The Effect of Motor Vehicle Tax on Regional Original Income (PAD) 
Bone Bolango District

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Abstract

Tax is a source of state or regional income whose contribution is highly expected to finance development. One of the taxes that has the potential to become one of the sources to encourage local revenue is the Motor Vehicle Tax. This study aims to determine the effect of motorized vehicle tax on local revenue in Bone Bolango Regency. The results of the study show that the Motor Vehicle Tax (PKB) every year in the last 5 years (2015-2019) continues to increase in terms of realization achievement. Because it is able to make a real contribution to the PAD of Bone Bolango Regency. The results of the simple linear regression calculation and the calculation of the coefficient of determination show that the motor vehicle tax has a significant effect on PAD revenue as indicated by the value of RSquare = 0.784 or 78.4 percent. While the remaining 21.6 percent is influenced by other factors not examined. The test results are significant in the Summary Model table Sig = 0.046 > criteria (0.05) thus the regression equation model based on the research data is significant, meaning that the linear regression model meets the linearity criteria.

Keywords: Motor Vehicle Tax, Local Revenue

Introduction

In the past, it was still possible for local governments to obtain special assistance from the central government if they experienced financial difficulties or were unable to build much-needed infrastructure in their area. The current paradigm shift in government is marked by the issuance of Law No. 22 of 1999 and Law No. 25 of 1999 and the two laws have undergone several revisions. 32 and 34 of 2004, where the central government tries to put back the importance of regional autonomy in its true position, namely that regional autonomy is the authority of autonomous regions to regulate and manage the interests of local communities according to their own initiatives based on community aspirations in accordance with laws and regulations.

Each region has the obligation to fulfill the interests of the community by carrying out regional development in all fields (Jongbloed et al., 2008). In order to carry out regional development, each region requires a large amount of funds, where these funds have increased from year to year, in line with the increase in population and community needs. Regional development funds
are sourced from local tax revenues. Regional taxes are an important source of regional income to finance regional government administration and regional development.

According to Article 2 of Law no. 28 of 2009 concerning Regional Taxes and Levies, it is stated that the types of provincial taxes consist of 5 types of taxes, namely motor vehicle taxes, transfer fees for motorized vehicles, motor vehicle fuel taxes, surface water taxes, and cigarette taxes. Motor Vehicle Tax (PKB) is a competent source of regional income, which can provide a high contribution to the region (Nahumury et al., 2018). Plus the increasing volume of motorized vehicles, especially those in Bone Bolango Regency.

From the data obtained at the Samsat Bone Bolango office, the number of motorized vehicles registered in Bone Bolango ranges from 17,463 vehicles, with a tax revenue target of 22 billion but achieved until 2018 of Rp. 9.365 billion. Of the number of vehicles, the vehicle that dominates is motorcycles where in 2019 the number registered reached 17,463 vehicles. Therefore, it is necessary to optimize the receipt of Motor Vehicle Taxes through various efforts that are able to increase the amount of income, one of which is by increasing the satisfaction of motor vehicle taxpayers through the provision of optimal service quality.

Methods

The variable observed in this study is the amount of local tax realization over the last 5 years. This research involves 2 variables, namely X and Y. For details, it is explained as follows: (1) "X" is an independent variable (independent variable), is a variable whose value is not influenced by other factors or variables. In this study, the value of X is the realization of motor vehicle tax using time series data for the last 5 years; (2) "Y" is the dependent variable, this variable is the value that is influenced or caused by other variables. The dependent variable in this study is the value of Y is the realization of local revenue, using time series data for the last 5 years.

For the purposes of data analysis, the authors need a number of supporting data from inside and outside the organization. Data collection techniques used in collecting data related to and supporting the writing of this research were pursued through:

Field Research

This study seeks data directly from the object under study, so that the results can be believed to be true. The method taken is through; (1) Observation; (2) Documentation; (3) Library Research. The relationship between the two variables will be analyzed using regression and correlation analysis.

