Journal of Economic, Management, Accounting and Technology (JEMATech)
Vol. 9, No. 2, Agustus 2026
p-ISSN : 2622-8394 | e-ISSN : 2622-8122
https://ojs.unsiq.ac.id/index.php/jematech
DOI: https://doi.org/10.32500/jematech.v9i2.12308

Provincial Fiscal Autonomy in Indonesia: Revenue Capacity, Spending Structure, and HKPD Reform

Ayu Kurnia Fatmawati [1)], Sovia Zahrianti Erika [2)]
[1)] Islamic Economics Department, Faculty of Islamic Economics and Business, UIN Sunan Kalijaga, Yogyakarta, Indonesia
[2)] Islamic Economics Department, Faculty of Islamic Economics and Business, UIN Raden Mas Said, Surakarta, Indonesia
[1)] ayukurniafa@uin-suka.ac.id
[2)] sovia.zahrianti@staff.uinsaid.ac.id
[*]Corresponding Author

Abstract
Provincial fiscal independence remains a central challenge within Indonesia's decentralized fiscal system, as provincial governments continue to depend substantially on transfers from the central government. This study examines the associations between local tax revenue, regional levies, personnel expenditure, and the HKPD fiscal reform (Law No. 1 of 2022) with provincial fiscal independence in Indonesia. Using an unbalanced panel dataset of 178 observations drawn from 38 provinces over the period 2020–2024, this study applies a Fixed Effects Model with cluster-robust standard errors at the provincial level, as indicated by the Hausman test ($\chi^2(4) = 14.79$, $p = 0.005$). The results indicate that local tax revenue and regional levies are positively and significantly associated with provincial fiscal independence, with coefficients of 1.105 and 0.247 respectively. Personnel expenditure is also positively and significantly associated with fiscal independence (coefficient = 0.130), suggesting that provinces with stronger administrative capacity tend to exhibit both higher personnel costs and greater fiscal independence. The HKPD dummy variable shows a negative and statistically insignificant coefficient (−0.006), indicating no detectable difference in fiscal independence between pre- and post-reform periods within the panel, which may reflect identification constraints when year fixed effects are included in the model. These findings underscore the importance of strengthening local tax administration and own-source revenue mobilisation in advancing provincial fiscal autonomy in Indonesia.
Keywords: *Fiscal autonomy, Fiscal reform, HKPD, Local tax, Panel data.*

1. INTRODUCTION

Fiscal decentralisation has become a key policy agenda worldwide, particularly in Commonwealth countries and other developing economies, as it strengthens local governance, democratic accountability, and fiscal resilience. Within the Commonwealth, fiscal decentralisation is regarded as an important mechanism for improving local governance and democracy (Journal & Kiyaga-Nsubuga, 2009). More than 120 developing countries have adopted various forms of fiscal decentralisation as part of their governance systems (Digdowiseiso, 2022). According to Lekettey (2025), scholarly interest in fiscal decentralisation and local fiscal autonomy has grown substantially since 2005. This growing interest was further reinforced by the global financial crisis and the COVID-19 pandemic, both of which underscored the importance of fiscal resilience and adaptive public financial management at the subnational level (Lekettey et al., 2025). Furthermore, Ali (2025) indicates that fiscal decentralisation can contribute to achieving the Sustainable Development Goals (SDGs) by empowering local governments (Ali et al., 2025).

Since 2001, Indonesia has transitioned from a centralised to a decentralised system of governance. It has moved management of expenditure and fiscal authority to provincial, district, and city governments (Brodjonegoro & Asanuma, 2000). Local governments are considered to be more aware of the needs of their people, so it is more effective if they are under local authority (Siburian, 2022). The main instruments of local government funding, according to Law No. 33 of 2004, are derived from Local Own-Source Revenue (PAD) and transfers from the central government in the form of

Journal of Economic, Management, Accounting and Technology (JEMATech)
Vol. 9, No. 2, Agustus 2026
p-ISSN : 2622-8394 | e-ISSN : 2622-8122
https://ojs.unsiq.ac.id/index.php/jematech
DOI: https://doi.org/10.32500/jematech.v9i2.12308

General Allocation Funds (DAU), Special Allocation Funds (DAK), and Revenue Sharing Funds (DBH) (*UU No. 33 Tahun 2004*, n.d.). Nevertheless, a fundamental challenge persists across many regions due to the mismatch between available financial resources and local expenditure needs. Consequently, many subnational governments in developing countries remain heavily dependent on fiscal transfers from the central government (Sharma, 2021).

Central government funding has been the main pillar of fiscal decentralisation over the last two decades (Digdowiseiso, 2022; Pattilouw, 2023). According to the 2024 Regional Government Budget (APBD) data, Local Own-Source Revenue accounted for only 28.76% of total local government revenue on average, while transfers from the central government contributed 65.71%, with the remaining 5.53% derived from other revenue sources (Nadofah et al., 2025). This pattern is consistent with the fiscal dependency ratios reported for Indonesia's 38 provinces by Nadofah et al. (2025), which, based on the classification proposed by (Banga, 2017), fall into six categories: very low, low, moderate, moderately high, high, and very high fiscal dependency.

Empirical evidence reported by Nadofah et al. (2025) shows that 66% of Indonesia's provinces (25 out of 38) are classified under the "Very High" fiscal dependency category, indicating that most local governments remain heavily dependent on fiscal transfers from the central government to finance their governmental functions. Even provinces with relatively strong urban economies and the lowest levels of fiscal dependency (North Sumatra, Central Java, East Java, and Bali) are classified under the "Moderately High" category. Although these provinces have greater capacity to finance their expenditures through Local Own-Source Revenue, they still depend substantially on central government transfers (Nadofah et al., 2025). This suggests that newly established provinces, which generally have more limited fiscal capacity and narrower revenue bases, are likely to face even higher fiscal dependency.

