

# EFFECT OF MOTOR VEHICLE TAX REALIZATION, NAME REVERSAL DUTY MOTOR VEHICLE AND SURFACE WATER TAXES AGAINST LOCAL REVENUE OF REMBANG REGENCY

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## ABSTRACT

This study aims to analyze the reliability of Motor Vehicle Tax, Vehicle Name Reverse Duty and Surface Water Tax on Local Original Revenue of Rembang Regency. The population in this study is the target data target and realization of regional income of Rembang Regency. The sampling technique in this study uses *purposive sampling*, which is a sampling technique with certain criteria. The data used in this study is secondary data, through target data and regional revenue realization for the 2017-2021 fiscal year of Rembang Regency, by accessing the BAPENDA website of Central Java Province <http://pad-dppad.jatengprov.go.id:8080/jateng1/>. The results showed that PKB and BBNKB had a significant positive effect on the Regional Original Income (PAD) of Rembang Regency. Meanwhile, PAP has a negative insignificant effect on the Local Original Revenue (PAD) of Rembang Regency.

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## 1. INTRODUCTION

According to Law No. 32 of 2004 concerning Regional Government, it is stated that regional autonomy is the right, authority, and obligation of the region to independently manage and govern its own governance and community affairs in accordance with prevailing laws and regulations. As a consequence of exercising regional autonomy, each region is required to strive to increase the source of Original Local Government Revenue (PAD) to be able to finance the government's activities and improve services to the community. In the context of government administration, the Unitary State of the Republic of Indonesia (NKRI) is divided into provinces, and each province consists of regencies and cities. To support the administration of such governance, regions have the authority to impose levies on the community. In line with the above, the government is expected to explore various financial resources, especially to meet the financing needs of government and development in the region through Original Local Government Revenue (PAD). Based on the 1945 Constitution of the Republic of Indonesia, which recognizes taxation as one of the forms of statehood, it is emphasized that the imposition of burdens on the people, such as taxes and other compulsory levies, must be regulated by law. Therefore, the collection of Regional Taxes and Regional Levies must be based on the law (Law No. 28 of 2009)(UU No. 28 Tahun 2009).

The Original Local Government Revenue (PAD) is a self-sourced income derived from regional taxes, regional levies, revenue from the exploitation of regional wealth, which is separated, and other valid PAD sources. It serves as one of the fundamental bases for regional government in obtaining development funds and meeting regional expenditures. Other valid PAD sources include revenue from the sale of non-separated regional assets, banking services, interest income, foreign exchange rate gains against foreign currencies, as well as commissions, fees, or other forms resulting from the sale or acquisition of goods and services by the region. One of the essential sources of Original Local Government Revenue (PAD) is regional taxes, making them crucial in funding regional governance. To enhance service delivery to the community and regional self-reliance, there is a need to expand the scope of regional tax objects (Law No. 28 of 2009)(UU No. 28 Tahun 2009).

Referring to the research objectives, the first one is the Motor Vehicle Tax, abbreviated as PKB, which is a tax on the ownership and/or possession of motor vehicles (Ministry of Home Affairs Regulation No. 82 of 2022) (Permendagri Nomor 82 Tahun 2022). The tariff rates for Motor Vehicle Tax in accordance with the Provincial Regulation of Central Java No. 2 of 2011 concerning Provincial Taxes in Central Java are as follows: 15% (fifteen percent) for the initial ownership of private motor vehicles; 1.0% (one point zero percent) for public transport motor vehicles; 0.5% (zero point five percent) for ambulances, fire trucks,

social and religious vehicles, social and religious institutions, and government agencies; 0.2% (zero point two percent) for motor vehicles used as tools and equipment (Central Java Provincial Regulation No. 7 of 2017) (Perda Provinsi Jawa Tengah No. 7 Tahun 2017). This research is similar to several previous studies on Original Local Government Revenue (PAD) that have been conducted by various researchers, including the study conducted by Saputra (2020) that investigated the effect of Motor Vehicle Tax (PKB), Motor Vehicle Ownership Transfer Fee (BBNKB), and Surface Water Tax (PBBKB) on Original Local Government Revenue (PAD) (A Study in Bangka Belitung Province from 2010 to 2019).

