



The effect of motor vehicle tax and motor vehicle title transfer fee on regional original revenue: a study on local Governments in the special region of Yogyakarta for the 2019–2024 period

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Article Info:

Keywords:

Motor Vehicle Tax (PKB), Motor Vehicle Name Return Duty (BBNKB), Regional Original Revenue (PAD)

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DOI:

<https://doi.org/10.64282/phi.v3i2.125>

Received : 21-04-2026

Revised : 17-05-2026

Accepted : 22-05-2026

Published : 27-05-2026

Abstract

This study aims to analyze the influence of Motor Vehicle Tax (PKB) and Motor Vehicle Name Return Duty (BBNKB) on Regional Original Revenue (PAD) in the Regional Government of the Special Region of Yogyakarta during the 2019-2024 period. The method used is a quantitative approach with multiple linear regression analysis. The results showed that PKB had a significant influence on PAD with a t-value of 1.390 and a significance level of 0.037, while BBNKB showed a very significant influence with a t-value of 3.859 and a significance level of 0.011. The F test showed that the overall regression model was significant in predicting PAD with an F value of 4.590 and a significance of 0.050. These findings affirm the importance of regional tax and levy management in increasing PAD, as well as providing input for the government in improving tax compliance and the effectiveness of regional resource management.

1. INTRODUCTION

In an era of increasingly intense global economic competition, urban and regional development has become critically important to meet the continuously evolving needs of society. This development process involves various resources, both natural and human, which play a crucial role in the success of development programs. The role of government in regulating the allocation of funds for development and public welfare is highly vital, particularly through Regional Original Revenue (PAD), which is expected to serve as a primary pillar in financing regional development initiatives (Aditiya & Indira, 2024).

Since the enactment of Law Number 22 of 1999 concerning Regional Government, decentralization policies have granted autonomy to local governments to regulate and manage the interests of their respective communities. Regional autonomy enables local governments to plan and implement development programs in accordance with regional conditions and potentials, thereby enhancing regional independence and competitiveness (Mardiasmo, 2018; Kuncoro, 2018). Regional financial independence, measured by the ability of local governments to finance their activities without relying on central government support, has become one of the key parameters in evaluating governmental performance (BPK RI, 2020).



One of the primary sources of PAD is derived from regional taxes and levies, where Motor Vehicle Tax (PKB) and Motor Vehicle Title Transfer Fee (BBNKB) constitute important components in increasing regional revenue (Hadi & Saputri, 2018; Sukirno, 2023). Previous studies indicate that PKB and BBNKB contribute significantly to PAD, with PKB being the dominant source of local revenue (Sari, 2021; Prasetyo, 2022). The Government of the Special Region of Yogyakarta has demonstrated strong performance in managing PAD, with projections indicating a steady increase in revenue from 2019 to 2024 (BPKAD DIY).

Based on this background, this study aims to analyze the effect of PKB and BBNKB on PAD in the Special Region of Yogyakarta during the 2019–2024 period. The findings of this study are expected to provide insights for the government in improving tax compliance and to serve as a reference for the development of theory and knowledge in the field of local public financial management.

2. THEORETICAL REVIEW AND HYPOTHESIS

Stewardship Theory

This theory explains that managerial motivation does not stem from personal interests but rather refers to the primary objectives of management, which are grounded in the interests of the organization (Donaldson & Davis, 1991). In this context, it is assumed that every individual possesses integrity, resulting in a close relationship between the success of an institution and the satisfaction of capital owners. Capital managers are expected to prioritize collective interests over personal interests (Sudaryo et al., 2017). According to Mus et al. (2022), the application of stewardship theory can be implemented in public sector organizational accounting, including government institutions.

Tax

According to Law Number 28 of 2007, tax is defined as a mandatory contribution to the state owed by individuals or entities, which is coercive in nature, without direct compensation, and is used for state purposes to achieve the greatest prosperity of the people. Mardiasmo (2019) explains that tax is a contribution from the public to the state treasury based on law (which can be enforced) without receiving direct reciprocal services, and is used to finance public expenditures.