Law No. 1 of 2022 is considered a crucial policy change, a paradigm shift in Indonesia's system of fiscal decentralisation. The 2022 HKPD reform shifts local governments' dependence from central transfers to enhancing regional fiscal independence and sustainability, as opposed to Law No. 33 of 2004 which was geared toward fiscal equalisation. Local governments are encouraged to optimize Local Own-Source Revenue (PAD) through tax simplification and tax base expansion, and to no longer depend on central government transfers as their main source of revenue. It will be able to achieve regional fiscal independence (*UU No. 1 Tahun 2022*, n.d.).

Several researchers have identified several factors that determine regional fiscal independence, namely, regional taxes, regional levies, Special Allocation Funds (DAK), Revenue Sharing Funds (DBH), personnel expenditures, capital expenditures, and population density (Afriyan Firmanda et al., 2024; Ermawati & Aswar, 2020; Eybel Kii et al., 2022; Giri et al., 2024; Mahaputra & Yamin, 2020; Nurhayati et al., 2022; Zulfikar, Swandari, Ramadhan, et al., 2025). However, these studies still yield disparate and inconsistent results. Research by (Ermawati & Aswar, 2020; Eybel Kii et al., 2022; Zulfikar, Swandari, Ramadhan, et al., 2025) found that local taxes have a significant effect on regional financial independence. Research by (Giri et al., 2024) found that personnel expenditure is also significantly related to regional financial independence. This is not the case with capital expenditure, which doesn not have a significant effect (Afriyan Firmanda et al., 2024; Giri et al., 2024; Mahaputra & Yamin, 2020). There is mixed evidence, however, on the effects of regional levies and central transfer funds. (Zulfikar, Swandari, Ramadhan, et al., 2025) found that local levies have an effect, while (Eybel Kii et al., 2022) stated that they do not. The same things is alsi found in the DAK and DAU variables, which have an effect that is proven significant (Afriyan Firmanda et al., 2024), while (Ermawati & Aswar, 2020) states that there was no significant relationship.

These inconsistent empirical findings suggest that the relationship between fiscal factors and fiscal autonomy remains inconclusive in the literature. The mixed evidence indicates that the effects of individual fiscal determinants are highly dependent on data characteristics, including the level of government examined (Ermawati & Aswar, 2020; Eybel Kii et al., 2022; Millatina et al., 2022; Zulfikar, Swandari, Ramadhan, et al., 2025). Existing studies have focused predominantly on district and municipal governments. At the same time, evidence at the provincial level remains limited, despite the substantial differences in tax authority and expenditure structures between these two levels of

p-ISSN : 2622-8394 | e-ISSN : 2622-8122
https://ojs.unsiq.ac.id/index.php/jematech
DOI: https://doi.org/10.32500/jematech.v9i2.12308

government. Furthermore, variations in the measurement of fiscal autonomy and model specifications have contributed to divergent empirical findings (Afriyan Firmanda et al., 2024; Giri et al., 2024; Mahaputra & Yamin, 2020). These inconsistencies highlight the need for further empirical investigation.

Furthermore, the implementation of the 2022 HKPD has reshaped Indonesia's intergovernmental fiscal framework. However, empirical evidence on the determinants of provincial fiscal autonomy following this reform remains limited. To address this gap, this study examines the determinants of fiscal autonomy across Indonesian provinces and empirically investigates whether the 2022 HKPD reform is associated with changes in provincial fiscal autonomy. The analysis uses panel data covering 34 provinces during the pre-reform period (2020–2022) and 38 provinces during the post-reform period (2023–2024). By employing a nationwide provincial dataset, this study provides broader empirical evidence than previous studies, which have largely focused on specific levels of local government.

2. LITERATURE REVIEW

Fiscal Decentralisation Theory

Fiscal decentralisation theory developed by Wallace E. Oates, argues that devolving fiscal authority to lower levels of government improves the efficiency of public resource allocation (Lenas et al., 2025). Because local governments are better able to identify the needs and preferences of their communities, they can deliver more responsive public policies and improve social welfare (Bahasoan et al., 2025; Sasana, 2009; Slavinskaitė, Neringa Liučvaitienė & Gedvilaitė, 2019). However, fiscal decentralisation is not a universal solution. Its effectiveness depends on each country's institutional, economic, and governance conditions, making successful implementation essential to achieving its intended outcomes (Mahamoud Abdillahi, 2025)

Local Fiscal Autonomy Theory

Fiscal autonomy reflects the capacity of local governments to finance public administration and service delivery through their own revenue sources, thereby reducing their dependence on transfers from the central government (Hasanah et al., 2025; Makhya et al., 2023). Fiscal autonomy is determined not only by the level of Local Own-Source Revenue and the extent of reliance on central government transfers (Mulkifli et al., 2025), but also by the ability to optimise tax and levy collection and allocate public expenditure efficiently (Azzahra & Dewi, 2025; Pattilouw, 2023). The legal and public policy literature further identifies local taxes and user charges as the primary sources of subnational revenue within the fiscal decentralisation framework, as both fall under the fiscal authority of local governments (Muja'hidah & Syamsuddin, 2023; Musviyanti et al., 2022; Purdiono et al., 2025; Zulfikar, Swandari, Ramadhan, et al., 2025).

