Brown Analysis Model for Measuring the Performance of Local Governments with Related to Budget Management: Jambi City Government Revenue and Expenditure

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ABSTRACT
The purpose of this study was to assess the financial performance of the Jambi City Government using the Brown analysis method. The data used in this study is quantitative data sourced from the BPK RI Audit Result Report Jambi representatives for the period 2016 to 2019. Measurement of the financial performance of the Jambi City Regional Government using the 10-point Brown Model. Measuring the financial condition of Jambi city, Number one, the analysis first calculates the 10 key financial ratios of all Local government based on the existing financial statement database. Step two, calculate the data quartile consisting of 4 quartiles. Step three, every quartile scores respectively -1, 0, 1, and 2. Last step to assess a local government's financial condition is to provide a score on its financial condition. The results of the study state that the performance of the Jambi city local government in 2016-2019 in terms of revenue has lower performance than other local governments. In the other hand, the performance of the Jambi city local government in 2016-2019 in terms of expenditure has performed better than other local governments in Jambi Province.

Keywords: Performance, Regional Budget Management.

1. INTRODUCTION
In an organization, budget take an important thing. Laws number 32 and 33 of 2004 about changes in regional financial management, based on this law, regional finances must be transparent and accountable. apart from vertical accountability, the government is required to do horizontal accountability where reporting to the DPRD and the wider community, [1]. For this reason, the DPRD must monitor government performance through the budget. Accountability through the budget includes budget planning to budget reporting.

To assess the accountability of organizations and managers in producing better public services, performance measurement is very important. Performance measurement is used as the basis for performance appraisal, namely to assess the success or failure of an organization's programs / activities. Public sector performance measurement is carried out to fulfill three things. First, public sector measurement aims to improve government performance. Second, public sector performance measures are useful for allocating employment and resource decisions. Third, the performance measure of the public sector is intended to improve institutions and to achieve public accountability [2].

Ropa [2] states that measurement of financial performance for the public interest can be used as evaluation and restoring performance by comparing implementation and work schemes. Besides that, it can also be used as a benchmark for improving performance, especially local government finances in the next period. Public sector performance measurement is very important because it aims to assist local governments in assessing the achievement of a strategy through financial measurement tools.

One method of measuring the financial performance of local governments is to analyze the financial performance of local governments. Financial ratio analysis in the Regional Revenue and Expenditure Budget (APBD) that has been determined and implemented can be one way to analyze the financial performance of a region. The ratio analysis to the
realization of the APBD must be carried out to improve the quality of regional financial management. In addition to increasing the quantity of regional financial management, ratio analysis to the realization of the APBD can also be used as a tool to assess the effectiveness of regional autonomy because this policy which provides flexibility for local governments to manage their regional finances should be able to improve the financial performance of the region concerned [2].

Ratio analysis to the realization of the Regional Revenue and Expenditure Budget (APBD) must be carried out to improve the quality of regional financial management. In addition to regional financial management, ratio analysis to the realization of the Regional Revenue and Expenditure Budget (APBD) can also be used as a tool to assess the effectiveness of regional autonomy because this policy, which provides flexibility for regional governments to manage their regional finances, should be able to improve the financial performance of the regions concerned.

The Jambi City Government as the party given the authority and duty to run the wheels of government, development and community services is required to submit a regional financial accountability report so that the public can judge whether the Jambi City government has succeeded in carrying out its duties properly or not. The community or population as one of the development resources that plays two important roles in development, namely as an object or behavior as well as an object of development wants transparency regarding the existing financial budget in the Jambi City Government, so that the community can also monitor the performance of the Jambi City Government whether it has been running well or not. This increase in income and expenditure shows that many activities or programs that have been carried out by the Jambi City government are a manifestation of the realization of the government's vision, mission and goals. The achievement or failure of the vision, mission and objectives is a reflection of the government’s performance itself, so an assessment of the Jambi City government finances is whether healthy or a fiscal emergency.

