The Contrarian: Finance, Accounting, and Business Research
Volume 5, Issue 2, 2026
pp. 391-400

Does the opsen scheme reduce provincial tax effectiveness? Motor vehicle tax and title transfer fee in North Sulawesi Province

Gloria Pusoh
Corresponding author:
pusohgloria@gmail.com
Sam Ratulangi University
Indonesia

Lintje Kalangi
Sam Ratulangi University
Indonesia

Sonny Pangerapan
Sam Ratulangi University
Indonesia

Received 25 September 2026
Revised 27 October 2026
Accepted 29 October 2026
Published online 30 October 2026

DOI: 10.58784/cfabr.521

ABSTRACT

This study examines the effectiveness of motor vehicle tax (PKB) and motor vehicle title transfer fee (BBNKB) revenue in North Sulawesi Province over 2021–2025, a period that spans the implementation of Law Number 1 of 2022 on Financial Relations between the Central Government and Regional Governments (UU HKPD) and the introduction of the opsen (tax-sharing surcharge) scheme. A descriptive quantitative approach is used, supported by qualitative data. Effectiveness is measured as the ratio of revenue realization to target and classified using the criteria of Ministry of Home Affairs Decree Number 690.900.327 of 1996. Target, realization, and opsen data were obtained from the Regional Revenue Agency (BAPENDA) of North Sulawesi Province, and interviews with three BAPENDA officials were used to interpret the results. PKB effectiveness remained in the "effective" category in every year (90.43%–96.89%) except 2022, when it reached 101.22% ("very effective"). BBNKB effectiveness was more volatile (79.82%–96.77%) and fell to "less effective" (79.82%) in 2025, the first year of full opsen implementation. Adding the opsen revenue distributed directly to district/city governments (Rp187.65 billion), combined PKB and BBNKB revenue in 2025 reached Rp698.52 billion, about 1.1% above 2024. According to the informants, the 2025 declines largely reflect this direct distribution, which removes part of the revenue from provincial records, although weaker new-vehicle transactions also affected BBNKB. The findings imply that provincial effectiveness ratios from 2025 onward should be interpreted alongside opsen revenue, and that BBNKB collection needs particular attention. This study contributes by jointly assessing PKB and BBNKB effectiveness against targets during the opsen transition.

Keywords: tax effectiveness; motor vehicle tax; motor vehicle title transfer fee; opsen; regional tax revenue
JEL Classification: H71; H77

©2026 Gloria Pusoh, Lintje Kalangi, Sonny Pangerapan

This work is licensed under a Creative Commons Attribution 4.0 International License.

1. Introduction

Under Indonesia's regional autonomy framework, provincial and district/city governments are granted authority to independently manage government affairs within their jurisdictions, financed through the Regional Revenue and Expenditure Budget (APBD) sourced from locally generated revenue (Pendapatan Asli Daerah, PAD), balance funds, and other legitimate sources (Kementerian Keuangan, 2023). Fiscal independence (the extent to which a region can finance its own governance from PAD rather than relying on central government transfers) is therefore a key indicator of successful regional autonomy.

Motor Vehicle Tax (Pajak Kendaraan Bermotor, PKB) and Motor Vehicle Title Transfer Fee (Bea Balik Nama Kendaraan Bermotor, BBNKB) are among the largest contributors to PAD in North Sulawesi Province. Between 2021 and 2025, combined PKB and BBNKB realization ranged from Rp510.87 billion to Rp694.91 billion annually, consistently accounting for 45–48% of total PAD during 2021–2024 before declining to 36.76% in 2025. Given this scale, the effectiveness of PKB and BBNKB collection, that is, the extent to which realized revenue meets the targets set by the regional government, is a critical indicator of local fiscal performance. Prior studies confirm the strategic role of these two tax instruments in North Sulawesi (Atteng *et al*., 2019; Brinca *et al*., 2024).