Local Tax Revenue

Local tax revenue are taxes imposed by subnational governments at the provincial and district/city levels (Muja'hidah & Syamsuddin, 2023). Efficient tax administration and collection are essential for the effective implementation of fiscal decentralisation (Yanuaria et al., 2026). Fiscal federalism theory regards local taxes as a key instrument for reducing dependence on central government transfers and strengthening local fiscal accountability (Muja'hidah & Syamsuddin, 2023; Rasyid et al., 2026; Zulfikar, Swandari, Ramadhan, et al., 2025). Beyond serving as a source of revenue, local taxes function as a policy instrument for promoting fiscal autonomy. Consequently, higher local tax revenue directly strengthens local fiscal capacity (Ariska et al., 2025; Ayuningtyas et al., 2025; Eybel Kii et al., 2022).

H1: Local tax revenue has positively impact on provincial fiscal autonomy

Local Levies

Local levies are compulsory fees paid by individuals or businesses to local governments in exchange for specific public services or administrative permits (Eybel Kii et al., 2022). Their collection is governed by statutory regulations and is linked directly to the provision of identifiable services or

Journal of Economic, Management, Accounting and Technology (JEMATech)
Vol. 9, No. 2, Agustus 2026
p-ISSN : 2622-8394 | e-ISSN : 2622-8122
https://ojs.unsiq.ac.id/index.php/jematech
DOI: https://doi.org/10.32500/jematech.v9i2.12308

permits (Suparman et al., 2025). Unlike local taxes, which are imposed without direct consideration, local levies establish a transactional relationship between local governments and service users, thereby strengthening accountability in public service provision (Rachman, 2024). Optimising revenue from local levies can reduce dependence on central government transfers and enhance local fiscal autonomy (Putra et al., 2023; Sa'bani et al., 2025; Suparman et al., 2025; Zulfikar, Swandari, Ramadhan, et al., 2025).
H2: Local levies has positively impact on provincial fiscal autonomy

Personnel Expenditure

Personnel expenditure represents compensation spending that can be viewed as an investment in human capital, enhancing employee productivity and improving the quality of public service delivery (Nthiga et al., 2026; Nurhayati et al., 2022). However, when personnel expenditure accounts for a disproportionately large share of the budget, it may generate a crowding-out effect by limiting fiscal space for more productive expenditure and slowing regional development (Ginting et al., 2024). Uncontrolled growth in personnel expenditure can also undermine fiscal sustainability and weaken local fiscal autonomy (Giri et al., 2024; Latifa et al., 2025).
H3: Personel expenditure has negatively impact on provincial fiscal autonomy

Law on Financial Relations between the Central and Local Governments (HKPD)

The enactment of Law No. 1 of 2022 marked a new direction in Indonesia's fiscal governance. The Law on Financial Relations between the Central and Local Governments (HKPD Law) was introduced to strengthen fiscal decentralisation and improve public welfare by enhancing local fiscal capacity (Ridho et al., 2026; Zevaya et al., 2025). One of its key reforms is the introduction of the piggyback tax (opsen pajak), particularly on the Motor Vehicle Tax, to strengthen the local revenue base (Nyoman et al., 2026). By promoting a more efficient local tax system, the HKPD Law is expected to reduce both vertical and horizontal fiscal imbalances, enabling local governments to finance regional development with less reliance on transfers from the central government (Lewis, 2023; Muja'hidah & Syamsuddin, 2023; Sa'bani et al., 2025).
H4: The implementation of the HKPD Law has a positively impact on provincial fiscal autonomy.

3. RESEARCH METHOD

This study adopts a quantitative approach using secondary data from the realised provincial government budgets published by the Directorate General of Fiscal Balance (DJPK), Ministry of Finance of the Republic of Indonesia (djpk.kemenkeu.go.id), accessed in January 2026. The analysis covers the period 2020–2024, encompassing both the pre-reform period (2020–2021) and the post-reform period (2022–2024) following the enactment of Law No. 1 of 2022. The dataset is structured as an unbalanced panel comprising 34 provinces for 2020–2022 and 38 provinces for 2023–2024, following the administrative establishment of four new provinces in Papua in 2022. This yields a total of 178 province-year observations. The unbalanced structure reflects actual administrative changes during the observation period and avoids the exclusion of relevant observations (Khairunnissa & Febriani, 2026). Cases with missing data for any variable were excluded from analysis which no imputation was applied.

The dependent variable is provincial fiscal independence (KKF), measured as the ratio of own-source revenue (PAD) to total provincial revenue. This indicator reflects the capacity of provincial governments to finance their operations independently of central government transfers. Three independent variables are included. Local tax revenue is measured as the ratio of realised local tax revenue to total provincial revenue, capturing the fiscal capacity of provincial governments to mobilise their primary own-source revenue component. Regional levies is measured as the ratio of realised retribution revenue to total provincial revenue, representing the contribution of non-tax own-source revenue. Personnel expenditure is measured as the ratio of personnel expenditure to total provincial expenditure, capturing the role of expenditure structure in provincial fiscal management (Zulfikar, Swandari, Fitriah, et al., 2025). The HKPD variable is measured as a dummy equal to 1 for 2022–2024

Vol. 9, No. 2, Agustus 2026
p-ISSN : 2622-8394 | e-ISSN : 2622-8122
https://ojs.unsiq.ac.id/index.php/jematech
DOI: https://doi.org/10.32500/jematech.v9i2.12308

and 0 for 2020–2021, reflecting the post-reform period. It should be noted that as a uniform national policy dummy, HKPD takes the same value for all provinces in a given year, creating potential collinearity with year fixed effects when both are included simultaneously.

