The Influence of Capital Expenditures on Maintenance Expenditures in Regency or City Governments in West Sumatra Province

M. Rizky Mahaputra¹, M. Rido Mahaputra²
¹Mercu Buana University, Jakarta, Indonesia, rizkymahaputra55@gmail.com
²Mercu Buana University, Jakarta, Indonesia, ridhomahaputra26@gmail.com

Corresponding Author: rizkymahaputra55@gmail.com

Abstract: The research objective to be achieved is to provide empirical evidence that: Capital Expenditures have a significant effect on Maintenance Expenditures in the same year. Capital Expenditures have a significant effect on Maintenance Expenditures in different years. The difference in capital expenditure has a significant effect on the difference in maintenance expenditure in the same year. The data collection method is a documentation study method where the data collection time is in the form of a time series (time series/historical). This research uses a simple linear regression analysis method. The research results show that Capital Expenditures have a significant effect on Maintenance Expenditures in the same year, namely 2015, this is proven by a significance value of 0.000 < 0.05. Capital Expenditures have a significant effect on Maintenance Expenditures in different years. The difference in capital expenditures does not have a significant effect on the difference in maintenance expenditures in the same year, namely 2015, this is due to the significance value of 0.250 > 0.05.

Keywords: Capital Expenditures, Maintenance Expenditures, Regency or City Government.

INTRODUCTION

Development is a series of processes of change towards a better situation in an effort to improve community welfare (Kurniawan, 2010). Other literature states that development is a process of change that covers the entire social system, such as politics, economics, infrastructure, defense, education and technology, institutions and culture (Alexander 1994). One of the supporting factors for regional development is the availability of adequate infrastructure. In fact, it can be said that infrastructure is an important aspect to speed up the development process.

In an effort to speed up the development process, a Regional Autonomy system was implemented which was marked by the enactment of Law Number 22 of 1999 concerning Regional Government. In 2004, Law Number 22 of 1999 concerning Regional Government was deemed no longer appropriate to developments in the situation, state administration and demands for the implementation of regional autonomy, so it was replaced by Law Number 32
of 2004 concerning Regional Government. Furthermore, Law Number 32 of 2004 concerning Regional Government has undergone several changes to date, the most recent being Law Number 12 of 2008 concerning the Second Amendment to Law Number 32 of 2004 concerning Regional Government.

The definition of regional autonomy is the right, authority and obligation of an autonomous region to regulate and manage its own government affairs and local community interests in accordance with statutory regulations (UU No. 32 of 2004 Article 1 number 5). With regional autonomy, regional governments can autonomously provide infrastructure with the aim of accelerating regional development. Currently, regional governments are competing with each other to develop their own regions.

To be able to provide infrastructure, local governments must put the plan into the Regional Revenue and Expenditure Budget (APBD). The definition of APBD according to Law Number 17 concerning State Finance is the annual financial plan of regional government approved by the Regional People's Representative Council (DPRD). The infrastructure provision plan is outlined in the government's annual financial plan in the Capital Expenditure group.

Capital expenditures are budget expenditures for the acquisition of fixed assets and other assets that provide benefits for more than one accounting period. Capital expenditure includes, among other things, capital expenditure for the acquisition of land, buildings and structures, equipment, intangible assets (PP 71/2010).

In capital expenditure budgeting, local governments must also pay attention to long-term financial planning, especially for maintaining fixed assets resulting from capital expenditure (Abdullah and Halim, 2004). The need to maintain fixed assets is because as the useful life of the assets increases, the function and value of the assets owned by the government decreases. So additional costs are needed to maintain, maintain and ensure that assets owned by the government are always in proper condition and can be used for the intended use of the assets.

The government's commitment to ensuring that assets owned by the government are used for their intended purpose in a suitable and ready-to-use condition greatly determines the quality of development and public services. If a regional government is able to provide infrastructure in an effort to accelerate regional development, it must also have a commitment to provide a maintenance budget that will be used to maintain that infrastructure. The government's failure to provide adequate fixed asset maintenance funds raises the risk of inefficiency and ineffective use of government assets (Kukuh Tegar Abdullah, 2015).

Based on the news issued by minangkabaunews.com, March 17 2015, we can see how the government's failure to provide funds for maintaining its assets has resulted in the ineffective use of GOR H. Agus Salim's assets. The absence of a maintenance budget was explained by the Head of the Padang City Youth and Sports Department, so that the field grass could be seen being long, but the government could not do anything about it. The government even stated that it would maintain these assets by utilizing self-help from the community, instead of providing an adequate maintenance budget.

