of Kotabaru Regency. This is because the contribution of local taxes to the formation of Local Own-Source Revenue (PAD) has not yet consistently surpassed or stabilized relative to the contribution of Other Legitimate Local Revenues (LLPADS), which tend to be volatile and highly dependent on specific economic conditions and technical policy measures implemented by the local government. Several key factors are identified as underlying this condition:

1. Target-setting practices for certain tax components remain insufficiently grounded in systematic tax potential mapping. Frequent instances where

realizations far exceed targets may indicate limitations in accurately forecasting actual tax capacity, rather than genuine improvements in revenue mobilization

2. Fluctuations across tax types suggest that a significant share of revenue remains dependent on specific sectors, particularly non-metal mineral and rock taxes (MBLB) and energy-related taxes, which are inherently cyclical and do not support long-term fiscal sustainability
3. During the observation period, no significant intensification of local tax revenue sources was observed, particularly those that could increase the overall share of local taxes in PAD, including the delayed implementation of regulatory changes at the central level related to Opsen taxation.

In the context of future PAD optimization, the local government is therefore encouraged to enhance the quality of tax revenue planning by anchoring target-setting more firmly in actual economic potential, strengthening digital-based tax collection and compliance monitoring systems, and promoting diversification of the local tax base toward sectors with high multiplier effects on the regional economy. Such measures are essential to ensure that improvements in local tax performance translate into sustainable gains in fiscal capacity rather than short-term or sector-dependent revenue fluctuations.

Interpretation of the Logarithmic Trend Model for Local Taxes in Kotabaru Regency

Figure 3 illustrates the logarithmic function ($y = -0.081 \ln(x) + 1.1317$), indicating that the performance trend of local tax revenues in Kotabaru Regency shows a declining pattern from one tax type to another toward a more stable and ideal level of achievement, although the rate of decline gradually slows toward the end of the curve. This pattern suggests that several major tax sources, such as hotel and restaurant taxes, have reached a relatively stable level of revenue realization.

In contrast, other types of local taxes, including swiftlet nest tax, advertisement tax, and groundwater tax, have not yet demonstrated optimal performance, indicating substantial room for future revenue enhancement. These findings imply that while certain tax categories have matured in terms of collection performance, others remain underutilized and offer opportunities for strengthening local revenue mobilization.

This pattern of local tax performance indicates that an increase in the number of tax types administered by local governments does not necessarily lead to a proportional increase in their contribution to total PAD. Such a phenomenon is commonly referred to as the diminishing return effect in fiscal performance. Therefore, future policy directions should prioritize improving effectiveness and taxpayer compliance in underperforming tax categories rather than merely introducing new sources of local taxation.

Although the logarithmic model provides a relatively realistic depiction of the long-term direction of local tax revenue growth, the projection results are subject to several important assumptions that must be interpreted with caution. First, the model assumes relative stability in macroeconomic conditions, local fiscal policies, and patterns of tax and retribution revenue throughout the projection period of 2025–2029. This implies the absence of major shocks such as regulatory changes, economic crises, or extreme structural shifts in the local economy.

Second, the logarithmic trend assumes that the efficiency of tax collection and local fiscal capacity are approaching an optimal level, resulting in a slower pace of future growth in local tax revenue. In practice, this condition may change in response to policy innovations, the digitalization of local tax administration, or increased real-sector investment that could significantly expand the local tax base.