According Law No. 28 of 2009 concerning Regional Taxes and Regional Levies, it is explained that Motor Vehicle Tax applies to all motorized vehicles with their trailers used on all types of roads, and propelled by technical equipment such as engines or other equipment that converts a specific energy source into driving power for the respective motor vehicle, including equipment operated by wheels and engines that are not fixed, as well as motorized vehicles operated in water based on ownership and/or possession. The results of the research conducted by Saputra (2020) indicated that Motor Vehicle Tax has a significant positive effect on the Original Local Government Revenue (PAD).

Name Reversal Duty Motor Vehicle (BBN-KB) is a tax or transfer of ownership rights of motorized vehicles resulting from a bilateral agreement or unilateral act or circumstance arising from sale, exchange, gift, inheritance, or inclusion in a business entity (Central Java Provincial Regulation No. 13 of 2015) (Perda Provinsi Jawa Tengah No. 13 Tahun 2015). Basically, the Name Reversal Duty Motor Vehicle (BBN-KB) cannot be separated from the motor vehicle tax because for every motor vehicle purchase transaction, there will automatically be a payment transaction for the Motor Vehicle Tax. To increase the Original Local Government Revenue (PAD), especially from the revenue collected through the Motor Vehicle Ownership Transfer Fee, it is essential for the local government to create a stable economic condition. The research results by Nurul Aliah et al. (2019) show that both the Motor Vehicle Tax (PKB) and the Name Reversal Duty Motor Vehicle (BBN-KB) have a significant positive effect on the Original Local Government Revenue (PAD).

Surface Water Tax (PAP) is a tax on the extraction and/or utilization of surface water (Central Java Provincial Regulation No. 13 of 2015) (Perda Provinsi Jawa Tengah No. 13 Tahun 2015). The taxpayers or the subjects of Surface Water Tax (PAP) are individuals or entities that carry out the extraction and/or utilization of surface water (UU No. 28 Tahun 2009). The following are exempted from Surface Water Tax (PAP) are extraction and/or utilization of surface water for household purposes, agricultural irrigation, and community needs while considering environmental sustainability, as well as extraction and/or utilization of surface water for community plantations, community forestry, social enterprises, government institutions, places of worship, fire stations while considering environmental sustainability (Law No. 28 of 2009) (UU No. 28 Tahun 2009). The research results by Delima et al. (2022) show that the surface water tax has a significant positive effect on Original Local Government Revenue (PAD).

## 2. METHOD

The type of data used in this research was based on documentary data using time series data. Documentary data is a type of research data that includes: invoices, journals, letters, meeting minutes, memos, or in the form of program reports (Sugiyono, 2018). The documentary data in this research consisted of data on motor vehicle taxes paid and registration conducted at SAMSAT (Regional Office of Motor Vehicle Tax) Rembang, as well as target and realization data of local revenue in Rembang Regency from January 2017 to December 2021.

The data source for this research was secondary data. According to Sugiyono (2018), secondary data refers to data that is not directly obtained by the data collector. This type of data supports the primary data's needs, such as books, literature, and readings related to and supporting this research, or sources that do not directly provide data to the data collector, for example, through other individuals or documents. The secondary data in this research consisted of target and realization data of regional revenue for the fiscal years 2017-2021 in Rembang Regency, accessed through the website of the Regional Financial and Development Supervisory Agency (BAPEMDA) of Central Java Province at <http://pad-dppad.jatengprov.go.id:8080/jateng1/>.

In this research, the population was the target and realization of regional revenue in Rembang Regency. According to Sugiyono (2018), a sample is a part of the total characteristics possessed by the population in question. When the population is large, and the researcher cannot study everything within the population due to constraints such as limited funds, resources, and time, the researcher can use a sample taken from that population. The sample used in this research was the entire population, which included data on the realization of revenue from Vehicle Tax, Vehicle Ownership Transfer Fee, and Surface

Water Tax in the period from 2017 to 2021, comprising data from the last 5 years taken on a monthly basis (60 months). Based on the explanation above, the sample size used in this research was 60 months. This research focuses on the mentioned subjects because they align with the research objectives, which are to determine the effect of Motor Vehicle Tax, Motor Vehicle Ownership Transfer Fee, and Surface Water Tax on the Original Local Government Revenue in Rembang Regency.