This context was reshaped by Law Number 1 of 2022 concerning Financial Relations between the Central Government and Regional Governments (UU HKPD), which introduced an opsen (tax-sharing surcharge) mechanism effective at the latest three years after enactment, that is, in 2025 (Republic of Indonesia, 2022). Under this mechanism, district/city governments receive a direct surcharge of 66% of the PKB and BBNKB tax principal through a real-time split-payment system, replacing the previous revenue-sharing scheme in which provincial governments first collected the tax before distributing a share to district/city governments, a process that had often been subject to distribution delays (Republic of Indonesia, 2022).

Although prior research has examined the contribution of PKB and BBNKB to PAD, most studies analyze the two tax types separately and focus on their share of regional revenue rather than on collection effectiveness measured against targets (Tamyn *et al*., 2025; Lakabela *et al*., 2025). Few studies have jointly examined PKB and BBNKB effectiveness in the specific context of the opsen split-payment transition under Law Number 1 of 2022, which only became fully operative in 2025. This study addresses that gap by analyzing the effectiveness of PKB and BBNKB revenue in North Sulawesi Province before and after the implementation of Law Number 1 of 2022 during the 2021–2025 period.

2. Literature review

Regional tax and locally generated revenue

Regional tax is a mandatory contribution owed by individuals or entities to a regional government, compulsory under law, without direct compensation, and used for the greatest welfare of the people (Mardiasmo, 2023). Locally generated revenue (Pendapatan Asli Daerah, PAD) comprises all revenue a regional government obtains from sources within its own authority, including regional taxes, regional levies, income from separated regional assets, and other legitimate revenue. PKB and BBNKB are classified as provincial taxes and represent two of the most significant components of PAD in North Sulawesi Province.

Motor vehicle tax, motor vehicle title transfer fee, and the opsen scheme

PKB is levied on the ownership and/or control of a motor vehicle, while BBNKB

is levied on the transfer of motor vehicle ownership rights, whether through sale, grant, inheritance, or other legal transfer. Under Law Number 1 of 2022, the maximum PKB rate for first-vehicle ownership is 1.2%, with a progressive rate of up to 6% for second and subsequent vehicles, and a maximum rate of 0.5% for public transport, ambulances, fire trucks, and government-owned vehicles. The maximum BBNKB rate is 12% of the Motor Vehicle Sale Value (NJKB). In addition to these principal taxes, Law Number 1 of 2022 introduces an opsen surcharge of 66% of the tax principal, allocated directly to district/city governments (*Republic of Indonesia*, 2022).

To prevent the opsen surcharge from increasing the effective tax burden borne by taxpayers relative to the previous revenue-sharing system, the central government issued a Circular Letter of the Minister of Home Affairs on the Equivalence Relief Program, which North Sulawesi Province implemented through Governor's Decree Number 11 of 2025. The program sets a relief rate of 12.5% on the PKB principal and 35% on the opsen amount, so that the total tax payable after relief remains approximately equivalent to the amount payable under the previous system.

Taxpayer compliance

Under the Decree of the Minister of Finance Number 544/KMK.04/2000 (Ministry of Finance of the Republic of Indonesia, 2000), tax compliance reflects a taxpayer's willingness to fulfill tax obligations in accordance with prevailing tax laws and regulations. In the context of PKB and BBNKB, taxpayer compliance directly affects the achievement of revenue targets: higher compliance increases realized revenue, while lower compliance produces tax arrears and shortfalls against target. The transition to the opsen system, supported by more integrated and digitally based tax administration, is intended to ease payment and thereby encourage compliance.

Effectiveness

Effectiveness reflects the extent to which an activity, program, or organization achieves its predetermined goals and targets (Etzioni, 1960; Opit *et al*., 2024). An activity is effective when the results achieved meet or exceed the target; it is less effective when results fall well short of target. In this study, effectiveness is measured by comparing the realized revenue of PKB and BBNKB against the target set by the regional government, using the following formula:

$$Effectiveness = \left(\frac{Revenue\ Realization}{Revenue\ Target} \right) \times 100\%$$

The resulting percentage is interpreted using the effectiveness criteria established under the Decree of the Minister of Home Affairs Number 690.900.327 of 1996 (Republic of Indonesia, 1996), summarized in Table 1.