Revenue Performance by Type of Local Tax

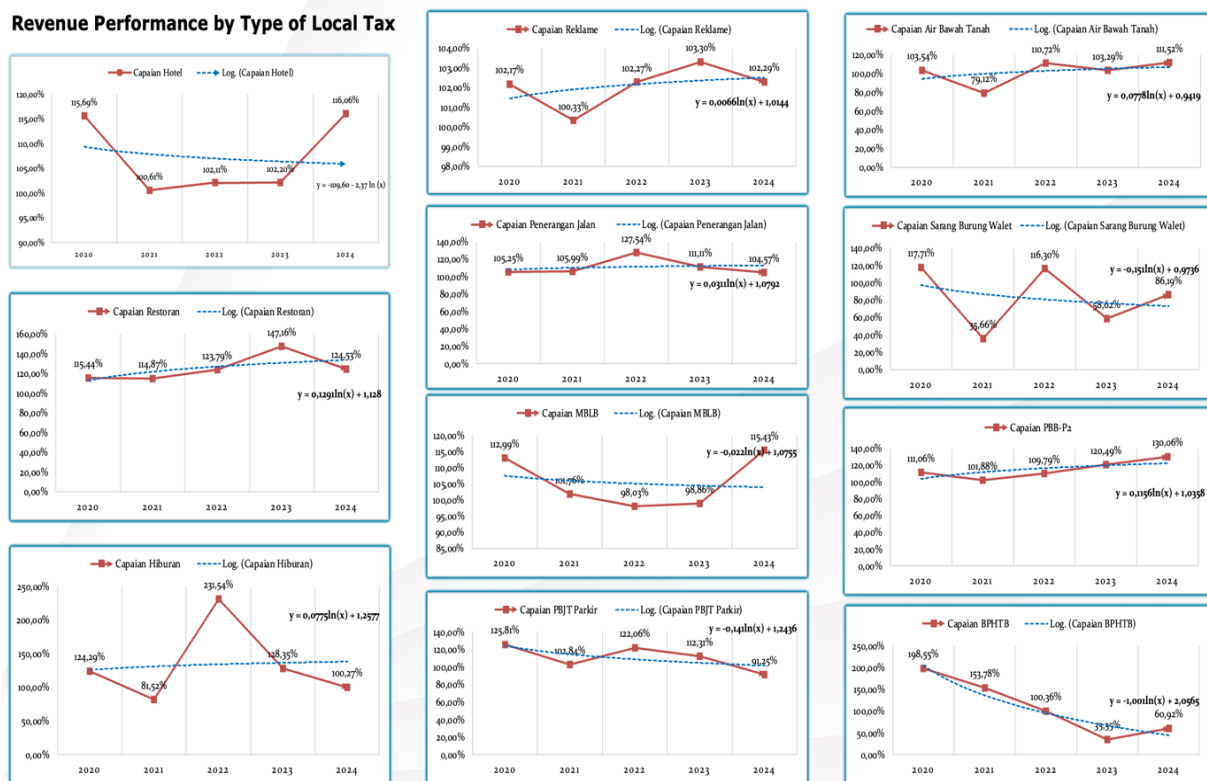


Figure 3. Trend of revenue performance by type of local tax in Kotabaru Regency, 2020–2024

Source: Processed secondary data (2025)

Performance of Hotel Tax

The performance of the Hotel Tax during the observation period was relatively stable above the established targets, with an average achievement of 107.33 percent. This performance indicates a positive correlation between tourism activity and local government revenue. The COVID-19 pandemic during 2020–2022 exerted downward pressure on hotel tax revenue, followed by a recovery

phase in 2023 and a surge in tourism activities in 2024, which subsequently enhanced fiscal potential.

However, despite this positive trend, the contribution of the hotel tax remains suboptimal due to the low level of formalization among tourism-related businesses and the limited availability of real-time occupancy data. These constraints reflect the presence of an administrative gap between potential and actual tax revenue. The medium-term trend is modeled using a logarithmic function $y = 109.60 - 2.37 \ln(x)$, indicates a decelerating growth pattern, which is consistent with the characteristics of the accommodation sector that faces inherent capacity limits following the post-pandemic recovery phase.

Performance of Restaurant Tax

Restaurant Tax represents one of the most high-performing and consumption-elastic local taxes. In 2024, realized revenue reached IDR 13.31 billion, equivalent to 124.53 percent of the target, driven primarily by Restaurant and Similar Services Tax (127.83 percent) and Catering Services (124.10 percent). Culinary MSME segments, such as food stalls and small restaurants, also showed positive contributions, while Cafeteria Tax performance remained very low (11.43 percent), indicating weaknesses in taxpayer registration and compliance.