Motor Vehicle Tax

Based on Law Number 28 of 2009 concerning Regional Taxes and Levies, motor vehicle tax is a tax on the ownership and use of motor vehicles, including trailers, that are operated on all types of public roads. Satispi and Aziz (2021) state that motor vehicle tax applies to the ownership and/or control of vehicles, excluding heavy equipment not used as transportation tools, such as bulldozers, excavators, and loaders.

Islami and Rahmawati (2020) note that in the imposition of motor vehicle tax, regional governors may grant tax relief, reductions, or exemptions. Vehicles used for ambulances and hearses may be granted such incentives as determined by the regional head. The amount of motor vehicle tax payable is calculated by multiplying the tax rate by the tax base. In practice, the motor vehicle tax (PKB) formula is expressed as follows:

$$\text{Tax Payable} = \text{Tax Rate} \times \text{Tax Base (NJKB} \times \text{Weight)}$$

Motor Vehicle Title Transfer Fee (BBN-KB)

According to Marihot (2014), the Motor Vehicle Title Transfer Fee is a tax imposed on the transfer of ownership rights of motor vehicles resulting from agreements between two parties or unilateral acts, or circumstances arising from sale and purchase, exchange, grants, inheritance, or inclusion in a business entity.

Motor vehicles are defined as all wheeled vehicles along with their trailers used on all types of land roads and powered by technical equipment such as engines or other devices that convert specific energy sources into motion, including heavy equipment that operates using wheels and is not permanently affixed.

According to Regional Tax Regulation Number 9 of 2010, the Motor Vehicle Title Transfer Fee is a tax on the transfer of ownership rights due to transactions such as sale and purchase, exchange, grants, inheritance, or business capitalization. A progressive tax is applied to privately owned motor vehicles (both two-wheeled and four-wheeled) registered under the same owner and residential address. The principal amount of BBNKB payable is calculated by multiplying the tax rate by the tax base. In general, the formula is as follows:

$$\text{BBNKB} = \text{Tax Rate} \times \text{Tax Base (NJKB)}$$

Regional Original Revenue

Regional Original Revenue (PAD), according to Law Number 28 of 2009, is a source of regional finance derived from the region itself, consisting of regional tax revenues, regional levies, proceeds from the management of separated regional assets, and other legitimate local revenues.

Maharani and Sari (2021) define regional original revenue as income generated within a region that can be developed in accordance with the economic potential of the local community. Marlina and Pratiwi (2021) state that within the framework of regional autonomy and decentralization, regional original revenue represents a form of income that grants regions the authority to determine their own financing strategies.

Motor Vehicle Tax and Regional Original Revenue

Several studies have examined the relationship between Motor Vehicle Tax (PKB) and Regional Original Revenue (PAD). These studies indicate that PKB is a significant source of income for local governments.

Sari and Rahmawati (2022) found a positive and significant effect of PKB on PAD. Similarly, Hidayati (2020) reported that PKB has a positive influence on PAD. Nugroho (2023), in a comparative study, analyzed the contributions of PKB and BBNKB to PAD across several regions and found that although both taxes contribute significantly, PKB

tends to be more dominant. Based on these findings and empirical phenomena, the hypothesis is formulated as follows:

H₁: Motor Vehicle Tax has an effect on Regional Original Revenue.

Motor Vehicle Title Transfer Fee and Regional Original Revenue

Research on the effect of Motor Vehicle Title Transfer Fee (BBNKB) on Regional Original Revenue (PAD) indicates that BBNKB is also an important revenue source for local governments. [Prasetyo \(2021\)](#) found that BBNKB contributes significantly to the increase in PAD. [Wulandari \(2022\)](#) reported that although BBNKB provides a significant contribution, its management effectiveness needs improvement, particularly in administrative systems and public services. [Hidayati and Sari \(2023\)](#) further explored the relationship between BBNKB and PAD in several regions in Indonesia. Based on these findings and empirical observations, the hypothesis is formulated as follows:

H₂: Motor Vehicle Title Transfer Fee has an effect on Regional Original Revenue.