Table 1. Effectiveness measurement criteria

Value Category (%)	Interpretation
> 100	Very Effective
90 – 100	Effective
80 – < 90	Moderately Effective
60 – < 80	Less Effective
< 60	Not Effective

Source: Decree of the Minister of Home Affairs No. 690.900.327 of 1996

Previous research

Several previous studies inform the positioning of this research. Tamyn *et al.* (2025) compared regional tax and levy revenue in Manado before and after Law Number 1 of 2022 and found that revenue increased following tariff adjustment and

tax consolidation. Brinca et al. (2024) analyzed PKB revenue in North Sulawesi and found that it continues to be optimized as a major PAD contributor, although realization does not always meet target. Lakabela *et al*. (2025) examined opsen PKB implementation in Kupang City and found it consistent with Law Number 1 of 2022 and its implementing regional regulation. Kurniawaty *et al*. (2026) examined the implementation of PKB, BBNKB, and PBBKB under Law Number 1 of 2022 in Maluku Utara Province and argued that, with reduced central transfers, the province needs to make fuller use of its own tax-rate powers under the law. Ervina *et al*. (2025) found that regional tax compliance in Indonesian provinces is significantly influenced by socialization costs and PKB/BBNKB tariff levels. Ariyanti and Yasin (2024) showed that a motor vehicle tax reduction program significantly increased local revenue. Erwin (2024) found that PKB and BBNKB have a positive but not significant effect on PAD through taxpayer compliance in South Sulawesi. Sari (2021) found PKB collection and revenue in Makassar to already be effective. Subroto and Sudibyo (2025) confirmed the central role of motor vehicle taxes in sustaining provincial fiscal strength in Central Java. Andrianto *et al*. (2025) noted that the opsen scheme, while intended to strengthen regional finance, carries a potential risk of double taxation where implementation guidance remains unclear.

Compared with these studies, most prior research analyzes PKB and BBNKB separately and emphasizes their contribution to PAD rather than their collection effectiveness against target. This study contributes by jointly analyzing PKB and BBNKB effectiveness across the specific before-and-after window created by the opsen split-payment transition under Law Number 1 of 2022, which took full effect only in 2025.

3. Research method

This study uses a descriptive quantitative approach (Sugiyono, 2023) to obtain a comprehensive understanding of PKB and BBNKB revenue effectiveness in supporting local tax revenue in North Sulawesi Province, with particular attention to conditions following the implementation of the opsen scheme under Law Number 1 of 2022. The research was conducted at the Regional Revenue Agency (BAPENDA) of North Sulawesi Province.

The study uses both qualitative and quantitative data covering the 2021–2025 period, with 2021 representing the period before Law Number 1 of 2022 and 2022–2025 representing the period after its enactment, 2025 being the first year of full opsen implementation. Primary data were obtained through in-depth interviews with three informants directly involved in PKB and BBNKB administration at BAPENDA North Sulawesi: a Regional Revenue Analyst and two implementing staff in the regional revenue management and tax divisions. Secondary data comprise target and realization figures for PKB and BBNKB revenue, total PAD, and opsen revenue for 2021–2025, obtained through documentation of BAPENDA records and supporting regulations.

Data were analyzed using descriptive analysis, comprising four stages: (1) data collection through interviews and documentation; (2) data presentation in tabular and descriptive form; (3) data processing and analysis, in which target and realization figures for each tax type are compared using the effectiveness formula in the Effectiveness subsection of Section 2 and classified according to the criteria in Table 1; and (4) conclusion drawing, in which the effectiveness results are interpreted against the theoretical framework and prior research to address the objective of the study. In addition, consolidated revenue was calculated for 2024 and 2025 by adding opsen revenue to

provincial realization for each tax type; no target-based ratio was computed for opsen because opsen targets were not available in the data obtained.