Consistently high realization exceeding 100 percent further suggests the presence of underestimation bias in target setting. The logarithmic trend $y = 0.1291 \ln(x) + 1.128$ indicates positive but slowing growth, reflecting a post-pandemic transition toward saturation and a gradual shift toward more realistic, potential-based fiscal planning.

Performance of Entertainment Tax

Entertainment Tax reflects both household consumption dynamics and the effectiveness of enforcement and intensification efforts within the entertainment services sector. Over the 2020–2024 period, the average achievement reached 133.19 percent, with extreme surges in 2022 (231.54 percent) and 2023 (147.16 percent), highlighting significant under-targeting issues.

In 2024, realized revenue amounted to IDR 185.92 million (100.27 percent), with the largest contributions originating from Film Exhibition Tax (165.80 percent) and recreational games, while night entertainment and other categories remained below optimal levels. These findings underscore the need for improved tax potential mapping and strengthened data systems to enhance the credibility of revenue targets and overall fiscal efficiency.

Performance of Advertisement Tax

The performance of Advertisement Tax during 2020–2024 was relatively stable and consistently exceeded targets, with an average realization of 102.07 percent, making it one of the most reliable components of local own-source revenue. In 2024, realized revenue reached IDR 369.49 million (approximately 103 percent), supported by large-scale advertising media such as billboards and

videotrons, as well as fabric-based advertisements that exceeded targets (115.96 percent).

This stability indicates effective management of advertisement tax despite the ongoing shift toward digital marketing platforms. Going forward, further optimization can be achieved through updating strategic advertising location maps, enforcing regulations against illegal advertisements, integrating digital licensing systems, and adjusting rental values in accordance with local economic spatial characteristics.

Public Street Lighting Tax (PPJ)

The Public Street Lighting Tax (PPJ) demonstrated very stable performance and served as the main backbone of Kotabaru's PAD during 2020–2024 due to its automated tax base integrated with the state electricity payment system (PLN). Characterized by high collection efficiency, PPJ revenue is collected through an automatic billing mechanism rather than taxpayer self-reporting. Consistently exceeding 100 percent of the target, PPJ reflects rising electricity consumption driven by increased household and industrial economic activity, as well as the multiplier effect of GRDP growth on PAD. Over the period, achievement rates reached 105.25%, 105.99%, 127.54%, 111.11%, and 104.57%, with an average of 110.89%. PPJ-PLN remains the dominant contributor, while Non-PLN PPJ plays a complementary role by expanding the revenue base and supporting diversification.

Non-Metallic Minerals and Rock Tax (MLBM)

The performance of MLBM during 2020–2024 was generally strong and relatively stable despite fluctuations, with an average realization of 105.41 percent. Achievement levels ranged from 98.03 percent to 115.43 percent, reflecting sensitivity to construction and development activity. Although ranked at a mid-level in percentage terms among local taxes, MLBM constitutes a major PAD contributor after PPJ, highlighting Kotabaru's fiscal dependence on extractive activities. Revenue is dominated by construction-related commodities such as sand, gravel, and fill soil, while other commodities serve to broaden the tax base. This structure underscores the importance of tax diversification to reduce fiscal vulnerability.

Parking Tax (PBJT–Parking Services)

Parking tax recorded an average realization of 110.86 percent during 2020–2024, indicating strong potential from the mobility and transportation service sectors. Most years exceeded targets, although a decline in 2024 likely reflected changes in mobility patterns or policy adjustments. Despite stable performance, its overall contribution to PAD remains limited and potentially subject to leakage due to weak monitoring systems and incomplete databases. In the context of UU HKPD and Government Regulation No. 35/2023, digitalization and location-based monitoring are critical to enhancing revenue performance.

Groundwater Tax

Groundwater tax achieved an average realization of 101.64 percent over 2020–2024, indicating effective collection with relatively realistic target setting. This tax serves a dual function as a PAD source and as a regulatory instrument for groundwater resource management. However, its contribution remains small due to limited taxable objects. Key constraints include weak supervision, low licensing compliance, and the absence of accurate water-flow measurement instruments, which create gaps between potential and realized revenue. Comprehensive field surveys and systematic data collection are prerequisites for performance improvement.