The sampling technique used in this research was purposive sampling. Purposive sampling was a sampling technique employed with a specific purpose in mind (Sugiyono, 2018). This method was used to obtain a representative sample based on certain criteria. The criteria used in this study were the realization value of Motor Vehicle Tax, Name Reversal Duty Motor Vehicle, Surface Water Tax, and the realization value of the Original Local Government Revenue in Rembang Regency from 2017 to 2021. These values were then calculated for each month, resulting in a total of 60 samples. Thus, the realization value of each independent variable, namely Motor Vehicle Tax, Name Reversal Duty Motor Vehicle, Surface Water Tax, and the dependent variable, which was the Original Local Government Revenue, consisted of 60 samples.

Linear regression analysis was used to determine the direction and magnitude of the effect of independent variables on the dependent variable. The independent variables in this research were the Revenue of Motor Vehicle Tax (PKB), the Revenue of Name Reversal Duty Motor Vehicle (BBN-KB), and the Revenue of Surface Water Tax (PAP). Meanwhile, the dependent variable was the Original Local Government Revenue (PAD). The regression equation for this study was as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Interpretation:

Y	: Original Local Government Revenue (PAD)
$\alpha$	: Intercept (Constant)
$\beta_1; \beta_2; \beta_3$	: Regression coefficients
$X_1$	: Motor Vehicle Tax (PKB)
$X_2$	: Name Reversal Duty Motor Vehicle (BBN-KB)
$X_3$	: Surface Water Tax (PAP)
e	: Error

The steps in multiple linear regression analysis include:

a. Partial Test (t-Test)

According to Ghozali (2018), the partial test is used to determine the effect of each independent variable on the dependent variable. The Partial Test (t-Test) was intended to determine how much the independent variables could individually explain the variation in the dependent variable. The criteria for the partial test (t-Test) were used to test hypotheses H1, H2, and H3. The steps or stages of the t-Test were as follows:

H<sub>0</sub>:  $\beta_1; \beta_2; \beta_3 \leq 0$ , means that the Revenue of Motor Vehicle Tax (PKB), the Revenue of Motor Vehicle Ownership Transfer Fee (BBN-KB), and the Revenue of Surface Water Tax (PAP) have a significant positive effect on Original Local Government Revenue (PAD).

H<sub>a</sub>:  $\beta_1; \beta_2; \beta_3 > 0$ , means that the Revenue of Motor Vehicle Tax (PKB), the Revenue of Motor Vehicle Ownership Transfer Fee (BBN-KB), and the Revenue of Surface Water Tax (PAP) have a significant negative effect on Original Local Government Revenue (PAD).

The acceptance and rejection criteria for the hypotheses are as follows:

H<sub>1</sub>, H<sub>2</sub>, H<sub>3</sub>, are accepted if the coefficient (beta) values show a positive direction and the significance level is <5% (0.05).

H<sub>1</sub>, H<sub>2</sub>, H<sub>3</sub> are rejected if the coefficient (beta) values show a negative direction or the significance level  $\geq 5\%$  (0.05).

b. Determination Test

The determination test was used to examine how much the independent variables could explain the dependent variable. In this research, the determination test was conducted using the adjusted R<sup>2</sup>. Determination (R<sup>2</sup>) essentially measured how well the model could explain the variation in the dependent variable.

Generally, the determination coefficient for cross-sectional data is relatively low due to significant variations among each observation, while for time series data, it typically has a high determination coefficient (Ghozali, 2018).

The interpretation of the final stage of the adjusted determination coefficient (R<sup>2</sup>) was as follows:

- 1) If the value of the adjusted determination coefficient (R<sup>2</sup>) approaches one, it means that the independent variables have a relationship that closely approximates the perfect relationship with

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the dependent variable.

- 2) If the value of the adjusted determination coefficient ( $R^2$ ) approaches zero, it means that the independent variables do not have a relationship that closely approximates the perfect relationship with the dependent variable.

### 3. RESULT AND DISCUSSION

#### The Classic Assumption Test

##### a. Normality Test

Table 1. Results of the Normality Test

<i>Unstandardized Residual</i>	
Asymp.Sig.(2-tailed)	0.200

From the results of the normality test, the Asymp.Sig. 2-tailed value was approximately 0.200, which was greater than 0.05. Based on this, it could be inferred that the data were normally distributed, allowing us to proceed with further classical assumption tests.