On June 26 2016, as reported by economy.okezone.com, a Class A Cultural Heritage Asset collapsed. Kadisbudpar Padang confirmed that the Old Temple asset is indeed a class A Cultural Heritage Asset. The temple is currently used as a museum, because the New Temple has been built which is used for worship by the Chinese community. The community regrets that this incident occurred because of the historical value and also the tourism value that arises from the existence of the temple. Even though there were no fatalities or injuries, the government should pay more attention to maintaining the old temple. Apart from supporting tourism, lack of maintenance can endanger visitors to the Old Temple museum.

In the Government Accounting Standards Technical Bulletin Number 04 concerning Presentation and Disclosure of Government Expenditures, it is stated that Maintenance
Expenditures, Goods and Services Expenditures, and Official Travel Expenditures are included in Goods Expenditures. Maintenance expenditure is expenditure intended to maintain existing fixed assets or other assets in normal condition without regard to the size of the expenditure. Maintenance expenditure includes, among other things, land maintenance, maintenance of office buildings and premises, official residences, official motor vehicles, repairs to building equipment and facilities, roads, irrigation networks, machine tools, and other facilities related to government administration.

What is not included in the definition of Maintenance Expenditure is if there are expenditures after the acquisition of fixed assets that increase and extend their useful life and/or are likely to provide economic benefits in the future in the form of capacity, production quality, or increased performance standards that must be capitalized into capital expenditures and included in the financial statements as an addition to the value of fixed assets and explained in the Notes to the Financial Statements.

There are times when regional government maintenance spending increases, and there are times when it decreases. An increase in the amount of regional government maintenance expenditure can be caused if the government's capital expenditure aims to increase production capacity or the government purchases new assets that require additional maintenance costs. Meanwhile, a decrease in the amount of government maintenance spending could occur if the capital expenditure made by the government is intended to replace old fixed assets with new fixed assets with better technology, making it possible to obtain lower maintenance costs.

Regional government maintenance spending can also be burdened in terms of sources of acquisition of government fixed assets. Fixed assets can be obtained from two sources, namely from APBD capital expenditure and other sources of acquisition in accordance with statutory provisions. Fixed assets obtained from other sources of acquisition usually come from gifts from other parties such as grants from the central government, donor agencies or the community. Acquiring assets from other sources of acquisition will of course not burden the APBD in the capital expenditure group. However, the budget burden on the maintenance spending group will still be burdened.

Several empirical studies related to the relationship between capital expenditure and maintenance expenditure have been carried out. The results of research found by several previous authors show different facts. Abdullah and Halim's research (2004) found that allocation for capital expenditure was positively associated with maintenance expenditure in the context of regional government in Indonesia, especially after regional autonomy was implemented. In line with this research, Sembiring (2009) stated that capital expenditure and local revenue have a significant effect on maintenance expenditure. Kukuh Tegar Abdullah (2015) also believes that city government capital expenditure has a significant influence on city government maintenance expenditure.

In contrast to the research of Abdullah Halim (2004), Sembiring (2009) and Kukuh Tegar Abdullah (2015), other research conducted by researchers from the United States Bland and Nunn (1992) and Karo-Karo (2006) shows different facts. Bland and Nunn stated that although managers in the public sector, including the government, are aware that the realization of capital expenditure has consequences for maintenance expenditure, in decision making, the allocation of capital expenditure and maintenance expenditure is usually carried out separately. This seems to show that there is no connection between capital expenditure and operational and maintenance expenditure. Meanwhile, in Karo-karo's research, he found that there was no correlation between capital expenditure and maintenance expenditure. What he found was that when local governments made policies to allocate capital expenditure budgets, they were not accompanied by balanced allocations for operational and maintenance expenditures.
Based on the explanation above, the author is interested in conducting research on the influence of capital expenditure on maintenance expenditure in Regency/City Governments in West Sumatra Province. The problem discussed here is the effect of Capital Expenditures on Maintenance Expenditures in the same year, different years, as well as the influence of Capital Expenditure Differences on Maintenance Expenditure Differences in the same year.

**METHOD**

There are 2 (two) variables in the research, namely Maintenance Expenditure and Capital Expenditure. The dependent variable is maintenance expenditure, while the independent variable is capital expenditure.

The type of data used in this research is secondary data. The data collection method is a documentation study method where the data collection time is in the form of a time series (time series/historical).


The unit of analysis in this research is the Regency/City/Provincial Government organization in West Sumatra. This research uses a simple linear regression analysis method.