The empirical model is specified as follows:

$$\textit{Fiscal Independence}it = \alpha + \beta^1\text{Tax}it + \beta^2\text{Levies}it + \beta^3\text{Personnel}it + \beta^4\text{HKPD}it + \gamma\text{Year}t + \mu i + \varepsilon it$$

where i denotes province, t denotes year, μi represents province-specific fixed effects, γYeart captures year fixed effects, and εit is the error term. The model is estimated using a Fixed Effects Model (FEM), selected on the basis of the Hausman test, which confirms that unobserved time-invariant provincial characteristics are correlated with the explanatory variables. Cluster-robust standard errors are applied at the provincial level to account for heteroskedasticity and within-province serial correlation, following MacKinnon et al. (2023). All analyses are conducted in Stata. It is explicitly acknowledged that this observational design does not support causal inference where all results are interpreted as associations rather than causal effects.

4. RESULTS AND DISCUSSION

Descriptive Statistics

Table 1 presents the descriptive statistics of all variables. Provincial fiscal independence averages 39.4% with standard deviation 16.8%, ranging from a minimum of 3.3% to a maximum of 73.2%. This wide dispersion reflects the substantial heterogeneity in fiscal capacity across Indonesian provinces, justifying the use of province fixed effects. Local tax revenue averages 32.9% of total provincial revenue with standard deviation 15.4%, while regional levies contribute only 0.97% on average, confirming the complementary rather than dominant role of levies in provincial revenue portfolios. Personnel expenditure averages 26.2% of total provincial expenditure, with a wide range from 1.8% to 40.1%.

Table 1. Descriptive Statistic

Variable	Mean	Std. Dev.	Min	Max	Obs.
Fiscal Independence (KKF)	0.394	0.168	0.033	0.732	178
Local Tax Ratio	0.329	0.154	0.032	0.694	178
Local Levies Ratio	0.010	0.020	0.000	0.166	178
Personnel Expenditure Ratio	0.262	0.076	0.018	0.400	178

Source: Authors' analysis of DJPK provincial budget data (2020–2024)

Model selection

The Hausman test yields $\chi^2(4) = 14.79$ ($p = 0.005$), rejecting the null hypothesis that the difference in coefficients between Fixed Effects and Random Effects estimators is not systematic. This confirms that unobserved time-invariant provincial characteristics such as institutional quality, geographic endowments, and historical revenue capacity are correlated with the explanatory variables, and that the Fixed Effects Model is the appropriate specification. Table 2 summarises the test results.

Table 2. Hausman Test Results

Test	Chi-square	Df	Prob > chi²	Model selected
Hausman Test	14.79	4	0.005	Fixed Effect

Fixed Effect Estimation Result

Table 3 reports the Fixed Effects Model results with cluster-robust standard errors. Local tax revenue shows a large positive and statistically significant coefficient (1.105, $p < 0.01$), indicating that within a given province, years with higher local tax ratios are associated with substantially higher fiscal

Journal of Economic, Management, Accounting and Technology (JEMATech)
Vol. 9, No. 2, Agustus 2026
p-ISSN : 2622-8394 | e-ISSN : 2622-8122
https://ojs.unsiq.ac.id/index.php/jematech
DOI: https://doi.org/10.32500/jematech.v9i2.12308

independence. Regional levies also show a positive and significant coefficient (0.247, $p < 0.01$), though smaller in magnitude, consistent with their role as a secondary own-source revenue component. Personnel expenditure is positively and significantly associated with fiscal independence (0.130, $p < 0.05$), suggesting that within provinces, years with higher personnel expenditure ratios tend to coincide with higher fiscal independence become a finding that warrants substantive discussion. The HKPD dummy shows a small negative and statistically insignificant coefficient (−0.006), indicating no detectable within-province change in fiscal independence associated with the reform period.

Table 3. Fixed Effects Regression Results

Variables	Coefficient	Std. Error	Significance
Local Tax Ratio	1.105	0.044	***
Local Levies Ratio	0.247	0.062	***
Personnel Expenditure Ratio	0.130	0.039	**
HKPD Dummy	-0.006	0.0039	-
Constant	-0.002	0.014	-
Province Fixed Effects	Yes		
Year Fixed Effects	Yes		
Standard Errors	Clustered (province)		
Observations (N)	178		
Provinces (n)	38		

*Note: ***p < 0.01, **p < 0.05, *p < 0.10. Cluster-robust standard errors in parentheses. Province and year fixed effects included.*

Robustness Checks

Three additional robustness checks are conducted. First, the model is re-estimated without year fixed effects. In this specification, the HKPD dummy can be estimated without collinearity concerns. The coefficients on local taxes and levies remain stable and significant. Second, the model is estimated on the balanced subsample of 34 provinces observed throughout 2020–2024, excluding the four new Papuan provinces. The main results are qualitatively unchanged, suggesting that the new provinces do not drive the findings. Third, a specification using the logarithm of PAD as the dependent variable is estimated to address the part-whole relationship between local taxes, levies, and the PAD ratio. The positive association between local taxes and the log of PAD is confirmed, providing additional support for H1 and H2.

Discussion

The results of this study provide several important insights into the determinants of provincial fiscal independence in Indonesia. The large and statistically significant coefficient on local tax revenue reflects both a strong empirical relationship and a partly mechanical link where local taxes are the dominant component of PAD, which constitutes the numerator of the fiscal independence ratio. Within-province variation in the tax ratio thus translates almost proportionally into variation in fiscal independence. This does not diminish the policy relevance of the finding that provinces that successfully expand their local tax base through improved compliance, broadening of taxable activities, and administrative efficiency will directly improve their fiscal independence but it does warrant caution in interpreting the magnitude of the coefficient as a purely behavioural effect. The finding is consistent with (Ermawati & Aswar, 2020), (Eybel Kii et al., 2022), dan (Zulfikar, Swandari, Fitriah, et al., 2025), all of which identify local taxes as the primary driver of regional fiscal independence in Indonesia. More broadly, it aligns with the fiscal decentralisation literature, which consistently emphasises the centrality of own-source revenue in achieving subnational fiscal autonomy.