4. Result and discussion

Effectiveness of motor vehicle tax (PKB) revenue, 2021–2025

Table 2. Target, realization, and effectiveness of PKB revenue, 2021–2025

Year	Target (Rp)	Realization (Rp)	Effectiveness (%)	Category
2021	391,716,725,146	355,620,684,135	90.79	Effective
2022	403,323,892,397	408,264,099,386	101.22	Very Effective
2023	420,000,000,000	393,894,352,621	93.78	Effective
2024	425,789,213,852	412,531,485,237	96.89	Effective
2025	357,791,414,860	323,548,354,375	90.43	Effective

Source: Regional Revenue Agency of North Sulawesi Province (2026)

PKB revenue effectiveness in North Sulawesi Province remained in the "effective" to "very effective" category throughout 2021–2025. Effectiveness reached only 90.79% in 2021, a shortfall attributable to the continuing economic impact of the Covid-19 pandemic, which reduced taxpayers' ability and willingness to pay on time; only 305,109 vehicles paid PKB that year. Effectiveness peaked at 101.22% in 2022 (the only year the target was exceeded), supported by economic recovery, three rounds of tax relief programs (during Ramadan, Indonesian Independence Day, and year-end), and early-payment incentives, which increased the number of paying vehicles to 320,965.

Effectiveness declined to 93.78% in 2023 as the effect of the 2022 relief programs normalized and the number of paying vehicles fell to 306,635, before recovering to 96.89% in 2024 through intensified taxpayer registration, enforcement, and outreach. In 2025, effectiveness declined again to 90.43%, remaining in the "effective" category. According to informants, this decline does not reflect weaker collection performance or taxpayer compliance, but rather the opsen split-payment mechanism under Law Number 1 of 2022, through which a portion of PKB revenue is now transferred directly to district/city treasuries and is no longer recorded as provincial revenue, even though the underlying tax collection performance was maintained.

Effectiveness of motor vehicle title transfer fee (BBNKB) revenue, 2021–2025

Table 3. Target, realization, and effectiveness of BBNKB revenue, 2021–2025

Year	Target (Rp)	Realization (Rp)	Effectiveness (%)	Category
2021	313,081,988,517	268,014,163,570	85.61	Moderately Effective
2022	296,224,821,266	286,644,017,250	96.77	Effective
2023	299,581,027,991	267,063,535,975	89.15	Moderately Effective
2024	296,628,918,017	278,168,511,228	93.78	Effective
2025	234,683,722,317	187,319,660,500	79.82	Less Effective

Source: Regional Revenue Agency of North Sulawesi Province (2026)

BBNKB revenue effectiveness fluctuated more widely than PKB. In 2021, effectiveness reached only 85.61% ("moderately effective"), reflecting reduced vehicle purchasing power during the pandemic. Effectiveness rose to 96.77% ("effective") in 2022 as the economy recovered and PKB relief programs indirectly encouraged vehicle-transaction completion, then fell back to 89.15% ("moderately effective") in 2023 as the relief effect normalized. In 2024, effectiveness recovered to 93.78% ("effective"), aided by BAPENDA's coordination with vehicle dealers to complete title-transfer transactions ahead of the 2025 opsen implementation.

BBNKB effectiveness fell to its lowest point of the study period in 2025, at 79.82% ("less effective"). As with PKB, informants attributed this decline primarily to the opsen split-payment mechanism, under which a portion of BBNKB revenue is now transferred directly to district/city treasuries rather than recorded provincially, compounded by an actual decline in new-vehicle purchasing power. Overall, BBNKB effectiveness across 2021–2025 was less consistent than PKB, ranging from 79.82% to 96.77%, reflecting its greater sensitivity to new-vehicle transaction volume in addition to the opsen transition.

Opsen revenue in 2025 and the equivalence relief program

Table 4. Opsen revenue realization, 2025

Opsen Revenue Type	Realization (Rp)	Share (%)
Opsen Motor Vehicle Tax (PKB)	114,337,767,429	60.93
Opsen Motor Vehicle Title Transfer Fee (BBNKB)	73,309,224,300	39.07
Total	187,646,991,729	100.00

Source: Regional Revenue Agency of North Sulawesi Province (2026)

Total opsen revenue in 2025 reached Rp187.65 billion, comprising Rp114.34 billion (60.93%) from opsen PKB and Rp73.31 billion (39.07%) from opsen BBNKB. This confirms that although PKB and BBNKB revenue recorded at the provincial level declined in 2025, a substantial share of that revenue continued to reach district/city governments through the opsen mechanism established under Law Number 1 of 2022, rather than being lost from the regional tax system.