**RESULTS AND DISCUSSION**

Results

1. Capital Expenditures have a significant effect on Maintenance Expenditures in the same year.

To see the effect of Capital Expenditures on Maintenance Expenditures, a simple linear regression test was carried out. The R value in the simple regression test shows a simple correlation (Pearson correlation), namely the correlation between the capital expenditure and maintenance expenditure variables. Meanwhile, the R Square value (coefficient of determination) shows how much the Capital Expenditure variable contributes to Maintenance Expenditure. The results of the simple regression test can be seen in the table below:

<p>| Table 1. Simple Regression Test Results for Hypothesis Testing in 2015 |
|--------------------------|------------------|------------------|------------------|</p>
<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>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.866a</td>
<td>.784</td>
<td>.772</td>
<td>7410167957,130</td>
</tr>
</tbody>
</table>

Based on table 1 above, it can be seen that the R Square value is 0.784, which means that the Maintenance Expenditure variable is influenced by the Capital Expenditure variable by 78.4% while the rest is influenced by other factors. In simple regression analysis, a regression equation can also be obtained. This can be seen in the table below.

<p>| Table 2. Results of the 2015 Simple Regression Equation |
|--------------------------|-----------------|-----------------|-----------------|</p>
<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>1</td>
<td>(Constant)</td>
<td>-4.45209952,674</td>
<td>.041547256,725</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>shopping capital 2015</td>
<td>.092</td>
<td>.012</td>
<td>.886</td>
</tr>
</tbody>
</table>
Based on table 2, the regression equation obtained is \( Y = -4452090952.674 + 0.092 \). This regression equation illustrates that if one unit increases the Capital Expenditure variable, the regression model will predict an increase in Maintenance Expenditure of 0.092.

Furthermore, to test hypothesis 1, namely "Capital Expenditures have a significant effect on Maintenance Expenditures in the same year" can be proven by looking at the significance value. If the significance is <0.05 then Ho is rejected, whereas if the significance is >0.05 then Ho is accepted. In this study, the significance value is 0.000 (< 0.05) and the regression coefficient value is positive, so Ho is rejected. This means that there is a positive influence on Capital Expenditures and Maintenance Expenditures. This means that the higher the Capital Expenditure, the higher the Maintenance Expenditure. Vice versa, the lower the Capital Expenditure, the lower the Maintenance Expenditure.

2. Capital Expenditures have a significant effect on Maintenance Expenditures in different years.

To see the effect of capital expenditure on maintenance expenditure in different years, a simple linear regression test was also carried out. The R value in the simple regression test shows a simple correlation (Pearson correlation), namely the correlation between the capital expenditure and maintenance expenditure variables in different years. Meanwhile, the R Square value (coefficient of determination) shows how much the capital expenditure variable contributes to maintenance expenditure. The results of the simple regression test can be seen in the table below:

| Table 3. Simple Regression Test Results for 2012 and 2015 |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|
| Model                          | R               | R Square        | Adjusted R Square | Std. Error of the Estimate |
| 1                              | .689a           | .474            | .444             | 11569849397.594   |

Based on table 3 above, it can be seen that the R Square value is 0.474, which means that the Maintenance Expenditure variable is influenced by the Capital Expenditure variable by 47.4% while the rest is influenced by other factors. In simple regression analysis, a regression equation can also be obtained. This can be seen in the table below:

<table>
<thead>
<tr>
<th>Table 4. Results of Simple Regression Equations for 2012 and 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
</tr>
<tr>
<td>2012 capital expenditure</td>
</tr>
</tbody>
</table>

Based on table 4, the regression equation obtained is \( Y = 4228205455.385 + 0.062 \). This regression equation illustrates that if one unit increases the Capital Expenditure variable, the regression model will predict an increase in Maintenance Expenditure of 0.062.

In the table above, a significance value of 0.001 <0.05 is obtained with a t value of 3.918. This means that there is a positive influence on Capital Expenditures in 2012 with Maintenance Expenditures in 2015. This means that the increase in Capital Expenditures has a significant effect on the increase in Maintenance Expenditures.
Based on table 5 above, it can be seen that the R Square value is 0.783, which means that the Maintenance Expenditure variable is influenced by the Capital Expenditure variable by 78.3% while the rest is influenced by other factors. In simple regression analysis, a regression equation can also be obtained. This can be seen in the table below.