Based on the hypotheses developed in this study, the research model can be illustrated as follows:

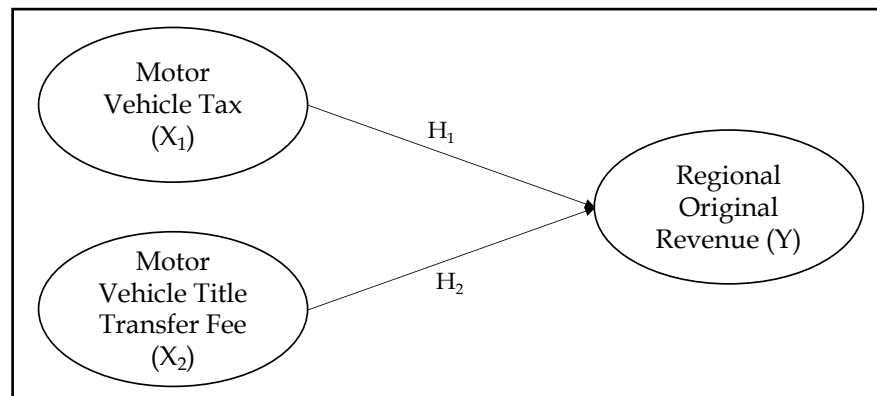


Figure 1. Research Model

3. RESEARCH METHODOLOGY

This study employs a causal approach aimed at analyzing the effect of independent variables, namely Motor Vehicle Tax (PKB) and Motor Vehicle Title Transfer Fee (BBNKB), on the dependent variable, Regional Original Revenue (PAD). This research adopts a quantitative design utilizing numerical data to measure the contribution and effectiveness of PKB and BBNKB toward PAD in the Local Government of the Special Region of Yogyakarta during the 2019–2024 period.

The operational definitions of variables refer to relevant statutory regulations. PAD is defined as all revenues generated by the region in accordance with regional regulations, calculated as the sum of regional taxes, regional levies, proceeds from the management of separated regional assets, and other legitimate local revenues. PKB is defined as a tax imposed on the ownership and control of motor vehicles, while BBNKB is defined as a tax imposed on the transfer of ownership rights of motor vehicles; both are measured based on predetermined tax rates and tax bases.

The research data consist of quantitative data derived from primary sources, namely the realized revenues of PKB, BBNKB, and PAD in the Special Region of Yogyakarta for the period 2019–2024. Secondary data are also utilized to support problem identification, sourced from relevant literature, journals, and articles. The sampling technique employed is purposive sampling, with criteria focused on selecting data sources that are considered to have the most comprehensive understanding of the research object.

Data collection techniques include documentation and interviews. Documentation is used to obtain data in the form of archives, reports, and official documents, while interviews are conducted directly to gather additional information from relevant informants. Furthermore, data analysis is performed using multiple linear regression with the assistance of SPSS software. The analysis includes descriptive statistics as well as classical assumption tests, namely multicollinearity, autocorrelation, heteroscedasticity, and normality tests.

Hypothesis testing is conducted using a multiple regression model to examine the effects of PKB, BBNKB, and their effectiveness on PAD. Decision-making is based on the coefficient of determination (R^2), the F-test for simultaneous significance of independent variables, and the t-test for partial significance of each variable. This study refers to statistical theories and methods proposed by Ghozali (2013), and follows regulatory guidelines related to taxation and regional revenue ([Law No. 28 of 2009](#) and [Law No. 33 of 2014](#)), as well as quantitative research methodology by Sugiyono (2019).

4. RESULTS AND DISCUSSION

Simultaneous Test (F-Test)

The F-test, also known as the model feasibility test, is conducted to evaluate the adequacy of the regression model. This test determines whether the independent variables simultaneously have a significant effect on the dependent variable. In this study, the independent variables consist of Motor Vehicle Tax (PKB) and Motor Vehicle Title Transfer Fee (BBNKB), while the dependent variable is Regional Original Revenue (PAD). The test is conducted at a significance level (α) of 5%. The results of the F-test in this study are presented in the following table:

Table 1. F-test Result

	F	Sig.	Remark
Regression	4.590	.050 ^b	Sig

The obtained F-value is 4.590, which is then compared with the significance value (Sig.) presented in the table, namely 0.050. This p-value (Sig.) indicates the probability that the observed result occurs by chance. In the context of the F-test, if the p-value is less than 0.05, the null hypothesis stating that there is no relationship between the independent variables and the dependent variable can be rejected.

