The Effect of Capital Expenditure and Investment on Regional Generated Revenue and Economic Growth of Bali Province

N.L.P. Carllan Elgiana Putri, Made Kembar Sri Budhi
Faculty of Economics and Business Udayana University, Bali, Indonesia

ABSTRACT: The purpose of this study are 1) to analyze the effect of capital expenditure and investment on the regional generated revenue of regencies/cities in Bali Province. 2) to analyze the effect of capital expenditure, investment, and regional generated revenue on the economic growth of regencies/cities in Bali Province. 3) to analyze the role of regional generated revenue in mediating the effect of capital expenditure and investment on the economic growth of the regencies/cities in Bali Province. The data in this study is in the form of panel data, by nine regencies/cities of Bali Province in the year of 2013-2017. The data collection of this research was carried out by the non-participant observation method. The data analysis technique used to solve the problem in this study is the path analysis technique. The analysis shows that capital expenditure and investment have a positive and significant effect on regional generated revenue. Capital expenditure has a negative and significant effect on economic growth while investment and regional generated revenue have a positive and significant effect on economic growth and regional generated revenue is a mediating variable of the effect of capital expenditure and investment on economic growth.

KEYWORDS: Capital expenditure, investment, regional generated revenue, economic growth

I. INTRODUCTION
Economic growth is a process of increasing output per capita in the long run (Adipuryanti and Sudibia, 2015). Growth is a real picture of the impact of an economic development policy. Successful economic development is a hallmark of economic growth (Trisnu and Purbadharmaja, 2014). According to HarrodDomar's theory, capital formation is an important factor that determines economic growth (Arsyad, 2016: 83). For the sake of realizing economic development one of them is needed capital to increase the production capacity of an economy. Regional revenue is the right of the regional government which is recognized as an addition to the net worth in the period of the year. Sources of regional revenue consist of regional generated revenue(PAD), balance funds and other legitimate revenues (Ririn et al., 2014). Regions with positive economic growth have the possibility of increasing PAD. Significant increase in PAD shows the ability of regions to meet their needs and prosper the community. The community can then stimulate regional economic improvement by carrying out investment and spending activities (Apriana and Suryanto, 2010).
This is in line with the results of the study of Utami and Indrajaya (2019), it is said that regional generated revenue has a positive and significant effect on economic growth in the regencies/cities of Bali Province in 2012-2017. Priambodo's research (2015) also states that PAD has a positive and significant effect on the economic growth of regencies/cities in Central Java Province in 2008 to 2012. Regional generated revenue has a positive and significant effect on economic growth in regencies/cities of the Province of Bali in the research of Saraswati and Ramantha (2018) and Barimbing and Karmini (2015). This happens because the higher the PAD, the better the economic growth in Bali. Research with similar results was also stated by Rori et al. (2016), Suwandika and Yasa (2015), and Apriana and Suryanto (2010).
Infrastructure and public infrastructure in the area will have an impact on regional economic growth. The adequate infrastructure and facilities of public infrastructure depend on capital expenditure by the regional government. The increase in capital expenditure will have an impact in the coming period, namely increased community productivity and will increase regional generated revenue (Abimanyuin Harianto and Adi, 2015), so that capital expenditure positively impacts PAD. In the study of Darwanis and Saputra (2014), it was said that capital expenditure directly affected PAD and Siswoyo's research (2018) and Nugroho and Rohman (2012), also stated the same thing. Increased capital expenditure will increase PAD which has an impact on the growth rate of economic growth. In the study of Utami and Indrajaya (2019), capital expenditure is stated to have a positive and significant impact on economic growth in Bali Province regencies/cities in 2012-2017.
The increase in development carried out by the regional government in addition to being supported by infrastructure and public services through capital expenditure also requires the role of third parties who can support regional development. Local governments not only rely on people who pay taxes and user fees as the biggest PAD producer, but also look for ways for entrepreneurs to invest in their regions in the form of investments. Investment has a positive and significant effect on PAD (Ririn et al., 2014). Research with the same results was also stated by Anggraini (2017), and Ifrizal et al. (2014) which states that investment has a positive and significant effect on PAD. The effect of investment on PAD will have a tendency in increasing the rate of economic growth. This was stated in the study of Adipuryanti and Sudibya (2015) where investment had a positive and significant effect on economic growth in regencies / cities in Bali Province. Other studies that state the same results are those by AdiParwa and MurjanaYasa (2019), Pratama and SuyanaUtama (2019), Anggraini (2017), Danawati et al. (2016), Suwandika and Yasa (2015), Sutawijaya (2010), and the research of Wahyuni et al. (2014), which said that investment had a positive and significant effect on economic growth. The positive relationship between investment variables and economic growth variables is supported by Adam Smith’s economic growth theory and HarrodDomar’s theory.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Economic Growth
HarrodDomar’s theory in the economy of the two investment sectors must increase so that the economy experiences a prolonged growth and the added investment is needed to increase aggregate expenditure. Economic growth will have a positive effect on foreign direct investment, if balanced with the development of the domestic development financial system it has reached a certain minimum level (Hermes and Lensink, 2003). HarrodDomar’s theory does not pay attention to the requirements to achieve full capacity if the economy consists of three sectors or four sectors. Although based on the theory, it can easily be concluded that this applies if aggregate expenditure includes more components, namely covering government and export expenditure.