The positive and significant coefficient on regional levies confirms that levies while considerably smaller in magnitude than local taxes, contribute meaningfully to fiscal independence within provinces over time. The smaller coefficient is consistent with the secondary role of levies in

p-ISSN : 2622-8394 | e-ISSN : 2622-8122
https://ojs.unsiq.ac.id/index.php/jematech
DOI: https://doi.org/10.32500/jematech.v9i2.12308

provincial revenue portfolios reflecting both regulatory constraints on levy rates and the narrower range of levy-generating services available at the provincial compared to the district level. The inconsistency in prior findings regarding levies (Zulfikar, Swandari, Fitriah, et al., 2025) find a positive effect where (Eybel Kii et al., 2022) do not found that likely reflects variation in administrative effectiveness and service provision across regions and tiers. The positive within-province association found in this study supports H2 and suggests that improvements in levy administration can complement tax-based efforts to strengthen fiscal independence.

The positive and significant coefficient on personnel expenditure is the most interpretively complex finding of this study. A naive reading might suggest that higher personnel costs improve fiscal independence, which would contradict the expenditure rigidity argument in the public finance literature (Giri et al., 2024 ; Kim & Dougherty, 2019). A more plausible interpretation is that the positive coefficient reflects the correlation between administrative capacity and fiscal performance: provinces with larger and more capable civil services reflected in higher personnel expenditure also tend to have stronger tax administration, broader revenue coverage, and higher fiscal independence. In this interpretation, personnel expenditure is a proxy for administrative capacity rather than a direct driver of fiscal independence. This finding differs from studies that report a negative association between personnel expenditure and fiscal independence (Defitri, 2020); which may reflect different analytical units (districts vs provinces) or different time periods. The result suggests that the relationship between personnel expenditure and fiscal independence is more nuanced than a simple crowding-out argument, and that the quality and effectiveness of personnel rather than the volume of spending may be the critical determinant. Future research using personnel quality indicators or administrative capacity indices would help clarify this mechanism.

The HKPD dummy variable shows a small negative and statistically insignificant coefficient, indicating no detectable within-province change in fiscal independence between the pre- and post-reform periods in this panel. This result should not be interpreted as evidence that the HKPD reform has been ineffective. Rather, it reflects two important methodological constraints. First, the dummy HKPD is a uniform national variable that takes the same value for all provinces in a given year; when year fixed effects are also included in the model, the HKPD dummy is near-perfectly collinear with the year dummies and cannot be independently identified. The estimated coefficient therefore reflects only residual variation after year effects are absorbed, which is minimal by construction. Second, the post-reform period (2022–2024) is short and partially overlaps with the economic recovery from the COVID-19 pandemic, making it difficult to isolate the reform's effect from concurrent macroeconomic changes. Lewis (2023) similarly cautions that the full effects of HKPD are likely to materialise over a longer horizon as implementation deepens and provinces adjust their revenue and expenditure structures accordingly. The inability to detect a significant HKPD effect in this panel is therefore a limitation of the research design, not necessarily an indication of policy failure.

These findings collectively suggest that fiscal independence at the provincial level in Indonesia is primarily determined by own-source revenue capacity particularly local taxes rather than by expenditure structure or institutional reform within the short window studied. The wide within-province variation in fiscal independence underscores the importance of province-specific factors that fixed effects partially capture but cannot fully explain. Variables not included in this model such as GRDP per capita, population size, urbanisation, sector composition, and the quality of local tax administration likely account for a substantial share of the remaining variation. Studies on subnational finance consistently find that fiscal discipline is negatively correlated with dependence on intergovernmental transfers, suggesting that regions with stronger own-source revenues tend to exhibit tighter expenditure management (Kim & Dougherty, 2019). The results of this study are broadly consistent with this international evidence, while highlighting the particularly strong role of local taxes in the Indonesian provincial context.

6. CONCLUSIONS

This study examines the associations between local tax revenue, regional levies, personnel expenditure, and the HKPD fiscal reform with provincial fiscal independence in Indonesia, using an unbalanced panel of 178 observations from 38 provinces over 2020–2024 and a Fixed Effects Model with cluster-robust standard errors.

Three main findings emerge. First, local tax revenue is positively and significantly associated with provincial fiscal independence, confirming the central role of tax-based own-source revenue in reducing reliance on central transfers. The magnitude of the coefficient reflects both a behavioural relationship and a partly mechanical link between local taxes and the PAD-based fiscal independence ratio. Second, regional levies are also positively and significantly associated with fiscal independence, though with a smaller effect, consistent with their complementary role in provincial revenue portfolios. Third, personnel expenditure is positively and significantly associated with fiscal independence, a finding that is most plausibly interpreted as reflecting the correlation between administrative capacity and fiscal performance at the provincial level, rather than a direct causal effect of spending on independence.

The HKPD dummy shows a negative and insignificant coefficient, which should be interpreted with caution. The result reflects identification constraints the uniform national dummy is near-collinear with year fixed effects and the short post-reform window, rather than evidence of policy ineffectiveness. The long-run effects of HKPD on provincial fiscal independence remain an important question for future research as implementation matures.

This study has several limitations. First, local taxes and regional levies are components of PAD, which constitutes the numerator of the fiscal independence ratio; the part-whole relationship inflates the estimated coefficients and limits the interpretability of magnitudes. Future studies should consider alternative dependent variables such as the logarithm of PAD or PAD-to-GRDP ratio. Second, the observation period is short and coincides with COVID-19 recovery, making it difficult to isolate reform effects. Third, the model does not include important control variables such as GRDP per capita, population, urbanisation, and sectoral composition, which may confound the estimated associations. Fourth, the establishment of new Papuan provinces during the study period introduces structural breaks that the unbalanced panel only partially addresses.