##### b. Multicollinearity Test

Table 2 Results of the Multicollinearity Test

Variable	Tolerance	VIF
PKB	0,192	5.280
BBN-KB	0,304	3.285
PAP	0,453	2.209

The results indicated that there was no multicollinearity issue. This conclusion was based on the fact that the Tolerance values were greater than 0.10, and the VIF values were less than 10, which meant that there was no significant correlation between the independent variables. Therefore, it could be inferred that multicollinearity did not occur in the analysis.

##### c. Autocorrelation Test

Table 3. Results of the Autocorrelation Test

<i>Durbin-Watson</i>	1.699
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The Durbin-Watson value of 1.699 was obtained, which was used to test for autocorrelation using the Durbin-Watson test with the assumption that  $dU < dW < 4-dU$ . With the calculated value of  $dU = 1.689$ , it can be observed that  $1.689 < 1.699 < (4-1.689 = 2.311)$ , indicating that there is no autocorrelation present in the data.

##### d. Heteroscedasticity Test (Park Test)

Table 4 Results of the Heteroscedasticity Test (Park Test)

Variable	Sig	Interpretation
PKB	0.060	No Heteroscedasticity Detected
BBN-KB	0.162	No Heteroscedasticity Detected
PAP	0.058	No Heteroscedasticity Detected

Based on Table 4, which showed the significance values of each variable, it was concluded that there was no evidence of heteroscedasticity in the data.

#### T-TEST (Hypothesis Testing)

The results of the hypothesis test can be seen in Table 5, as follows:

Table 5. Results of Hypothesis Testing

Variable	B	Sig.	Keputusan
PKB	1.486	0.000	$H_1$ Accepted
BBN-KB	0.439	0.000	$H_2$ Accepted
PAP	-2.379	0.964	$H_3$ Rejected

Based on the table above, the results of the hypothesis testing were as follows:

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1. Hypothesis Testing Result for the First Hypothesis (H<sub>1</sub>)

The first hypothesis stated that PKB had a positive and significant effect on PAD. To conduct the hypothesis testing for the first hypothesis, a two-tailed t-test was used. The obtained coefficient value was 1.486, and the significance level was 0.000. Therefore, the hypothesis that PKB had a positive and significant effect on PAD was accepted. The results of the hypothesis testing for the first hypothesis indicated that PKB had a positive and significant effect on PAD.

2. Hypothesis Testing Result for the Second Hypothesis (H<sub>2</sub>)

The second hypothesis stated that BBN-KB had a positive and significant effect on PAD. To conduct the hypothesis testing for the second hypothesis, a two-sided t-test was performed. The results showed that the coefficient value of BBN-KB was 0.439 with a significance level of 0.000. Thus, the hypothesis that BBN-KB had a positive and significant effect on PAD was accepted. The results of the second hypothesis testing indicated that BBN-KB had a positive and significant impact on PAD.

3. Hypothesis Testing Result for the Third Hypothesis (H<sub>3</sub>)

The third hypothesis stated that PAP had a significant positive effect on PAD. To conduct the hypothesis testing for H<sub>3</sub>, a two-tailed t-test was performed, and it yielded a coefficient value of -2.379 with a significance level of 0.964. However, the hypothesis stating that PAP has a significant positive effect on PAD was rejected. The results of the hypothesis testing for H<sub>3</sub> suggested that PAP had a non-significant negative effect on PAD.

**Determination Test Results**

Table 6. Determination Test Results

Model	R	RSquare	AdjustrsRSquare
1	0.994	0.988	0.987

The estimated regression results in the determination test indicated an adjusted R<sup>2</sup> value of 0.987. This meant that the independent variables, PKB, BBNKB, and PAP, in this regression model could collectively explain 98.7% of the variation in the dependent variable, PAD. The remaining 1.3% of the variation was attributed to other factors that were not included in this research model.