Gross Regional Domestic Product (GRDP)
GRDP is the net value of final goods and services produced by various economic activities in a region in a period (Sasana, 2006). GRDP can describe the ability of an area to manage its natural resources, therefore the amount of GRDP produced by each region is highly dependent on the potential factors of production in the region. The existence of limitations in the supply of these factors causes the amount of GRDP varies between regions.

GRDP is macro data compiled to determine the economic conditions and behavior of a region. In terms of business (industrial sector), this GRDP is the sum of all added value generated by all production units in a given area. Viewed from the usage side, it is the entire value of domestic production goods and services that are consumed end by the community consisting of household economic units, non-profit institutions, government, business sector and abroad. In terms of income it is more representative of the amount of income received by the factors of production as remuneration received for its involvement in various economic production activities in the domestic area (BPS, 2009).

Regional generated revenue (PAD)
Caraka (2019), states that PAD is a source of regional generated revenue based on the applicable laws and regulations that are obtained from each potential owned by the region. PAD is revenue obtained from sources within their own region that are collected based on regional regulations in accordance with applicable laws and regulations (Hertanto and Sriyana, 2011). Darise (2009: 48), explains that PAD is all income or income earned by the region through levies based on local regulations in accordance with statutory regulations. According to Kaho in Astawa and Budiasih (2019), the regional tax and levies sector still plays a dominant role in local financial revenues.

Regional financial capacity can be seen from the size of the PAD obtained by the region concerned. If seen in relation to granting greater regional autonomy to the regions. PAD is always seen as one indicator or criterion to measure the dependence of a region to the center. In principle, the greater the contribution of PAD to the regional budget will show the smaller dependence of the region on the center as a consequence of the implementation of regional autonomy from the principle in a real and responsible manner (Rinaldi, 2012).

Capital Expenditure
Capital expenditures incurred by the regional government are costs incurred by the region in the context of providing services to the community whose benefits can be directly or indirectly felt by the community. In managing this capital expenditure the regional government must be based on the principle of effectiveness, efficiency, transparency and accountability by considering the scale of regional development priorities. Fixed assets owned by local governments as a result of capital expenditure are the main requirements in providing public services. The regional government allocates funds in the form of capital expenditure budget in the APBD.
to add fixed assets. Meanwhile, according to PSAP No. 2, capital expenditure is a budget expenditure for the acquisition of fixed assets and other assets that provide benefits for more than one accounting period.

**Investment**

Investment in essence is the beginning of economic development activities. Similarly, the study of Ocaya et al. (2012), that investment is also a strong link for innovation, economic growth and poverty reduction. Investment can be made by the private sector, government or cooperation between the government and the private sector. Investment is the purchase of goods that will be used in the future to produce more goods and services (Mankiw, 2013: 12).

Investment is a major component in moving the wheels of a country’s economy. Investment has an influence on a country's economic growth (Sarungu and Endah, 2013). Increased investment will encourage trade volumes and production volumes which in turn will expand productive employment opportunities and will increase per capita income while increasing community welfare. Majeed and Khan (2013) stated that investment plays a very important role in economic growth, such as generating economic productive capacity, and increasing labor. However, investments made by the government and the private sector can be one of the factors causing income inequality (Adipuryanti and Sudibia, 2015).

Based on the literature review and conceptual framework above, purposes that can be drawn in this research as follows:

1) To analyze the effect of capital expenditure and investment on the regional generated revenue of regencies/cities in Bali Province.
2) To analyze the effect of capital expenditure, investment, and regional generated revenue on the economic growth of Bali Province regencies/cities.
3) To analyze the role of regional generated revenue in mediating the effect of capital expenditure and investment on the economic growth of the regencies/cities in Bali Province.