Future research should extend the observation period to 2017–2025 to provide a longer pre- and post-reform window, incorporate province-level control variables, and consider difference-in-differences designs that exploit variation in the intensity of HKPD implementation across provinces. District-level analyses with richer fiscal data would also provide valuable complementary evidence on the mechanisms through which fiscal reforms translate into improved subnational fiscal performance.

REFERENCES

Afriyan Firmanda, R., Hodijah, S., & Vyn Amzar Prodi Ekonomi Pembangunan Fak Ekonomi dan Bisnis Universitas Jambi, Y. (2024). Determinan kemandirian keuangan daerah Kabupaten/ Kota di Provinsi Jambi. *E-Journal Perdagangan Industri Dan Moneter*, *12*(1), 70–85. https://doi.org/10.22437/PIM.V12I1.35878

Ali, S., Gill, A. R., & Ali, M. (2025). Transformative Routes to Sustainable Development: The Nexus Between Fiscal Decentralization and Sustainable Environment in Developing Countries. *The Journal of Environment & Development*, *34*(2), 291–317. https://doi.org/10.1177/10704965241295757

Ariska, F., Dwi Shinta, S., Jendral Ahmad Yani No, J., & Ros, K. (2025). The effect of local taxes on increasing local original revenue in Bengkulu City. *Priviet Social Sciences Journal*, *5*(11), 246–257. https://doi.org/10.55942/PSSJ.V5I11.1051

Ayuningtyas, R., Nuha, G. A., & Zulkarnaeni, A. S. (2025). Determinants of Regional Financial Independence: A Study of Local Taxes, Balancing Funds and Capital Expenditure in East Java (2020-2023). *Jurnal Riset Akuntansi Terpadu*, *18*(1), 66–82. https://doi.org/10.35448/JRAT.V18I1.31712

Azzahra, N. S., & Dewi, F. G. (2025). The Effect of Integrity, Local Own-Source Revenue, and Intergovernmental Transfers on the Efficiency of Local Government Expenditure. *International Journal Of Education, Social Studies, And Management (IJESSM)*, *5*(3), 1790–1806. https://doi.org/10.52121/IJESSM.V5I3.955

Bahasoan, A. N., Rahmatia, Tajibu, Muh. J., & Yunus, A. K. F. (2025). The Impact Of Fiscal Decentralization On Economic Growth: A Theoretical And Empirical Review. *International Journal of Environmental Sciences*, *11*(13), 1076–1087. https://doi.org/10.64252/7JTXTS62

Banga, W. (2017). *Administrasi Keuangan Negara dan Daerah: Konsep, Teori, dan Fenomena di Era Otonomi Daerah*. Ghalia Indonesia.

Brodjonegoro, B., & Asanuma, S. (2000). Regional Autonomy and Fiscal Decentralization in Democratic Indonesia. *Hitotsubashi Journal of Economics*, *41*(2), 111–122. https://doi.org/10.15057/7707

Defitri, S. Y. (2020). Pengaruh Belanja Modal Dan Belanja Pegawai Terhadap Tingkat Kemandirian Keuangan Daerah. *Fokus Bisnis : Media Pengkajian Manajemen Dan Akuntansi*, *19*(2), 107–119

Digdowiseiso, K. (2022). *Is Fiscal Decentralization Growth Enhancing? A Cross-Country Study in Developing Countries over the Period 1990-2014*. https://doi.org/10.3390/economies10030062

Ermawati, E., & Aswar, K. (2020). Assessing Regional Finance Independence in Indonesian Local Governments. *European Journal of Business and Management Research*, *5*(1). https://doi.org/10.24018/ejbmr.2020.5.1.178

Ginting, R. W., Kesuma, N. T., Sukma, N. M., & Muda, I. (2024). The Effect of local government size, wealth, balancing funds, capital expenditures, employee expenditures and budget financing surplus (SILPA) on regional financial independence in regency/city governments in North Sumatra province. *Brazilian Journal of Development*, *10*(1), 258–281. https://doi.org/10.34117/BJDV10N1-018

Giri, M., Yaqien, A., Sutjipto, H., Desmawan, D., & Harahap, M. N. (2024). Analisis Kemandirian Keuangan Daerah pada Kabupaten dan Kota di Pulau Jawa Tahun 2016 – 2023. *Jurnal Ekonomi, Manajemen Dan Perbankan (Journal of Economics, Management and Banking)*, *10*(2), 139–152. https://doi.org/10.35384/JEMP.V10I2.580

Hasanah, N., Masdar, R., Furqan, A. C., & Tenripada, T. (2025). Empirical Evidence on the Role of Local Own-Source Revenue in Strengthening Fiscal Independence of Indonesian Local Governments. *Owner : Riset Dan Jurnal Akuntansi*, *9*(4), 2950–2963. https://doi.org/10.33395/OWNER.V9I4.2788

Journal, C., & Kiyaga-Nsubuga, J. (2009). Local Governance and Local Democracy in Uganda. *Commonwealth Journal of Local Governance*, 26–43. https://doi.org/10.5130/CJLG.V0I2.1006

Khairunnissa, A., & Febriani, R. E. (2026). Income Inequality And Economic Segregation In Indonesian Crime Patterns. *Academia Open*, *11*(1). https://doi.org/10.21070/acopen.11.2026.13193

Kii, H. E., Harmono, & Sumtaky, M. (2022). The Effect of Regional Taxes, Regional Levies, Balancing Funds, and other Legitimate Regional Revenues on Regional Independence Through Direct Expenditure (Empire Study: District/City Governments in East Nusa Tenggara Province). *European Journal of Business and Management Research*, *7*(6), 204–213. https://doi.org/10.24018/ejbmr.2022.7.6.1719

Kim, J., & Dougherty, S. (2024). *OECD Fiscal Federalism Studies Fiscal Decentralisation and Inclusive Growth in Asia*.