| Year | Revenue Budgeting | Realization | % |
|------|------------------|-------------|---|
| 2015 | 1.435,638,562,506.00 | 1.387,222,528,820.42 | 96.8 |
| 2016 | 1.622,710,103,775.00 | 1.571,332,218,626.47 | 97.2 |
| 2017 | 1.544,367,408,169.00 | 1.500,633,237,946.70 | 99.78 |
| 2018 | 1.628,500,835,180.00 | 1.624,877,312,712.19 | 99.78 |
| 2019 | 1.675,902,071,976.00 | 1.699,542,709,763.06 | 101.4 |

There are several ways to assess the financial condition of local governments, including the Fiscal Trend Monitoring System (FTMS) developed by The International City / Country Management Association (ICMA) in 1990 and revised twice in 1994 and 2003, Kloha Model (2005), Weissert, Kleine 10-Point Scale of Financial Health, Brown’s Model [4]: A 10-Point Test of Financial Condition. Of the several models above, the best model is a model that has five attributes from the nine existing attributes, this model is the model belonging to Kloha et al. [3].

This study uses the Brown Model [4] (1993, 1996) based on Ritonga [3] which explains that this model introduces 10 key ratios to measure the financial condition of local governments with a population of less than 100,000 people, the reason for choosing Brown is its ability to evaluate local government financial conditions with only ten indicators. and use of benchmark data

2. LITERATURE REVIEW

Brown [4]. Introducing 10 key ratios to measure the financial condition of local governments with a population of less than 100,000 people. The ten key ratios consist of four basic financial factors for local governments, consisting of income, expenditure, operating position, and debt structure. This ratio is shown in table 2 below:
### Table 2

| Financial factors       | Ratio                                                                 | Interpretation                                                                                                                                                                                                   |
|-------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| **Revenues**             | Total income / populations                                           | A higher ratio indicates a greatest ability to earn additional income *)                                                                                                                                        |
|                         | Total general fund revenue (TGFR) from own sources / TGFR           | The low ratio means that local governments don’t have to rely to transfer operations to finance general government operations.                                                                                      |
|                         | General funding sources from another funds / total general funding sources | A lower ratio indicates that the infrastructure is well maintained                                                                                                                                             |
| **Expenditure**          | Operational expenses / total expenses                               | A higher ratio indicates that local governments experience positive equity between periods                                                                                                                      |
|                         | Total income / total expenses                                       | A higher ratio indicates that there are resources that can be used to overcome temporary shortages of income                                                                                                   |
|                         | Unreserved general fund balance / total general income               | A higher ratio indicates sufficient cash which can be used to pay short-term obligations                                                                                                                        |
| **Operational Position** | amount of general cash funds and investment / total general fund liabilities | A lower ratio indicates short-term liabilities                                                                                                                                                               |
|                         | Total general fund liabilities / TGFR                               | A lower ratio indicates that short-term liabilities can easily be served by the normal flow of annual income                                                                                                  |
| **Debt Structure**       | Long-term direct debt / population                                  | A lower ratio indicates that local governments have the ability to pay long-term general debt                                                                                                                    |
|                         | Debt service / total income                                         | A lower ratio indicates that local governments are able to pay the terms of debt service when due.                                                                                                            |

#### Table 3. Financial Condition Score based on Comparison Results in step two

| Range  | Information |
|--------|-------------|
| 10 or more | Best condition |
| 5 to 9 | Better |
| 1 To 4 | Average |
| 0 to -4 | Worse |
| -5 | Worst |

### 3. METHODS

#### 3.1. Research Subject and Object

The subject of this research is the local government of Jambi City. The object of this research is the indicators contained in the Brown Model financial condition assessment which includes the 2016-2019 fiscal year to obtain results regarding the performance of the Jambi City government.