**III. METHODS**

The location of the study was carried out in the regencies/cities of the Province of Bali using data published by the BPS of the Province of Bali in the year of 2013-2017 and offices related to the object of research. The location of this study was chosen because the economic growth of regencies/cities in Bali Province, which was seen through the GRDP of constant prices, continued to increase but the increase was not followed by a driving capital factor considering the capital factor was quite volatile in several regions in the Province of Bali and there were still some regions that had GRDP below the average of all regencies/cities in Bali Province.

Path analysis method is an extension of multiple linear regression analysis, to estimate the causality relationship between tiered variables based on theory. Path analysis is used to determine the direct relationship of the independent variable to the dependent variable and the indirect relationship through the intervening variable.

**IV. RESULT AND DISCUSSION**

**The effect of capital expenditure and investment on regional generated revenue**

Structure 1 testing was conducted to see the effect of capital expenditure and investment directly on the regional generated revenue of Bali Province regencies/cities which was carried out using SPSS Version 21.0, then the regression results are presented in Table 1.

<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>-.106</td>
<td>.169</td>
<td>-.628</td>
<td>.534</td>
</tr>
<tr>
<td>I</td>
<td>Capital Expenditure</td>
<td>1.004</td>
<td>.123</td>
<td>.718</td>
</tr>
<tr>
<td></td>
<td>Investment</td>
<td>.168</td>
<td>.059</td>
<td>.252</td>
</tr>
</tbody>
</table>

Based on the results of Tables 1 shows that the results of testing the capital expenditure variable on regional generated revenue have a significance value of 0.000 <0.05 (alpha value) and t-count of 8.184> 1.682 (t-table value), so this states that capital expenditure has a positive and significant effect on regional generated revenue. This means that each increase of ten billion rupiah in capital expenditure causes an increase in regional generated revenue of 7.18 billion rupiah. The positive and significant effect of the capital expenditure variable on regional generated revenue accepts the initial hypothesis. The results of this study are in accordance with research conducted by Siswoyo (2018), Puspitasari et al. (2015), Darwanis and Saputra (2014), Suksesih (2012),
and Nugroho and Rohman (2012). This positive and significant relationship means that an increase in capital expenditure will increase the regional generated revenue of regencies/cities in Bali Province. An increase in infrastructure development that occurs in a region means that there is an increase in capital expenditure which will later affect the level of productivity of the community in working so that the community has more ability to pay for the benefits of infrastructure made in the form of regional taxes and levies which will certainly increase the regional generated revenue of regencies/cities of the Province of Bali.

The results of testing the investment variable on regional generated revenue with a significance of 0.006 <0.05 (alpha value) and t-count of 2.871 > 1.682 (t-table value), this proves that investment has a positive and significant effect on regional generated revenue. This means that any increase of ten billion rupiah in investment causes an increase of 2.52 billion rupiah in regional generated revenue. The positive and significant effect of investment variables on the regional generated revenue accepts the initial hypothesis. The results of this study are also consistent with research by Anggraini (2017), Ifrizal et al. (2014), Ririn et al. (2014), and Batik (2013) which states that investment has a positive and significant effect on PAD. A region will be said to be successful in carrying out regional autonomy if the region is able to have good independence. The regional generated revenue in a region reflects the amount of regional dependence on the central government which can directly demonstrate the independence of the region.

Bastian (2006: 342) states that increasing investment through both domestic investment (PMDN) and foreign investment (PMA) can be an economic indicator of the success of local governments in implementing autonomy. The Province of Bali has become one of the tourist destinations from all over the world, thus causing an increase in investment in regencies/cities of the Province of Bali which is driven through investment in the private sector both domestically and abroad. In addition, an increase in the performance of private investment in regencies/cities of the Province of Bali was predominantly driven by increased investment in the construction sector, especially in the form of hospitality given the Province of Bali as a tourist destination (KEKR, 2017).

The Structure 1 regression equation model can be presented as follows:

\[ e_1 = \sqrt{(1 - R^2_1)} = \sqrt{(1 - 0.810)} = 0.436 \]

\[ \ln Y_1 = b_1 \ln X_1 + b_2 \ln X_2 + e_1 \]

\[ \ln Y_1 = 0.718 \ln X_1 + 0.252 \ln X_2 + 0.436 \]

Information:
- \( X_1 \): Capital expenditure
- \( X_2 \): Investment
- \( Y_1 \): Regional generated revenue
- \( e_1 \): Error variable

**The effect of capital expenditure, investment, and regional generated revenue on economic growth**

Structure 2 testing is conducted to see the effect of direct capital expenditure, investment, and regional generated revenue on the economic growth of regencies/cities in Bali Province directly using SPSS Version 21.0, then the regression results are presented in Table 2.