<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>(Constant)</td>
<td>-2346116660.614</td>
<td>283393624,309</td>
<td>-.828</td>
<td>.419</td>
</tr>
<tr>
<td>shopping capital 2013</td>
<td>.102</td>
<td>.013</td>
<td>.885</td>
<td>7.834</td>
</tr>
</tbody>
</table>

Based on table 6, the regression equation obtained is \( Y = -2346116660.614 + 0.102 \). This regression equation illustrates that if one unit increases the Capital Expenditure variable, the regression model will predict an increase in Maintenance Expenditure of 0.102.

In the table above, a significance value of 0.000 < 0.05 is obtained with a t value of 7.834. This means that there is a positive influence on Capital Expenditures in 2013 with Maintenance Expenditures in 2015. This means that the increase in Capital Expenditures has a significant effect on the increase in Maintenance Expenditures.

Based on table 7 above, it can be seen that the R Square value is 0.796, which means that the Maintenance Expenditure variable is influenced by the Capital Expenditure variable by 79.6% while the rest is influenced by other factors. In simple regression analysis, a regression equation can also be obtained. This can be seen in the table below.

<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>(Constant)</td>
<td>-2114618428.075</td>
<td>2714564238,197</td>
<td>-.779</td>
<td>.447</td>
</tr>
<tr>
<td>shopping capital 2014</td>
<td>.091</td>
<td>.011</td>
<td>.892</td>
<td>8.134</td>
</tr>
</tbody>
</table>

Based on table 8, the regression equation obtained is \( Y = -2114618428.075 + 0.091 \). This regression equation illustrates that if one unit increases the Capital Expenditure variable, the regression model will predict an increase in Maintenance Expenditure of 0.091.

In the table above, a significance value of 0.000 < 0.05 is obtained with a t value of 8.134. This means that there is a positive influence on Capital Expenditures in 2014 with Maintenance Expenditures in 2015. This means that the increase in Capital Expenditures has a significant effect on the increase in Maintenance Expenditures.
3. The difference in capital expenditure has a significant effect on the difference in maintenance expenditure in the same year.

To see the effect of the difference in capital expenditures with the difference in maintenance expenditures in the same year, a simple linear regression test was also carried out. The R value in the simple regression test shows a simple correlation (Pearson correlation), namely the correlation between the Capital Expenditure Difference variable and the Maintenance Expenditure Difference in the same year. Meanwhile, the R Square value (coefficient of determination) shows how much the Capital Expenditure Difference variable contributes to the Maintenance Expenditure Difference. The results of the simple regression test can be seen in the table below:

Table 9. 2015 Simple Regression Test Results

<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>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.329a</td>
<td>.108</td>
<td>.034</td>
<td>2816025584.094</td>
<td>2.049</td>
</tr>
</tbody>
</table>

Based on table 9 above, it can be seen that the R Square value is 0.108, which means that the Difference in Maintenance Expenditures is influenced by the Difference in Capital Expenditures of 10.8% while the rest is influenced by other factors. In simple regression analysis, a regression equation can also be obtained. This can be seen in the table below.

Table 10. Results of Simple Regression Equations in 2015

<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>(Constant)</td>
<td>99474544.486</td>
<td>1029902246.582</td>
<td>.097</td>
<td>.925</td>
</tr>
<tr>
<td>SBM1514</td>
<td>-.038</td>
<td>.032</td>
<td>-.329</td>
<td>-1.208</td>
</tr>
</tbody>
</table>

Testing using data on the Difference between Capital Expenditures in 2014 and 2015 and the Difference in Maintenance Expenditures in 2014 and 2015 which are shown in table 10 above, obtained a sig value of 0.250 > 0.05 with a t value of -1.208. This means that the Difference in Capital Expenditures has no effect on the Difference in Maintenance Expenditures in the same year.

The unstandardized beta value is -0.038, which indicates that the correlation between the Difference in Capital Expenditures and the Difference in Maintenance Expenditures in the same year is negative, meaning that if the Difference in Capital Expenditures increases, the Difference in Maintenance Expenditures actually decreases.

Discussion

1. Capital Expenditures have a significant effect on Maintenance Expenditures in the same year.

The interpretation of the simple regression analysis that has been carried out to test hypothesis 1 (one) is that there is a positive influence on Capital Expenditures and Maintenance Expenditures. This means that the higher the Capital Expenditure, the higher the Maintenance Expenditure. and vice versa, the lower the Capital Expenditure, the lower the Maintenance Expenditure. In this research, the variance in Maintenance Expenditures is influenced by Capital Expenditures amounting to 78.4%, while the remainder is influenced by other factors.