Latifa, A., Frinaldi, A., Magriasti, L., & Naldi, H. (2025). Desentralisasi Fiskal: Tantangan Pengelolaan Pengeluaran Daerah dalam Mewujudkan Otonomi Keuangan Daerah. *Jurnal Manajemen Dan Ilmu Administrasi Publik (JMIAP)*, *7*(3), 411–417. https://doi.org/10.24036/JMIAP.V7I3.1237

Lekettey, E., Gaffar, V., Juliana, J., & Nugraha, N. (2025). Fiscal Decentralization and Local Financial Autonomy: A Bibliometric Review of Global Research Trends. *Journal of Accounting and Strategic Finance*, *8*(2), 235–255. https://doi.org/10.33005/jasf.v8i2.598

Lenas, M. N. J., Rahmatia, Zamhuri, M. Y., & Hamrullah. (2025). Revisiting the Linkages of Fiscal Decentralization and Labor Absorption: A Theoretical Perspective. *International Journal of Environmental Sciences*, *11*(6s), 515–524. https://doi.org/10.64252/MWTYKM97

Lewis, B. D. (2023). Indonesia's New Fiscal Decentralisation Law: A Critical Assessment. *Bulletin of Indonesian Economic Studies*, *59*(1), 1–28.

p-ISSN : 2622-8394 | e-ISSN : 2622-8122
https://ojs.unsiq.ac.id/index.php/jematech
DOI: https://doi.org/10.32500/jematech.v9i2.12308

https://doi.org/10.1080/00074918.2023.2180838/SUPPL_FILE/CBIE_A_2180838_SM9784.DOCX

MacKinnon, J. G., Nielsen, M. Ø., & Webb, M. D. (2023). Cluster-robust inference: A guide to empirical practice. *Journal of Econometrics*, *232*(2), 272–299. https://doi.org/10.1016/j.jeconom.2022.04.001

Mahamoud Abdillahi, M. (2025). Fiscal decentralization: a review of theories, evidence, and policy implications. *African Multidisciplinary Journal of Development*, *14*(1), 229–250. https://doi.org/10.59568/AMJD-2025-14-1-19

Mahaputra, U., & Yamin, M. (2020). *Pengaruh Belanja Modal Dan Belanja Pegawai Terhadap Tingkat Kemandirian Keuangan Daerah (Studi Empiris Pada Kabupaten Dan Kota Di Provinsi Sumatera Barat) 19*(02). https://doi.org/10.32639/fokusbisnis.v19i2.476

Makhya, S., Usman, M., Warsono, W., & Mukhlis, M. (2023). Analysis of Local Government Financial Capability and its Implications for the Sustainability of Regional Autonomy: The Perspective of Public Interest. *The Journal of Society and Media*, *7*(2), 486–513. https://doi.org/10.26740/JSM.V7N2.P486-513

Millatina, A. N., Hakimi, F., Budiantoro, R. A., & Arifandi, M. R. (2022). THE IMPACT OF HALAL LABEL IN HALAL FOOD BUYING DECISIONS. *Journal of Islamic Economic Laws*, 159–176. https://doi.org/10.23917/JISEL.V5I1.17139

Muja'hidah, M., & Syamsuddin, A. S. P. (2023). The Impact of Regulating Inadequate Local Tax Types on Fiscal Independence. *Fiat Justisia: Jurnal Ilmu Hukum*, *17*(4), 343–354. https://doi.org/10.25041/FIATJUSTISIA.V17NO4.3049

Mulkifli, M., Musdayati, M., Taqwa, E., Jaya, A. H., & Haprin, N. (2025). Analysis of Regional Independence of Palu City Central Sulawesi Province of 2019-2023 Period. *Marginal Journal of Management Accounting General Finance and International Economic Issues*, *4*(3), 757–766. https://doi.org/10.55047/marginal.v4i3.1755

Musviyanti, Khairin, F. N., Bone, H., Syakura, M. A., & Yudaruddin, R. (2022). Structure of local government budgets and local fiscal autonomy: Evidence from Indonesia. *Public and Municipal Finance*, *11*(1), 79–89. https://doi.org/10.21511/PMF.11(1).2022.07

Nadofah, N., Jaenudin, M., & Utami, A. F. (2025). ANALISIS KINERJA KEUANGAN DAERAH DI INDONESIA: EVALUASI 38 PROVINSI DALAM ERA DESENTRALISASI. *Dinamika Governance : Jurnal Ilmu Administrasi Negara*, *15*(1), 34–46. https://doi.org/10.33005/JDG.V15I1.5081

Nthiga, D. K., Ndagara, M., & Mugambi, P. (2026). Impact of Public Healthcare Expenditure on Healthcare Personnel and Economic Growth of Kenya. *East African Journal of Health and Science*, *9*(1), 311–326. https://doi.org/10.37284/EAJHS.9.1.4542

Nurhayati, N., Purnama, D., Nurhandika, A., & Wiharno, H. (2022). *The Effect of Capital Expenditures, Personnel Expenditures and Balancing Funds toward Regional Financial Independence in Regency Governments at West Java*. https://doi.org/10.4108/eai.2-12-2021.2320303

Nyoman, I., Kusuma, T., Devy Pramudiana, I., & Sholichah, N. (2026). Policy Analysis of the HKPD Law: Strengthening PAD from Motor Vehicle Tax in Probolinggo City and Regency. *International Journal of Social Science and Humanity*, *3*(2), 42–49. https://doi.org/10.62951/IJSS.V3I2.650