<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>6.346</td>
<td>.106</td>
<td>59.871</td>
<td>.000</td>
</tr>
<tr>
<td>Capital Expenditure</td>
<td>-0.405</td>
<td>.124</td>
<td>-0.527</td>
<td>-3.279</td>
</tr>
<tr>
<td>Investment</td>
<td>.109</td>
<td>.040</td>
<td>.296</td>
<td>2.709</td>
</tr>
<tr>
<td>Regional generated revenue</td>
<td>.586</td>
<td>.097</td>
<td>1.065</td>
<td>6.064</td>
</tr>
</tbody>
</table>

**Secondary Data, 2019**

Based on the results of Table 2 shows that the results of testing capital expenditure variables on economic growth have a significance value of 0.002 <0.025 (alpha value) and t-count of -3.279 <-2.019 (t-table); so it states that capital expenditure has a negative and significant effect on economic growth. This means that every ten billion rupiah increase in capital expenditure causes a decrease in economic growth of 5.27 billion rupiah. The negative and direct significant effect of the capital expenditure variable on economic growth accepts the initial hypothesis. The results of this study are supported by the results of research by Astrayasa Putra (2019), Arini Sita (2016), Islamiah (2015), Riwayati (2015), and Guntara and Dwirandra (2014), which stated that capital expenditure had a negative and significant effect on economic growth. Based on Keynesian economic...
theory, the amount of government expenditure affects economic growth so that an increase in government expenditure will be followed by an increase in economic growth in which capital expenditure is included as one part of government expenditure.

Differences in the results of research with existing theories can be caused by several things. Priambodo's research (2015) states that the discrepancy with existing theories is due to the low government spending, especially the part of the public sector that does not clearly increase economic growth. The realization of capital expenditure is far lower than the realization of expenditure for operating expenditure which causes the realization of expenditure for public interest is still low so that the impact of capital expenditure realization on economic growth is relatively small. The low allocation of capital expenditure compared to operating expenditure also occurred in the regencies/cities of the Province of Bali which can be seen through the APBD Realization Report for each regencies/cities of the Province of Bali. Capital expenditure is mobilized for the purchase of fixed assets to strengthen infrastructure in each region in the Province of Bali. Regional governments of Bali Province jointly accelerate the realization of regional expenditures including capital expenditures to intensify infrastructure development in each region (KEKR, 2017), which in 2013-2017 in total capital expenditure expenditures made in the Province of Bali in Bali Provinclal Budget Realization Report covers 1.76 percent of land capital expenditure; 22.12 percent of capital expenditure on equipment with machines; 27.64 percent of building and building capital expenditure; 47.58 percent of road, irrigation and network capital expenditure; and 0.90 percent of other fixed asset capital expenditure.

Most of the capital expenditure carried out in Bali Province is for regional infrastructure that requires a long time to be enjoyed by the entire community in the form of public services. This causes capital expenditure carried out in the research year not to directly affect economic growth in the year concerned but can directly influence economic growth in the following years when the infrastructure built is ready and fit for use by the public for public services.

The results of testing investment variables on economic growth with a significance of 0.010 <0.05 (alpha value) and t-count of 2.709> 1.683 (t-table value), this proves that investment has a positive and significant effect on economic growth. This means that every ten billion rupiah increase in investment causes an increase of 2.96 billion rupiah in economic growth. The positive and significant direct effect between investment variables on economic growth in this study accepts the initial hypothesis. The results of this study are supported by research by AdiParwa and MurjanaYasa (2019), Pratama and SuyanaUtama (2019), Anggraini (2017), Danawati et al. (2016), Yasa and Suwandikia (2015), Sutawijaya (2010), and the research of Wahyuni et al. (2014) which states that the investment variable has a positive effect on economic growth. This means that any increase in investment in Bali Province regencies/cities will increase the economic growth of Bali Province regencies/cities. The results of the study are in line with existing theories of economic growth, where an increase in investment will increase the income of a region which leads to economic growth. This means that investment invested in Bali Province regencies/cities in all sectors increases the welfare of the community which causes regional generated revenue from nine business fields in Bali Province regencies/cities to increase, so that economic growth will also increase.