Swiftlet Nest Tax

Swiftlet nest tax consistently recorded realizations far below targets, reflecting its classification as a low-compliance sector. Informal economic activity, high information asymmetry, and substantial monitoring costs contribute to low collection effectiveness. From a fiscal perspective, this tax is characterized by high enforcement costs, necessitating a more selective, cost-benefit-based policy approach.

Rural and Urban Land and Building Tax (PBB-P2)

PBB-P2 demonstrated strong performance with an average realization of 114.65 percent during 2020–2024. Consistently exceeding targets, this performance reflects effective administration and relatively high taxpayer compliance. As an asset-based tax, PBB-P2 offers stable revenue and resilience against short-term economic fluctuations. Nevertheless, high achievement does not necessarily imply full optimization of tax potential, underscoring the continued importance of updating property databases and assessed values (NJOP).

Land and Building Rights Acquisition Duty (BPHTB)

BPHTB is a highly elastic tax and extremely sensitive to economic cycles and property market dynamics. Sharp fluctuations in achievement from 198 percent in 2020 to only 60 percent in 2024 demonstrate its direct dependence on transaction volume and NJOP adjustment policies. This characteristic indicates that BPHTB is inherently unstable and more appropriately treated as an opportunistic revenue source rather than a primary pillar of PAD.

Aggregate Performance and Structural Interpretation of Local Tax Revenue

At an aggregate level, the performance of local taxes in Kotabaru Regency during the 2020–2024 period demonstrates relatively strong outcomes, as reflected by the predominance of revenue realization exceeding budget targets across almost all types of local taxes. This condition reflects a combination of post-pandemic economic recovery, the administrative effectiveness of certain tax instruments, and a tendency toward conservative target setting in local budget

planning. However, revenue realization above 100 percent does not necessarily indicate full optimization of fiscal potential; rather, it may signal the presence of underestimation bias in the local budgeting process (Bird & Zolt, 2008; OECD, 2019).

From the perspective of collection efficiency, the Street Lighting Tax (Pajak Penerangan Jalan-PPJ) occupies the most prominent position as a tax with exceptionally high collection efficiency. The integration of PPJ collection with the national electricity payment system operated by PLN renders it a quasi-automatic tax instrument, thereby significantly reducing administrative costs and minimizing revenue leakage. Public finance literature consistently emphasizes that taxes with a broad base, high compliance, and automated collection mechanisms constitute the most stable and reliable revenue sources for subnational governments (Musgrave & Musgrave, 1989; OECD, 2020). The stability of PPJ revenue also reflects a positive correlation between electricity consumption and regional GDP growth, although the dominance of this tax suggests a degree of fiscal dependence that warrants mitigation through diversification of the local tax base (Bird, 2010).

Consumption based service taxes, such as Hotel Tax, Restaurant Tax, Entertainment Tax, and Parking Tax exhibit high revenue elasticity in response to changes in economic activity. The post-pandemic surge in their performance reflects the recovery of household purchasing power and the intensification of service-sector activities, which are theoretically pro-cyclical in nature (Norregaard, 2013). Nevertheless, these taxes continue to face substantial administrative gaps due to low levels of business formalization, limited availability of real-time transaction data, and heavy reliance on self-reporting by taxpayers. This condition is consistent with findings from the IMF (2011) and OECD (2019), which highlight that without digitalization and data integration, improvements in service-sector tax performance often reflect cyclical economic expansion rather than genuine optimization of underlying tax potential.

In terms of medium-term fiscal stability, asset- and property-based taxes display contrasting characteristics. The Rural and Urban Land and Building Tax (PBB-P2) exhibits high revenue stability and resilience to short-term economic fluctuations, as it is derived from immobile fixed assets (Bahl & Martinez-Vazquez, 2008). In contrast, the Duty on the Acquisition of Rights over Land and Buildings (BPHTB) is highly volatile and pro-cyclical, with strong sensitivity to property market dynamics and adjustments in assessed property values (Norregaard, 2013). This divergence underscores the importance of balancing stable taxes with more elastic revenue sources within the local tax structure to safeguard fiscal sustainability (Bird & Slack, 2015).