Simple Regression Analysis

The regression equation for a simple regression analysis is:

\[ \hat{Y} = Y \text{ price when } X = 0 \text{ (constant)} \]

\[ = b \times X \]

\[ \hat{Y} = \text{subject in dependent variable} \]

\[ \text{Predictable} \]

\[ b= \text{ directional number / regression coefficient, which indicates an increase number (+) or} \]
decrease (-) of kriterium variables based on variables
Predictor
x = an oak subjon the predictor variable
has a certain value

**Correlation Analysis**

By using the formula:

\[
a = \frac{(\Sigma Y)(\Sigma X^2) - (\Sigma X)(\Sigma XY)}{n\Sigma X^2 - (\Sigma X)^2}
\]

\[
b = \frac{n(\Sigma XY) - (\Sigma X)(\Sigma Y)}{n\Sigma X^2 - (\Sigma X)^2}
\]

**Results and Discussion**

**Development of Motor Vehicles in Bone Bolango Regency**

Along with the development of Bone Bolango Regency, which is now 17 years old, of course, this has implications for the progress of transportation, especially motorized vehicles, both 2-wheeled and 4-wheeled. The increasing number of motorized vehicles will certainly have an impact on regional revenues through motor vehicle taxes (Awaluddin & Tamburaka, 2017; Hartanto & Sugiharti, 2019).

To find out the development of motorized vehicles in Bone Bolango Regency can be seen in the table below:

<table>
<thead>
<tr>
<th>No.</th>
<th>Year</th>
<th>R2</th>
<th>%</th>
<th>R4</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2015</td>
<td>22,194</td>
<td>2,841</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2016</td>
<td>20,103</td>
<td>-9.42</td>
<td>2,867</td>
<td>0.92</td>
</tr>
<tr>
<td>3</td>
<td>2017</td>
<td>21,137</td>
<td>5.14</td>
<td>3,236</td>
<td>12.87</td>
</tr>
<tr>
<td>4</td>
<td>2018</td>
<td>22,887</td>
<td>8.28</td>
<td>3,688</td>
<td>13.97</td>
</tr>
<tr>
<td>5</td>
<td>2019</td>
<td>24,124</td>
<td>5.40</td>
<td>3,964</td>
<td>7.48</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>22,089</td>
<td>1.88</td>
<td>3,319</td>
<td>7.05</td>
</tr>
</tbody>
</table>

Source: Samsat Bone Bolango, 2020

Table 1 above shows that the development of motorized vehicles in Bone Bolango Regency between 2015-2019 experienced an average increase of 1.88% for wheel 2 or 22,089 vehicle units, while for wheel 4 an average of 7.05% or 3,319 vehicles. Judging from the development of 4-wheeled motorized vehicles, the number is greater than 2-wheeled motorized vehicles. This shows that the ability to buy vehicles for the people of Bone Bolango is in four-wheeled vehicles (cars) compared to 2-wheeled vehicles. The road to and to this area. In relation to this research, of course, the development of the number of motorized vehicle units in Bolango Regency will have an impact on increasing Regional Original Income (PAD) through tax revenue.
Development of Motor Vehicle Tax and Regional Original Income (PAD) Bone Bolango Regency 2015-2019

Motor Vehicle Tax (PKB)

Base for Calculation and Tariff of Motor Vehicle Tax (PKB) in which the Calculation of PKB The principal amount of motor vehicle tax payable is calculated by multiplying the tax rate by the tax base. In general, the calculation of PKB is according to the formula:

\[ \text{Tax Payable} = \text{Tax Rate} \times \text{Tax Base} \]

\[ = \text{Tax Rate} \times (\text{NJKB} \times \text{Weight}) \]

Tax Rates PKB rates apply to each province that collects PKB. PKB rates are set in provincial regulations. According to government regulation No. 65 of 2001 Article 5, the CLA is divided into 3 groups according to the type of control of motorized vehicles, namely: (1) 1.5% for non-public motorized vehicles; (2) 1% for public motorized vehicles. That is a motor vehicle provided for use by the public for a fee; (3) 0.5% for motorized vehicles of heavy equipment and large equipment.