This positive relationship can occur because in the same year there was a large need for spending on maintenance of motor vehicles or machine equipment. Newly purchased official cars still require maintenance costs such as service fees and oil change fees.
Likewise, machine equipment, even though it was newly purchased in that year, still requires maintenance costs so that it can be used to carry out tasks and functions and achieve government administration goals.

2. Capital Expenditures have a significant effect on Maintenance Expenditures in different years.

To test the effect of Capital Expenditures on Maintenance Expenditures in different years, researchers used data on Capital Expenditures in 2012, 2013 and 2014 with Maintenance Expenditures in 2015. The following is an interpretation of the simple regression analysis, namely:

a. There is a positive influence of Capital Expenditures in 2012 with Maintenance Expenditures in 2015. The variance in Maintenance Expenditures is influenced by Capital Expenditures by 47.4% while the remainder is influenced by other factors.

b. There is a positive influence of Capital Expenditures in 2013 with Maintenance Expenditures in 2015. The variance in Maintenance Expenditures is influenced by Capital Expenditures by 78.3% while the remainder is influenced by other factors.

c. There is a positive influence of Capital Expenditures in 2014 with Maintenance Expenditures in 2015. The variance in Maintenance Expenditures is influenced by Capital Expenditures by 79.63% while the remainder is influenced by other factors.

Based on the regression results above, Capital Expenditures in 2013 and 2014 had the greatest significant influence on Maintenance Expenditures in 2015, namely 78.3% and 79.6%. Meanwhile, Capital Expenditures in 2012 had the smallest significant influence on Maintenance Expenditures in 2015, namely 47.4%. This fact shows that in 2015 the regional government focused more on maintaining assets originating from procurement (capital expenditure) in 2013 and 2014. For assets in 2012, part of the maintenance expenditure in previous years (2013 or 2014) was allocated.

The conditions mentioned above are in accordance with the criteria for maintenance expenditure, namely expenditure intended to maintain existing fixed assets or other assets in normal condition.

3. The difference in capital expenditure has a significant effect on the difference in maintenance expenditure in the same year.

The results obtained were a sig value of 0.250 > 0.05 with a t value of -1.208. This means that the Difference in Capital Expenditures does not have a significant effect on the Difference in Maintenance Expenditures in the same year. The variance in maintenance expenditure is influenced by capital expenditure of 10.8%, while the remainder is influenced by other factors.

This fact shows that the increase/decrease in the value of budgeted capital expenditure does not affect the increase/decrease in the value of maintenance expenditure. This is correct, because when allocating Maintenance Expenditures there is no need to consider increases/decreases in the value of Capital Expenditures. Things that should be considered are the condition and quality of the regional government assets.

If it is discovered that an asset is in decline, a maintenance budget should be proposed to return the asset to normal condition. With normal condition and quality of assets, regional government assets can support the duties and functions and objectives of government administration as expected.

CONCLUSION

Based on the results of the analysis and interpretation of research data, conclusions can be drawn regarding the research results, namely:
1. Capital Expenditures have a significant effect on Maintenance Expenditures in the same year, namely 2015, this is proven by the significance value of 0.000 < 0.05. The amount of variance in Capital Expenditures to Maintenance Expenditures in the same year (2015) was 78.4%.

2. Capital Expenditures have a significant effect on Maintenance Expenditures in different years. a. Testing 2012 data against 2015 data shows that Capital Expenditures have a significant effect on Maintenance Expenditures as evidenced by a significance value of 0.01 < 0.05. The results of this test also show that the variance in Capital Expenditures to Maintenance Expenditures is 47.4%. b. Testing the 2013 data against the 2015 data shows that Capital Expenditures have a significant effect on Maintenance Expenditures as evidenced by a significance value of 0.00 < 0.05. The results of this test also show that the variance in Capital Expenditures to Maintenance Expenditures is 78.3%. c. Testing the 2014 data against the 2015 data shows that Capital Expenditures have a significant effect on Maintenance Expenditures as evidenced by a significance value of 0.00 < 0.05. The results of this test also show that the variance in Capital Expenditures to Maintenance Expenditures is 79.6%.

3. The difference in capital expenditures does not have a significant effect on the difference in maintenance expenditures in the same year, namely 2015, this is due to the significance value of 0.250 > 0.05.

REFERENCES


Karo-Karo, Thank God, Congratulations. 2006. The relationship between capital expenditure and operational and maintenance expenditure in district/city governments on the island of Java. Master of Science Program - Gadjah Mada University Graduate School.


Government Regulation Number 71 of 2010 concerning Government Accounting Standards