Resource based taxes such as the Non-Metallic Mineral and Rock Tax and the Groundwater Tax make a notable contribution to PAD but simultaneously entail risks of fiscal vulnerability. Dependence on extractive activities renders revenue highly sensitive to construction cycles and the intensity of natural resource exploitation (Auty, 2001). In public finance theory, natural resource-based taxes should ideally function not only as revenue instruments but also as tools for

internalizing negative externalities (Pigouvian taxes) in support of environmental sustainability and long-term economic resilience (Boadway & Keen, 2010).

Meanwhile, taxes characterized by low compliance levels, such as the Swiftlet Nest Tax, illustrate classic challenges in local tax administration, including information asymmetry, the dominance of informal economic activity, and high monitoring costs. The literature on the informal sector suggests that for such taxes, enforcement costs may approach or even exceed the potential revenue that can be collected (Alm, Martinez-Vazquez, & Schneider, 2004). Consequently, from a cost-benefit perspective, careful policy evaluation is required to determine the feasibility of further intensification efforts.

The structure of local tax performance in Kotabaru Regency indicates that the region's fiscal strength remains heavily reliant on automatic taxes and asset-based taxes, while service-sector and informal-economy taxes continue to face structural constraints in achieving optimal performance. Public finance literature emphasizes that sustainable subnational fiscal capacity is not determined solely by target achievement, but by the alignment between tax effort and tax capacity, supported by modern, data-driven administrative systems (Bird & Zolt, 2008; OECD, 2020). Accordingly, a paradigm shift from target-oriented performance toward potential-based tax management through systematic tax potential mapping, digitalization of tax collection, cross-sector data integration, and more credible target setting constitutes a critical prerequisite for strengthening local fiscal capacity in a structural and sustainable manner.

CONCUSSIONS

The performance of local taxes remains characterized by relatively strong nominal achievements; however, these outcomes do not yet fully reflect the optimal utilization of underlying fiscal potential. The dominance of a limited number of tax instruments as the primary contributors to local own-source revenue (PAD) indicates an unbalanced local tax structure, in which taxes with automatic and easily enforceable bases exhibit more stable performance than those reliant on self-reporting and higher levels of business formality. High realization rates observed for several tax types do not necessarily signal an increase in tax effort, but are also influenced by conservative target setting, limited tax potential mapping, and administrative gaps between potential and actual revenue collection. Consequently, local tax performance during the observation period is more indicative of short-term success in meeting budgetary targets than of a structural strengthening of local fiscal capacity.

The implications of this study suggest that future improvements in local tax performance should prioritize the quality of tax collection rather than the mere achievement of revenue targets. Local governments need to strengthen the tax base through more accurate tax potential mapping, cross-sectoral data integration, and the digitalization of tax administration systems in order to reduce leakages and enhance taxpayer compliance. Moreover, diversification of local tax

sources is essential to reduce dependency on a narrow set of dominant taxes and to improve regional fiscal resilience. From an academic perspective, these findings contribute to the literature on local taxation by emphasizing the importance of distinguishing between target-based performance and potential-based performance, while also opening avenues for further research on the determinants of efficiency and sustainability in subnational tax performance.