In this case, with a p-value of 0.050, the result lies exactly at the threshold of significance. This indicates that the regression model as a whole is statistically significant in predicting Regional Original Revenue (PAD). Overall, the results of the F-test suggest that the independent variables included in the regression model have a significant effect on Regional Original Revenue.

Partial Test (t-Test)

The t-test is conducted to statistically examine the magnitude of the effect of each independent variable on the dependent variable. Based on the data processing results, the outcomes of the t-test are obtained from the Coefficients table.

Table 2. t-test Result

	t	Sig.	Remark
(Constant)	.315	.806	
Motor Vehicle Tax	1.390	.037	Sig
Motor Vehicle Title Transfer Fee	3.859	.011	Sig

The results of the t-test presented in the coefficients table provide important information regarding the effect of independent variables on the dependent variable in the regression model being analyzed. In this context, the independent variables include Motor Vehicle Tax (PKB) and Motor Vehicle Title Transfer Fee (BBNKB).

The t-value for PKB is 1.390 with a significance level (Sig.) of 0.037. Since this significance value is less than 0.05, it can be concluded that PKB has a statistically significant effect on the dependent variable. This indicates that changes in PKB are positively associated with changes in the dependent variable, and its effect can be considered meaningful within the context of this analysis.

The t-value for BBNKB is 3.859 with a significance level of 0.011. This significance value is also less than 0.05, indicating that BBNKB has a highly significant effect on the dependent variable. This strong effect suggests that BBNKB contributes substantially to variations in the dependent variable, highlighting its importance in the context of the policy or analysis being conducted.

Overall, the t-test results indicate that all independent variables analyzed (PKB and BBNKB) have a significant effect on the dependent variable at the 5% significance level (0.05). This finding implies that policies related to the management of regional taxes and levies have an important impact on the variable under study.

Motor Vehicle Tax and Regional Original Revenue

The t-value for Motor Vehicle Tax (PKB) is 1.390 with a significance level (Sig.) of 0.037. Since this significance value is less than 0.05, it can be concluded that PKB has a statistically significant effect on the dependent variable. This indicates that changes in PKB are positively associated with changes in the dependent variable, and its effect can be considered important within the context of this analysis.

These findings are consistent with and supported by several previous studies. [Saputri \(2019\)](#) stated that motor vehicle tax has a significant contribution to regional revenue. Similarly, [Faisal \(2020\)](#), in his study on the contribution of motor vehicle tax to PAD in Central Sulawesi Province, found that motor vehicle tax has a significant effect on increasing PAD.

Motor Vehicle Title Transfer Fee and Regional Original Revenue

The t-value for Motor Vehicle Title Transfer Fee (BBNKB) is 3.859 with a significance level of 0.011. This significance value is also less than 0.05, indicating that BBNKB has a highly significant effect on the dependent variable. This strong influence suggests that BBNKB contributes substantially to variations in the dependent variable, highlighting its importance in the context of policy or analysis being conducted.

This study is supported by several previous studies, including [Setiawan \(2023\)](#), who examined the effect of BBNKB on PAD in DKI Jakarta Province. The results showed that BBNKB has a significant impact on increasing PAD. Likewise, [Prasetyo \(2021\)](#), who analyzed the relationship between BBNKB and PAD in Banyumas Regency, found that BBNKB contributes significantly to PAD.

5. CONCLUSION AND RECOMMENDATIONS

Based on the results of the analysis regarding the effect of the contribution and effectiveness of Motor Vehicle Tax (PKB) and Motor Vehicle Title Transfer Fee (BBNKB) on Regional Original Revenue (PAD), as well as the development of the financial performance of the Local Government of the Special Region of Yogyakarta during the 2019–2024 period, it can be concluded that MVT has a significant effect on PAD, with a t-value of 1.390 and a significance level (Sig.) of 0.037, which is less than 0.05. Furthermore, BBNKB shows a highly significant effect on PAD, with a t-value of 3.859 and a significance level of 0.011, also below 0.05.

Based on the findings of this study on the contribution and effectiveness of Motor Vehicle Tax (PKB) and Motor Vehicle Title Transfer Fee (BBNKB) on Regional Original Revenue (PAD) in the Special Region of Yogyakarta, several recommendations can be proposed. These include enhancing public awareness and education regarding the importance of tax compliance, optimizing tax management through improvements in administrative systems and information technology, and increasing the effectiveness of tax collection through stronger supervision and law enforcement. In addition, local governments are encouraged to develop incentive policies for compliant taxpayers, conduct regular monitoring and evaluation of regional financial performance, and strengthen collaboration with relevant institutions to improve public awareness of tax obligations.