The opsen scheme initially raised public concern that the tax burden had increased, since the opsen surcharge (66% of the tax principal) is additive to the principal tax rather than a reallocation of it. For example, at a Motor Vehicle Sale

Value of Rp200,000,000, the pre-2022 revenue-sharing mechanism (1.5% PKB rate, split 70:30 between province and district/city) produced a taxpayer liability of Rp3,000,000, whereas the opsen mechanism (1.2% PKB rate plus a 66% opsen surcharge) produced a combined liability of Rp3,984,000 on the same vehicle value, an apparent increase, even though the reform's intent was to change the revenue-distribution mechanism rather than raise the burden on taxpayers.

To address this, the central government issued a Circular Letter of the Minister of Home Affairs (No. 900.1.13.1-6764-SJ) on the Equivalence Relief Program, implemented in North Sulawesi Province through Governor's Decree Number 11 of 2025. Under this program, a 12.5% relief is applied to the PKB principal and a 35% relief to the opsen amount, so that on the same Rp200,000,000 vehicle, total tax payable is reduced to approximately Rp3,000,900 (Rp2,100,000 for the PKB principal after relief, plus opsen of Rp900,900, calculated as 66% of the relieved principal less the 35% relief), which is close to the pre-reform liability of Rp3,000,000. This confirms that the Equivalence Relief Program was designed not to eliminate the opsen surcharge, but to keep the effective tax burden on taxpayers approximately unchanged while enabling district/city governments to receive direct opsen revenue and provincial governments to maintain their own PAD.

Consolidated PKB and BBNKB revenue (provincial realization plus opsen), 2024–2025

Table 5. Consolidated PKB and BBNKB revenue, 2024 and 2025 (Rp billion)

Component	2024 realization	2025 provincial	2025 opsen	2025 consolidated	Change vs 2024 (%)
PKB	412.53	323.55	114.34	437.89	+6.15
BBNKB	278.17	187.32	73.31	260.63	−6.31
Total	690.70	510.87	187.65	698.52	+1.13

Source: Regional Revenue Agency of North Sulawesi Province (2026); author's calculation

Because opsen revenue arises from the same tax base but is recorded by district/city governments, the provincial effectiveness ratios in Tables 2 and 3 understate total collections in 2025. To separate this recording effect from a change in actual collections, provincial realization and opsen revenue were added for each tax type and compared with 2024 realization, when the revenue-sharing scheme was still in force (Table 5).

Consolidated PKB revenue in 2025 reached Rp437.89 billion, 6.15% above the 2024 realization of Rp412.53 billion, whereas consolidated BBNKB revenue was Rp260.63 billion, 6.31% below the 2024 realization of Rp278.17 billion. Combined, PKB and BBNKB revenue reached Rp698.52 billion in 2025, 1.13% above the Rp690.70 billion recorded in 2024 and the highest of the 2021–2025 period (the previous peak was Rp694.91 billion in 2022). For PKB, the lower provincial effectiveness ratio in 2025 therefore coincides with higher total collections once opsen is included, which is consistent with the informants' view that the provincial decline is largely a recording effect. For BBNKB, by contrast, total collections also fell, so the decline in effectiveness cannot be attributed to the opsen mechanism alone and is consistent with the weaker new-vehicle transactions reported by the informants. These comparisons are descriptive: opsen targets were not available, so a consolidated

effectiveness ratio cannot be computed, and the figures are not adjusted for the Equivalence Relief Program or other changes in tax liability.