To find out how the PKB acceptance in Bone Bolango Regency in the last 5 years (2015-2019), it is presented in the table below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Realization (Rp)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>329.115.000</td>
<td>34,44</td>
</tr>
<tr>
<td>2016</td>
<td>464.573.000</td>
<td>41,56</td>
</tr>
<tr>
<td>2017</td>
<td>661.445.210</td>
<td>42,38</td>
</tr>
<tr>
<td>2018</td>
<td>922.045.100</td>
<td>39,40</td>
</tr>
<tr>
<td>2019</td>
<td>1.124.544.650</td>
<td>21,96</td>
</tr>
<tr>
<td>Average</td>
<td>700.344.592</td>
<td>35,95</td>
</tr>
</tbody>
</table>

Source: Finance Agency, Bone Bolango Regency, 2020

Based on table 3 above, it turns out that the realization of PKB in the last 5 years (2015-2019) has increased quite well every year. The highest revenue occurred in 2019 which reached up to more than 1 billion rupiah. However, the percentage increase is quite low compared to previous years. On average, PKB revenues in the 2015-2019 period reached Rp. 700,344,592,- or 35,95%.

Regional Original Income (PAD)

PAD is a source of local government net revenue, which comes from 4 components, namely: (1) Local taxes; (2) Regional Retribution; (3) The results of regionally-owned companies and the results of the management of other regional assets that are separated, and; (4) Legitimate regional business income.

To find out the amount of PAD revenue in Bone Bolango Regency in the last 5 years (2015-2019) as can be seen in the table below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Realization (Rp)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>697.980.906.108</td>
<td>22,23</td>
</tr>
</tbody>
</table>

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Based on the table above, it turns out that the overall realization of PAD revenue is not optimal. It can be seen that none of the developments reached 100 percent, even the maximum realization was only at 25.45 percent in 2016. The rest only achieved less than 25 percent realization, even in 2017 the realization only reached -0.52 percent.

This, of course, really needs the attention of the local government, because the potential of the region, especially through the receipt of tourist attraction fees, will greatly support regional development as a source of development financing in addition to other sources of Regional Original Income such as regional stakes, other legitimate revenues, and revenue the rest of the results of local companies. If this is not a concern of the regional government, then the tendency of receipts from regional retributions will decrease, and in the end will have an impact on other PAD revenues and the realization of development in general.

Analysis of The Effect of Motor Vehicle Tax on Pad Bone Bolango District in 2015-2019

To find out how much influence motor vehicle tax has on the receipt of PAD Bone Bolango Regency, a simple linear regression analysis is conducted using the help of SPSS Ver.16.

In this analysis also uses the formula approach of linear regression sederhan, and correlation, to find out whether or not there is a relationship between the two variables (X = Motor Vehicle Tax (PKB) and Y=PAD).

Table 4. Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAD</td>
<td>879380030.20</td>
<td>113686111.750</td>
<td>5</td>
</tr>
<tr>
<td>PKB</td>
<td>700344.40</td>
<td>325579.883</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: SPSS

Analysis of the Descriptive Statistics section

The average pad value (Y) of 5 years bone bolango district is Rp. 879.380.030.20,- with standard deviation of Rp. 113,686,111.75. The average PKB (X) is Rp. 700,344.40 with a standard deviation of Rp. 325,579.88.-

Furthermore, to find out how strong the relationship between independent variable (X) PKB to dependent variable (Y) PAD Bone Bolango Regency, it can be seen in the results of correlations analysis as follows:

Table 5. Correlations

<table>
<thead>
<tr>
<th></th>
<th>PAD</th>
<th>PKB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson</td>
<td>1.000</td>
<td>.886</td>
</tr>
</tbody>
</table>

Source: Financial Agency, Bone Bolango Regency, 2020
Analysis of the Correlations section

The magnitude of the relationship between PAD and PKB values can be seen by looking at the correlation coefficient = 0.886, meaning that this value can show a very strong relationship between the results of PAD and PKB values relationship to positive). The level of trust used is 0.05. the results obtained a significant level of correlation coefficient of 0.023. because the value is smaller than 0.05, the relationship between PAD and PKB are significantly different. Furthermore, to find out how much the value of the determinant coefficient or the magnitude of the influence of PKB on PAD in Bone Bolango Regency is, the results of the Summary Model analysis are shown below:

### Table 6. Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
<th>R Square Change</th>
<th>F Change</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.886(^a)</td>
<td>.784</td>
<td>.712</td>
<td>60984555.938</td>
<td>.784</td>
<td>10.901</td>
<td>.046</td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) Predictors: (Constant), PKB
b. Dependent Variable: PAD