6. REFERENCES

- Aditiya, N. Y., & Indira, P. D. (2024). Analysis of the effectiveness and contribution of local taxes as a source of local revenue. In *International Student Conference on Accounting and Business* (pp. 402–410).
- Donaldson, L., & Davis, J. H. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. *Australian Journal of Management*, 16(1), 49–64.
- Faisal, M. (2020). *Kontribusi pajak kendaraan bermotor terhadap pendapatan asli daerah*. IAIN Palu.
- Ghozali, I. (2013). *Aplikasi analisis multivariate dengan program IBM SPSS 21*. Badan Penerbit Universitas Diponegoro.
- Hadi, S. S., Dyah, R., & Saputri, A. (2018). Analisa kontribusi pajak kendaraan bermotor terhadap pendapatan asli daerah pada BPRD DKI Jakarta. *Jurnal*, 5(2).

- Hidayati, N., & Sari, D. (2023). Pengaruh bea balik nama kendaraan bermotor terhadap pendapatan asli daerah di Kota C. *Jurnal Akuntansi dan Keuangan*, 9(2), 200–215.
- Islami, D., & Rahmawati, L. (2020). Analisis kontribusi pajak kendaraan bermotor dan bea balik nama kendaraan bermotor terhadap pendapatan asli daerah (PAD) Provinsi Jawa Timur. *OECOMICUS Journal of Economics*, 4(2), 169–179.
- Kuncoro, M. (2018). *Perencanaan pembangunan*. Gramedia Pustaka Utama.
- Maharani, I., & Sari, R. M. (2021). Analisis efektivitas dan kontribusi pajak daerah terhadap pendapatan asli Kabupaten Blitar. *Jurnal Sosial dan Sains*, 1(11), 1–392.
- Mardiasmo. (2018). *Perpajakan* (Edisi terbaru). Penerbit Andi.
- Marlina, E., & Pratiwi, W. (2021). Analisis kontribusi pajak daerah dan retribusi daerah terhadap pendapatan asli daerah Kabupaten Bungo. *Jurnal Administrasi Sosial dan Humaniora*, 5(2), 215–225.
- Mus, A. A. R., Kamase, J., Mursalim, & Gani, A. A. (2022). Implications of managing assets and public sector financial performance on information quality financial report of the provincial government of Southeast Sulawesi. *Journal of Business and Management*, 24(8), 55–65. <https://doi.org/10.9790/487X-2408015565>
- Nugroho, A. (2023). Pengaruh pajak kendaraan bermotor terhadap pendapatan asli daerah di Kota Z. *Jurnal Akuntansi dan Keuangan*, 8(3), 201–215.
- Prasetyo, E. (2021). Pengaruh bea balik nama kendaraan bermotor terhadap pendapatan asli daerah di Kabupaten A. *Jurnal Ekonomi dan Keuangan Daerah*, 6(2), 150–165.
- Prasetyo, F. (2022). Efektivitas bea balik nama kendaraan bermotor terhadap pendapatan asli daerah di Kota Surabaya. *Jurnal Ekonomi dan Keuangan*.
- Sari, R. (2020). Efektivitas pajak kendaraan bermotor terhadap pendapatan asli daerah di Kabupaten Bandung. *Jurnal Ekonomi dan Bisnis*.
- Satispi, Y., & Samudra, A. A. (2021). Public policy implementation of the Jakarta government's policy: Study of community relocation around the reservoir. *The Social Perspective Journal*.
- Sudaryo, Y. (2017). *Keuangan di era otonomi daerah* (Edisi pertama). ANDI.
- Sukirno, S. (2023). Pajak daerah dan kontribusinya terhadap pendapatan asli daerah. *Jurnal Ekonomi dan Keuangan Daerah*.
- Wulandari, R. (2022). Dampak bea balik nama kendaraan bermotor terhadap pendapatan asli daerah di Provinsi B. *Jurnal Ilmu Ekonomi dan Manajemen*, 7(1), 75–90.