**Discussion**

**a. The Effect of PKB on PAD**

The first hypothesis stated that the Revenue of Motor Vehicle Tax (PKB) had a significant positive effect on PAD. The results of the hypothesis test indicated that PKB had a significant positive effect on PAD, meaning that an increase in PKB would have led to an increase in PAD. This could be attributed to the increasing trend of using motorized vehicles every year. Many individuals preferred using private vehicles over public transportation for their daily activities, and some even owned more than one vehicle, leading to an overall increase in motorized vehicle usage. Due to this trend, the increasing number of motorized vehicles could have contributed to the growth of Original Local Government Revenue (PAD) if effectively utilized. Therefore, it was crucial for the central government to responsibly manage and account for regional tax revenue. By doing so, the funding for both the central and regional governments in development and public services could have been enhanced, ultimately improving the well-being and welfare of society.

Based on Law No. 28 of 2009 (Undang-Undang Nomor 28 Tahun 2009) concerning Regional Taxes and Levies, the Motor Vehicle Tax applies to all motorized vehicles, including motorcycles, cars, and other vehicles used on public roads. These vehicles are powered by technical equipment, such as engines or other mechanical devices, that convert fuel energy into the vehicle's movement. The tax is levied to transform a certain portion of their energy consumption into motorized vehicle movement. This tax also includes larger tools and equipment that operate using wheels and motors and are not permanently attached to the vehicles but still involve motorized vehicles on land and water, either through ownership or possession. The findings of this research are consistent with research by Saputra (2020), which suggests that the motor vehicle tax has a significant positive effect on regional revenue.

#### **b. The Effect of BBN-KB on PAD**

The second hypothesis stated that the Revenue of Motor Vehicle Ownership Transfer Fee (BBN-KB) had a significant positive effect on PAD. The results of the hypothesis test indicated that BBN-KB had a significant positive effect on PAD, meaning that an increase in BBN-KB would have led to an increase in PAD. This could be attributed to the increasing number of motorized vehicles, which was closely related to the Vehicle Ownership Transfer Fee, providing a substantial contribution to Original Local Government Revenue (PAD) when effectively utilized. Therefore, it was essential for the regional government to responsibly manage and account for regional tax revenue. By doing so, the funding for regional government expenditures in development and public services could have been enhanced, ultimately improving the welfare and well-being of society.

A Name Reversal Duty Motor Vehicle (BBN-KB) is a tax or transfer of ownership rights for motorized vehicles resulting from a bilateral agreement, unilateral act, or certain circumstances such as sale and purchase, exchange, gift, inheritance, or inclusion in business entities (Regional Regulation of Central Java Province No. 13 of 2015) (Perda Provinsi Jawa Tengah No. 13 Tahun 2015). The findings of this research are consistent with a study conducted by Nuri Aliah et al. (2019), which indicated that the vehicle ownership transfer fee has a significant positive effect on regional original revenue.

#### **c. The Effect of PAP on PAD**

The third hypothesis stated that the Revenue of Surface Water Tax (PAP) had a significant positive effect on PAD. However, the results of the hypothesis test indicated that PAP had a non-significant negative effect on PAD. This means that an increase in PAP would have a minimal impact on reducing PAD, suggesting that changes in water usage-related tax (PAP) do not significantly affect Original Local Government Revenue.

Revenue of Surface Water Tax (PAP) is a tax on the extraction and/or utilization of surface water (Regional Regulation of Central Java Province No. 13 of 2015) (Perda Provinsi Jawa Tengah No. 13 Tahun 2015). The subject of PAP or the taxpayer of surface water tax is individuals or entities that engage in the extraction and/or utilization of surface water (Law No. 28 of 2009) (UU No. 28 Tahun 2009). The exemptions from the objective of the Revenue of Surface Water Tax (PAP) include the extraction and/or utilization of surface water for household basic needs, agricultural irrigation, and community welfare while maintaining environmental sustainability. It also encompasses the extraction and/or utilization of surface water for community economic development, community forestry, social enterprises, government institutions, places of worship, and firefighting facilities while ensuring environmental sustainability (Regional Regulation No. 28 of 2009) (UU No. 28 Tahun 2009). The results of this research are not consistent with the study conducted by Delima et al. (2022), which found that the surface water tax (PAP) had a significant positive effect on regional revenue.

#### **4. CONCLUSION**

Based on the research results, it can be concluded that the variables the Revenue of Motor Vehicle Tax (PKB) and the Revenue of Motor Vehicle Ownership Transfer Fee (BBN-KB) had a significant positive effect on PAD, while the Revenue of Surface Water Tax (PAP) has a non-significant negative effect on Original Local Government Revenue (PAD).

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