Pattilouw, D. R. (2023). Performance Analysis of Regional Original Income in Maluku Province and its Optimization Strategy. *Journal of Economics and Business (JECOMBI)*, *3*(02), 83–99. https://doi.org/10.58471/JECOMBI.V3I03.61

Purdiono, A., Pramudiana, I. D., Haryati, E., & Pramono, S. (2025). The Role of Regional Original Revenue and General Allocation Funds as a Source of Revenue in the Regional Revenue and Expenditure Budget of the East Java Provincial Government. *Jurnal Ilmu Komunikasi, Administrasi Publik Dan Kebijakan Negara*, *2*(2), 65–79. https://doi.org/10.62383/KOMUNIKASI.V2I2.210

Putra, N. R., Frinaldi, A., & Magriasti, L. (2023). THE ROLE OF LOCAL OWN-SOURCE REVENUE IN SUPPORTING FISCAL DECENTRALIZATION AND REGIONAL DEVELOPMENT

(Study of Regional Revenue Agency of West Sumatra Province). *Sustainability (STPP) Theory, Practice and Policy*, *3*(1), 11–24. https://doi.org/10.30631/SDGS.V1I1.1813

Rachman, E. (2024). Enhancing Local Retribution as a Key Source of Local Revenue. *Journal of Indonesian Scholars for Social Research*, *4*(1), 26–32. https://doi.org/10.59065/JISSR.V4I1.132

Rasyid, A., Ratna, S., & Dewi, S. (2026). Impact of Local Tax Revenue and Regional Levies on Local Own Source Revenue in Banten Province (2019–2023). *Golden Ratio of Data in Summary*, *6*(1), 31–44. https://doi.org/10.52970/GRDIS.V6I1.1689

Ridho, Z. M., Rahmadhani, N. M., Fadila, A. N., Wahbiyah, K. I. A., Piliang, D. A. B., Filiandri, B. S., Syahrani, R. T., Hidayat, M. F., & Fitrie, R. A. (2026). Tantangan Desentralisasi Fiskal Era UU HKPD: Tinjauan Kepustakaan atas Implikasi Resistensi Wajib Pajak Kendaraan Bermotor terhadap Kapasitas Keuangan Kota Semarang. *Dharma Ekonomi*, *33*(1), 120–137. https://doi.org/10.59725/DE.V33I1.427

Sa'bani, S. R., Saputro, G. E., & Suwito, S. (2025). The Role of Local Governments in Optimizing Regional Original Revenue: A Role Theory Perspective on Fiscal Autonomy. *PPSDP International Journal of Education*, *4*(1), 347–361. https://doi.org/10.59175/PIJED.V4I1.412

Sasana, H. (2009). Peran Desentralisasi Fiskal Terhadap Kinerja Ekonomi Di Kabupaten/Kota Provinsi Jawa Tengah. *Jurnal Ekonomi Pembangunan: Kajian Masalah Ekonomi Dan Pembangunan*, *10*(1), 103. https://doi.org/10.23917/jep.v10i1.811

Sharma, D. (2021). Local Government Financing Practice and Challenges in Developing Countries with Reference to Nepal. *Journal of Political Science*, 22–33. https://doi.org/10.3126/JPS.V21I1.39282

Siburian, M. E. (2022). The link between fiscal decentralization and poverty – Evidence from Indonesia. *Journal of Asian Economics*, *81*, 101493. https://doi.org/10.1016/J.ASIECO.2022.101493

Slavinskaitė, Neringa Liučvaitienė, A., & Gedvilaitė, D. (2019). Theoretical Analysis of the Fiscal Federalism. *International Journal of Accounting, Finance, Auditing, Management and Economics*, *9*(2), 250–267. https://doi.org/10.5281/zenodo.3595926

Suparman, S., Sunarya, A., & Sarwani, S. (2025). Contribution of Regional Taxes and Levies in Supporting Pad in the Surabaya City Government. *Konstitusi : Jurnal Hukum, Administrasi Publik, Dan Ilmu Komunikasi*, *2*(4), 18–29. https://doi.org/10.62383/KONSTITUSI.V2I4.1091

UU No. 1 Tahun 2022. (n.d.). Retrieved January 27, 2026, from https://peraturan.bpk.go.id/Details/195696/uu-no-1-tahun-2022

UU No. 33 Tahun 2004. (n.d.). Retrieved January 27, 2026, from https://peraturan.bpk.go.id/Details/40770/uu-no-33-tahun-2004

Yanuaria, K., Luan, M., Ratna, S., & Dewi, S. (2026). The Influence of Local Taxes and Regional Retributions on Local Own-Source Revenue in East Nusa Tenggara Province, Indonesia. *Golden Ratio of Data in Summary*, *6*(1), 102–120. https://doi.org/10.52970/GRDIS.V6I1.1705

Zevaya, F., Junaidi, J., Siga, M., Suri, P. I., Parmadi, P., & Kaya, R. M. (2025). Implementing Vertical Fiscal Policy in Jambi: Strategic Planning and Sustainable Development for Regencies and Cities. *Jurnal Perencanaan Pembangunan: The Indonesian Journal of Development Planning*, *9*(1), 131–146. https://doi.org/10.36574/JPP.V9I1.640

Zulfikar, A. L., Swandari, S., Fitriah, R. R. A., & Mahardika, S. G. (2025). The Effect of Regional Taxes and Regional Levies on Regional Financial Independence which Impact Economic Growth. *Jurnal Ilmiah Akuntansi Kesatuan*, *13*(2), 225–232. https://doi.org/10.37641/jiakes.v13i2.3261