REFERENCE

- (1) Ahmad, E., & Brosio, G. (2015). *Handbook of multilevel finance*. Edward Elgar Publishing.
- (2) Alm, J., Martinez-Vazquez, J., & Schneider, F. (2004). Sizing the problem of the hard-to-tax (World Bank Policy Research Working Paper No. 3380). World Bank. <https://documents.worldbank.org>
- (3) Auty, R. M. (2001). *Resource abundance and economic development*. Oxford University Press.
- (4) Bahl, R. (2003). Reaching the hard-to-tax: Consequences and possibilities. *Public Finance Review*, 31(2), 195–219. <https://doi.org/10.1177/1091142103251237>
- (5) Bahl, R., & Bird, R. M. (2008). Subnational taxes in developing countries: The way forward. *Public Budgeting & Finance*, 28(4), 1–25. <https://doi.org/10.1111/j.1540-5850.2008.00914.x>
- (6) Bahl, R., & Martinez-Vazquez, J. (2008). The property tax in developing countries: Current practice and prospects. Lincoln Institute of Land Policy. <https://www.lincolnst.edu>
- (7) Bird, R. M. (2010). Subnational taxation in developing countries: A review of the literature (World Bank Policy Research Working Paper No. 5450). World Bank. <https://documents.worldbank.org>
- (8) Bird, R. M., & Slack, E. (2004). *International handbook of land and property taxation*. Edward Elgar Publishing.
- (9) Bird, R. M., & Slack, E. (2015). Is a property tax reform needed in subnational governments? In R. M. Bird & J. Martinez-Vazquez (Eds.), *Local fiscal autonomy and financing urban development* (pp. 49–74). Edward Elgar Publishing.
- (10) Bird, R. M., & Vaillancourt, F. (2008). *Fiscal decentralization in developing countries*. Cambridge University Press.
- (11) Bird, R. M., & Zolt, E. M. (2008). Tax policy in emerging countries. *UCLA Law Review*, 55(6), 1495–1536.

- (12) Boadway, R., & Keen, M. (2010). Theoretical perspectives on resource taxation. IMF Staff Papers, 57(2), 288–324. <https://doi.org/10.1057/imfsp.2009.23>
- (13) Hartini, S., & Nur, M. (2022). Struktur pajak daerah dan kinerja pendapatan asli daerah di Indonesia. Jurnal Ekonomi Pembangunan, 23(2), 157–172.
- (14) International Monetary Fund. (2011). Revenue mobilization in developing countries. IMF Policy Paper. <https://www.imf.org>
- (15) Kelly, R. (2013). Property tax reform in developing countries. Asian Development Bank. <https://www.adb.org>
- (16) Mardiasmo. (2018). Otonomi dan manajemen keuangan daerah (Edisi terbaru). Andi Offset.
- (17) Musgrave, R. A., & Musgrave, P. B. (1989). Public finance in theory and practice (5th ed.). McGraw-Hill.
- (18) Norregaard, J. (2013). Taxing immovable property: Revenue potential and implementation challenges (IMF Working Paper No. WP/13/129). International Monetary Fund. <https://www.imf.org>
- (19) Oates, W. E. (1972). Fiscal federalism. Harcourt Brace Jovanovich.
- (20) Organisation for Economic Co-operation and Development. (2019). Fiscal decentralisation and tax autonomy. OECD Publishing. <https://www.oecd.org>
- (21) Organisation for Economic Co-operation and Development. (2019). Making decentralisation work: A handbook for policy-makers. OECD Publishing. <https://doi.org/10.1787/g2g9faa7-en>
- (22) Organisation for Economic Co-operation and Development. (2020). Digital government and tax administration. OECD Publishing. <https://www.oecd.org>
- (23) Prasetyo, A. D., & Wibowo, P. (2021). Efektivitas pajak daerah dan implikasinya terhadap kemandirian fiskal daerah. Jurnal BPPK, 14(2), 45–63.
- (24) Republik Indonesia. (2022). Undang-Undang Republik Indonesia Nomor 1 Tahun 2022 tentang Hubungan Keuangan antara Pemerintah Pusat dan Pemerintahan Daerah. <https://peraturan.bpk.go.id>
- (25) Saputri, N. L. (2023). Analisis potensi pajak daerah dan kontribusinya terhadap PAD kabupaten/kota di Indonesia. Jurnal Keuangan Daerah, 8(1), 1–15.

- (26) Shah, A. (2007). Local budgeting. World Bank.
<https://documents.worldbank.org>
- (27) Siregar, H. (2020). Desentralisasi fiskal dan ketahanan keuangan daerah berbasis sumber daya alam. *Jurnal Ekonomi dan Pembangunan Indonesia*, 20(1), 1–18.
- (28) Siregar, H., & Wahyuni, D. (2008). Dampak desentralisasi fiskal terhadap kemampuan keuangan daerah. *Jurnal Ekonomi dan Pembangunan Indonesia*, 9(1), 1–26.
- (29) World Bank. (2017). Subnational revenue mobilization. World Bank Group.
<https://documents.worldbank.org>