Analysis of the Model Summary section

In the model table, it can be seen that the R value is 0.886 or the correlation coefficient of the R value can be squared, namely 0.886 x 0.886 = 0.784 R square (coefficient of determination) in this case the variation of the dependent variable (PAD value) can be explained by the independent variable (PKB). that is equal to 78.4% or has a strong influence on the increase in PAD. The level of the relationship between the two variables can be seen in the following table:

### Table 7. The Magnitude of Relationships Between Variables

<table>
<thead>
<tr>
<th>Correlation Coefficient</th>
<th>The Power of Relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 0</td>
<td>Not a relationship</td>
</tr>
<tr>
<td>0.01 – 0.09</td>
<td>Relationships are less meaningful</td>
</tr>
<tr>
<td>0.10 – 0.29</td>
<td>Weak relationships</td>
</tr>
<tr>
<td>0.30 – 0.49</td>
<td>Moderate relationships</td>
</tr>
<tr>
<td>0.50 – 0.69</td>
<td>Strong relationships</td>
</tr>
<tr>
<td>0.70 – 0.89</td>
<td>Very strong relationship</td>
</tr>
<tr>
<td>&gt;0.90</td>
<td>Close-to-perfect relationship</td>
</tr>
</tbody>
</table>

Source: http://statistiksains.blogspot.com/2017/07
From the table above, it can be seen that the relationship is very meaningful or has a strong relationship between PAD in Bone Bolango Regency and Motor Vehicle Tax (PKB).

The next stage is to find out the value of forecasting or predicting the effect of Motor Vehicle Tax on PAD in Bone Bolango Regency which is described through the results of simple linear regression analysis as follows:

Table 8. Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>662,824,064.947</td>
<td>710,351,804.452</td>
<td>9.331</td>
</tr>
<tr>
<td>PKB</td>
<td>309.214</td>
<td>93.655</td>
<td>.886</td>
<td>3.302</td>
</tr>
</tbody>
</table>

Dependent Variable: PAD

The results of the regression equation are:

\[ Y = 662,824,064.947 + 309,214X \]

Where:

\[ Y = \text{PAD} \]
\[ X = \text{Motor Vehicle Tax (PKB)} \]

From the equation above, the value of Rp. 662,824,064.947 billion is a constant, meaning that if there is no value of Motor Vehicle Tax, then PAD remains the value of Rp. 662,824,064.947 billion

The regression coefficient of Rp. 309,214 indicates that every one unit increase (x = Motor Vehicle Tax) then Y (PAD) there is an increase of Rp. 309,214 or depending on the value of X, and vice versa.

In this case the t test is indispensable to test significant constants and free variables (Motor Vehicle Tax). The regression equation that has been obtained previously will be tested whether a free variable can be used as a variable to predict the future PAD value.

Previously we hypothesized:

\[ H_0 = \text{insignificant regression coefficient} \]
\[ H_1 = \text{significant regression coefficient} \]

Statistical testing:

if t count < t table then H0 is accepted, probability value > 0.05
if t count > t table then H1 is rejected, probability value < 0.05

from the calculation result obtained the value t count = 16,357 and table t = 9,331. So t count = 16,357 > table t = 9,331, and a significant value or probability of 0.003. So based on statistical testing H0 rejected and H1 accepted. So the coefficient of significant regression or Motor Vehicle Tax has a real effect on pad receipts.

Based on the calculation results above the regression model obtained earlier can be used as a tool to predict the value of The Original Revenue of Bone Bolango District in the following years.

To realize the capacity and independence of the region as well as to strengthen the structure of
regional revenue, the contribution of PAD in the APBD structure must always be increased because it is one of the benchmarks of ability and a mirror of regional independence. The lack of PAD revenue is still considered an obstacle and this must immediately be seriously evaluated by each local government in an effort to improve services and facilitation to the community (Maulana, 2020). In fact, the lack of effective and efficient targets to achieve the reality of meeting community needs is one of the things that has become the root of the problem of the lack of achievement of regional income so far.