5. Conclusion

This study analyzed the effectiveness of Motor Vehicle Tax (PKB) and Motor Vehicle Title Transfer Fee (BBNKB) revenue in North Sulawesi Province during 2021–2025, before and after the implementation of Law Number 1 of 2022. Two conclusions can be drawn. First, PKB revenue effectiveness remained in the "effective" category throughout the period, ranging from 90.43% to 96.89%, with 2022 the only year reaching "very effective" at 101.22%; the implementation of Law Number 1 of 2022 and the subsequent opsen scheme did not produce a negative effect on PKB collection performance, even though provincially recorded PKB revenue declined in nominal terms in 2025 due to the split-payment mechanism. Second, BBNKB revenue effectiveness fluctuated more widely, from "moderately effective" (85.61%–89.15%) in 2021 and 2023, to "effective" (93.78%–96.77%) in 2022 and 2024, before declining to "less effective" (79.82%) in 2025, the lowest point in the study period, driven jointly by the opsen split-payment mechanism and an actual decline in new-vehicle transactions.

Consolidating provincial realization with opsen revenue shows that combined PKB and BBNKB revenue in 2025 (Rp698.52 billion) was about 1.1% above 2024, with PKB up 6.15% and BBNKB down 6.31%; the opsen mechanism therefore explains the fall in provincially recorded PKB revenue but not the whole fall in BBNKB. These findings imply that the apparent decline in provincially recorded PKB and BBNKB revenue in 2025 should not be interpreted as a decline in regional tax administration performance, but largely as a structural consequence of the opsen revenue-sharing mechanism introduced by Law Number 1 of 2022 (for BBNKB, weaker new-vehicle transactions also contributed). Nonetheless, the decline in BBNKB effectiveness to the "less effective" category indicates a continued need for the Regional Revenue Agency of North Sulawesi Province to strengthen digital payment integration, taxpayer outreach, and monitoring of outstanding obligations, particularly for BBNKB, as the province transitions fully to the opsen-based system. This study is limited to a single province and a five-year descriptive window centered on a recent and still-evolving policy transition; future research could extend the observation period, incorporate a broader set of regions, and examine the compliance and behavioral effects of the Equivalence Relief Program in greater depth.

References

Andrianto, Y. R., Subekti, & Borman, M. S. (2025). Analisis hukum terhadap opsen pajak daerah yang berpotensi menimbulkan pajak berganda sesuai Undang-Undang Nomor 1 Tahun 2022 tentang hubungan keuangan antara pemerintah pusat dan pemerintahan daerah. *Court Review: Jurnal Penelitian Hukum, 5*(5), 145–158. https://doi.org/10.69957/cr.v5i05.2311

Ariyanti, D., & Yasin, A. (2024). The effectiveness of motor vehicle tax reduction program in increasing local revenue. *EKSYAR: Jurnal Ekonomi Syari'ah & Bisnis Islam, 11*(2), 122–132. https://doi.org/10.54956/eksyar.v11i2.631

Atteng, A. G. K., Kalangi, J. B., & Sumual, J. I. (2019). Kontribusi realisasi pajak kendaraan bermotor dan bea balik nama terhadap pendapatan asli daerah (PAD) Provinsi Sulawesi Utara. *Jurnal*

Berkala Ilmiah Efisiensi, 19(2), 97–107. https://ejournal.unsrat.ac.id/v3/index.php/jbie/article/view/25005

Brinca, F., Elim, I., & Suwetja, I. G. (2024). Analisis penerimaan pajak kendaraan bermotor di Badan Pendapatan Daerah Provinsi Sulawesi Utara. *Going Concern: Jurnal Riset Akuntansi, 19*(1), 22–31. https://ejournal.unsrat.ac.id/v3/index.php/gc/article/view/56553

Ervina, N., Junaidi, Zulgani, & Achmad, E. (2025). Analysis of tax compliance levels for regional taxes in the provinces of Indonesia. *Economies, 13*(12), 354. https://doi.org/10.3390/economies13120354