The test results of the regional generated revenue variable on economic growth with a significance of 0.000 <0.05 (alpha value) and t-test of 6.064> 1.683 (t-table value), this proves that Regional generated revenue has a positive and significant effect on growth the economy. This means that each increase of ten billion rupiah in regional generated revenue causes 10.65 billion rupiah increase in economic growth. The positive and significant effect directly on the variable of regional generated revenue on economic growth obtained in this study accepts the initial hypothesis. The results of this study are consistent with the results of research by Utami and Indrajaya (2019), Saraswati and Ramantha (2018), Rori et al. (2016), Priambodo (2015), Barimbing and Karmini (2015), Suwandikia and Yasa (2015), and Apriana and Suryanto (2010), which states that with increasing PAD, economic growth in a region will also increase.

The mechanism for receiving regional generated revenue includes taxation, levies, and the like to individuals and institutions which are then received by the Regional generated revenue Service in each regencies/cities of the Province of Bali. The revenue will go into the regional treasury to be deposited and then accounted for by each regional secretary and the Head of the Revenue Service in each region to the council. Through this mechanism, it means that economic actors in the regencies/cities of Bali Province are able to maximize the regional economy to increase income from each regency / city through local taxes, regional levies, BUMD profits, and other legitimate income, so that the increase Local original income will be able to cause positive externalities that tend to increase economic growth (Pujiati, 2008).

The Structure 2 regression equation model can be presented as follows:

\[ e_2 = \sqrt{(1 - R_2^2)} = \sqrt{(1 - 0.760)} = 0.489 \]

\[ LnY_2 = b_1LnX_1 + b_2LnX_2 + b_3LnY_1 + e_2 \]

\[ LnY_2 = -0.527LnX_1 + 0.296LnX_2 + 1.605LnY_1 + 0.489 \]
To find out the regional generated revenue as a mediating variable from the effect of capital expenditure on the economic growth of the regencies/cities of Bali Province, we can use the following formula:

\[ z = \frac{b_{12}b_{25}}{s_{b_{12}b_{25}}} \]

Based on the calculation of the coefficient \( s_{b_{12}b_{25}} \), we can test the significance of the mediating variable using the following formula:

\[ z = \frac{b_{12}b_{25}}{s_{b_{12}b_{25}}} \]

Therefore, \( |z| = 4.98 \rangle 1.96 \), which means that the regional generated revenue \( Y_1 \) is a mediating variable from the effect of capital expenditure variable \( X_1 \) to the economic growth \( Y_2 \) of Bali Province.

To find out the regional generated revenue as a mediating variable from the effect of investment on the economic growth of the regencies/cities of Bali, we can use the following formula:

\[ z = \frac{b_{12}b_{25}}{s_{b_{12}b_{25}}} \]

Based on the calculation of the coefficient \( s_{b_{12}b_{25}} \), we can test the significance of the mediating variable using the following formula:

\[ z = \frac{b_{12}b_{25}}{s_{b_{12}b_{25}}} \]

Therefore, \( |z| = 2.59 \rangle 1.96 \), hereby H0 is rejected, which means that the regional generated revenue \( Y_1 \) is a mediating variable in the relationship of the investment variable \( X_2 \) to the economic growth variable \( Y_2 \) of the regencies/cities of Bali Province.

V. CONCLUSION

Capital expenditure is a regional government expenditure that is part of the details of direct expenditure and has direct benefits felt by the community in the provision of public facilities and infrastructure. In the Province of Bali, capital expenditures undertaken by regional governments need to be continuously optimized, given that expenditures affecting PAD from each regencies/cities. The allocation of capital expenditure also needs to be reconsidered related to the efficiency of spending by the government so that it gives a positive influence on economic growth by carefully planning capital expenditure and evaluating the capital expenditure that has been done so as to provide adequate public facilities for the regencies/cities of Bali Province and able to increase economic growth.
Investment is an important driver for PAD and the economic growth of regencies/cities in Bali Province considering that in this study investment has a significant positive effect on PAD and economic growth so that the role of investment both through domestic capital or foreign capital must be maintained both to build facilities and infrastructure, employment, and also the skills of human resources in each region so that it has a good impact on the regencies/cities of Bali Province.

Regional generated revenue greatly determines the independence of a region, in the Province of Bali in general experiences an increase in regional generated revenue between the years so that with the increase in regional generated revenue has a positive influence on economic growth regencies/cities of the province of Bali given the good taxes, levies, or other regional generated revenue is very concretely regulated in legislation that has been adjusted for the benefit of the community, private sector, and the government itself.

REFERENCES


28–61. https://doi.org/10.1080/00074917312331332322


Daerah Kota Cimahi, Politeknik Negeri Bandung.