Until now, the potential for local revenue has not been explored in general due to the lack of sensitivity of the local government in finding cultural advantages and potential local revenue (PAD), relatively low compliance and awareness of taxpayers/retributions, weak legal system and local revenue administration, the weakness of the apparatus, fears of the bureaucracy will fail in carrying out its program, not optimistic about the results that might be achieved. If PAD can be optimized and managed professionally by discovering the advantages of local culture and potential as well as the strong will of all stakeholders, it will be able to grow competitive regional competitiveness and improve community welfare through pro-people programs (Serrano et al., 2006).

The source of regional revenue refers to the Law on financial balance between the center and the regions, the amount of which is adjusted and harmonized with the division of authority between the central government and regional governments (Calamai, 2009). In this case, the regional government is given the right to obtain financial sources in the form of certainty of the availability of funding from the government in accordance with the submitted government affairs, namely the authority to collect and utilize regional taxes and levies, the right to obtain profit sharing from national resources located in the region and local government funds. Other balances as well as to manage regional wealth and obtain sources of financing with the basic principle that money follows function (Money Follow Function) (Yuwono, 2008).

Regional revenue sourced from Regional Original Revenue (PAD) is realized in each region through the authority to collect regional taxes and levies that have been regulated in laws and regulations, including Law Number 34 of 2000 which has been updated with the birth of Law Number 28 of 2009 concerning Regional Taxes and Regional Levies. Where Law Number 34 of 2000 has given authority to district/city governments to collect 7 types of regional taxes and 25 types of regional levies and each region is still given the authority to collect other levies in accordance with the potential of each (open list) as long as does not conflict with the above laws and regulations. Likewise, Law Number 28 of 2009 has given authority to district/city governments, including the government of Bone Bolango Regency, to collect 13 types of regional taxes and 37 types of regional retribution (close list).

However, taking into account the potential and progress of regional development, the Government of Bone Bolango Regency currently only collects 9 types of regional taxes. Then of the 30 types of regional retribution listed in Law Number 28 of 2009, there are only 32 types of retribution that have been collected by the Bone Bolango Regency Government from the community, so there are still 3 types of retribution that have not been fully managed. Supposedly, taking into account the factors of the rapid development of economic development activities in Bone Bolango Regency, the Bone Bolango Regency Government should also collect this type of
What has been explained above, where the explanation of the Motor Vehicle Tax cannot be separated from the explanation of PAD which is a component of the regional tax described above. Of course, what has been described above, that the various efforts of the Government of Bone Bolango Regency, can be said to have been maximized. This is confirmed by the results of the study which show that one of the components of the regional tax, namely the Motor Vehicle Tax, has been able to provide a significant and real influence on PAD in Bone Bolango Regency.

The results of the analysis through this study on the effect of motor vehicle tax on PAD are quite significant. In the hypothesis test, it is proven that the motor vehicle tax is significant to PAD because statistical testing $H_0$ is rejected and $H_1$ is accepted. So that the significant regression coefficient or motor vehicle tax has a significant effect on PAD revenue in Bone Bolango Regency at least in the last five years (2015-2019). Thus the hypothesis in the study proved to be true and acceptable.

**Conclusion**

Motor Vehicle Tax (PKB) every year in the last 5 years (2015-2019) continues to increase judging by the realization achievement. Therefore, able to make a real contribution to the PAD Bone Bolango Regency. The results of simple linear regression calculation and calculation of the coefficient of determination show that Motor Vehicle Tax has a real influence on PAD receipts as indicated by the value of $R^2 = 0.784$ or 78.4 percent. While the remaining 21.6 percent was influenced by other factors that were not studied. The results of significant tests in the Table Model Summary Sig = 0.046 > criteria (0.05) and thus the regression equation model based on research data is significant meaning, linear regression models meet linearity criteria. Motor Vehicle Tax (PKB) is a source of pad receipts that have potential and promising prospects for the region. Therefore, speed and excellent service are needed for taxpayers, because motor vehicles are predicted to continue to grow in line with the progress of Bone Bolango and Gorontalo Province. The preparation of facilities and training and human resources support needs to be continuously improved.

**References**


Maulana, R. Y. (2020). Collaborative governance in the implementation of e-government-based