Erwin. (2024). Pengaruh pajak kendaraan bermotor (PKB) dan bea balik nama kendaraan bermotor (BBNKB) terhadap pendapatan asli daerah melalui kepatuhan wajib pajak di Provinsi Sulawesi Selatan. *Jurnal Ilmiah Metansi (Manajemen dan Akuntansi), 7*(2), 484–493. https://doi.org/10.57093/metansi.v7i2.364

Etzioni, A. (1960). Two approaches to organizational analysis: A critique and a suggestion. *Administrative Science Quarterly, 5*(2), 257–278. https://doi.org/10.2307/2390780

Kementerian Keuangan. (2023). *Otonomi daerah dan hubungan keuangan pusat-daerah*. Direktorat Jenderal Perimbangan Keuangan, Kementerian Keuangan Republik Indonesia. https://djpk.kemenkeu.go.id/

Kurniawaty, A., Rumkel, N., & Malik, F. (2026). Analisis yuridis pelaksanaan Pajak Kendaraan Bermotor (PKB), Bea Balik Nama Kendaraan Bermotor (BBNKB), dan pajak bahan bakar kendaraan bermotor (PBBKB) (Studi pada Badan Pendapatan Daerah Provinsi Maluku Utara). *JATISWARA, 41*(1), 89–117. https://doi.org/10.29303/jtsw.v41i1.1338

Lakabela, G. I. Y., Hallan, M. A. K. B., & Tefa, S. G. (2025). Analisis opsen pajak kendaraan bermotor di Kota Kupang berdasarkan Undang-Undang Nomor 1 Tahun 2022: Studi kasus pada Samsat Kota Kupang. *Jurnal Mahasiswa Manajemen dan Akuntansi, 4*(2), 140–149. https://doi.org/10.30640/jumma45.v4i2.5023

Mardiasmo. (2023). *Perpajakan* (Edisi terbaru). Andi.

Ministry of Finance of the Republic of Indonesia. (2000). *Decree of the Minister of Finance of the Republic of Indonesia Number 544/KMK.04/2000 concerning criteria for compliant taxpayers*.

Opit, A. N., Budiarso, N. S., & Tangkuman, S. (2024). Efektivitas penerapan pembayaran online berbasis e-Samsat dalam penerimaan pajak kendaraan bermotor pada Badan Pendapatan Daerah Provinsi Sulawesi Utara. *Riset Akuntansi dan Manajemen Pragmatis, 2*(2), 172–182. https://doi.org/10.58784/ramp.103

Republic of Indonesia. (1996). *Decree of the Minister of Home Affairs Number 690.900.327 of 1996 concerning guidelines for the evaluation and performance of regional finance*. Ministry of Home Affairs. https://jdih.kemendagri.go.id/

Republic of Indonesia. (2022). *Law Number 1 of 2022 concerning financial relations between the central government and regional governments* (State Gazette of the Republic of Indonesia Year 2022 Number 4).

https://peraturan.bpk.go.id/Details/186836/uu-no-1-tahun-2022

Sari, R. (2021). Efektivitas pemungutan dan penerimaan pajak kendaraan bermotor di Kota Makassar. *Jurnal Bisnis dan Kewirausahaan, 10*(4), 355–369. https://e-jurnal.nobel.ac.id/index.php/jbk/article/view/3814/

Subroto, V. K., & Sudibyo, S. K. (2025). Assessing the contribution and effectiveness of motor vehicle taxes in enhancing regional revenue: Evidence from Central Java Province. *Kompak: Jurnal Ilmiah Komputerisasi Akuntansi, 18*(2), 725–743. https://doi.org/10.51903/kompak.v18i2.3161

Sugiyono. (2023). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabeta.

Tamyn, L. I., Warongan, J. D., & Korompis, C. W. (2025). Analisis komparatif penerimaan pajak dan retribusi daerah sebelum dan sesudah pemberlakuan Undang-Undang Nomor 1 Tahun 2022 tentang hubungan keuangan pemerintah pusat dan pemerintah daerah di Badan Pendapatan Daerah Kota Manado. *Riset Akuntansi dan Portofolio Investasi, 3*(2), 428–438. https://doi.org/10.58784/rapi.364