#### 3.2. Types of Data

This study uses secondary data. This study uses secondary data, namely data to calculate the financial condition of the Jambi City Government according to the Brown model.

#### 3.3. Source of Data

Regional financial document data in this study were obtained from the Republic of Indonesia State Audit Board (BPK) Jambi Province Representative and Jambi City Financial and Asset Management Agency (BPKAD).

### 3.4. Method of collecting data

The data collection method used in this research is the archive data collection method. Archival data collection method is a data collection technique in the database.

### 3.5. Method of Analysis

The method used to analyze this research is descriptive analysis method. Descriptive analysis is a part of statistics that is used to describe or describe the collected data as it is without intending to make conclusions but only describing the data group. The analysis in this study is an analysis of local government performance with the Brown model which consists of 10 key ratios [3].

### 4. RESULTS

#### 4.1. Revenue

##### 4.1.1. Total Income/Population

The first ratio of financial factors is the ratio between total income and population. The following shows the total income and population data in table 5.2 below:
Table 4. Total Income/Population

| Year   | Jambi City | Year   | Jambi City | Year   | Jambi City | Year   | Jambi City |
|--------|------------|--------|------------|--------|------------|--------|------------|
| 2016   | 1.571.332.218.626,47 | 13%    | 583.487    | 1%     |            |        |            |
| 2017   | 1.500.633.237.946,70 | -4%    | 591.134    | 1%     |            |        |            |
| 2018   | 1.624.877.312.712,19 | 7%     | 598.103    | 1%     |            |        |            |
| 2019   | 1.699.542.709.763,06 | 4%     | 604.700    | 1%     |            |        |            |
| Avrge  | 1.599.096.369.812,35 | 5%     | 594.356    | 1%     |            |        |            |

4.2. Total General Fund Revenue from Own Sources / Total General Fund Revenue (TGFR)

The second ratio of financial factors is the ratio between Total General Fund Revenue from Own Sources / Total General Fund Revenue. The following shows the total income and population data in table 5 below:

Table 5. TGFR from Own Sources/TGFR

| Year   | Jambi City | Year   | Jambi City | Year   | Jambi City | Year   | Jambi City |
|--------|------------|--------|------------|--------|------------|--------|------------|
| 2016   | 287.525.214.004,49 | - | 1.223.767.251.851,47 | - |            |        |            |
| 2017   | 397.327.847.289,10 | 38% | 1.310.747.444.342,70 | 7% |            |        |            |
| 2018   | 338.891.882.592,96 | 14% | 1.347.578.196.428,19 | 3% |            |        |            |
| 2019   | 393.429.595.383,99 | 16% | 1.478.955.085.105,06 | 10% |            |        |            |
| Avrge  | 354.293.634.817,64 | 1.340.262.244.431,85 |            |        |            |        |            |

| TGFR from Own Sources/TGFR | % |
|---------------------------|---|
| 0,2349508974              | - |
| 0,3031307435              | - |
| 0,2514821652              | - |
| 0,2660186231              | - |

4.3. Sources of General Funds from Other Funds / Total Sources of General Funds

The third ratio of financial factors is the ratio between General Fund Sources from Other Funds / Total General Fund Sources. The following shows the total income and population data in table 6 below:

Table 6. Sources of General Funds from Other Funds/Total Sources of General Funds

| Year   | Sources of General Funds from Other Funds | % | Total of General Funds from Other Funds | % | Sources of General Funds from Other Funds/Total Sources of General Funds | % |
|--------|------------------------------------------|---|----------------------------------------|---|------------------------------------------------|---|
| 2016   | 46.909.923.835,98                        | - | 877.202.241.268,98                    | - | 0,05347674872                                   | - |
| 2017   | 87.480.495.375,60                        | 86%| 910.600.597.053,60                    | 3,8%| 0,0960690727                                    | 3,8%|
| 2018   | 115.851.016.818,83                       | 35%| 949.267.804.625,83                    | 4,24%| 0,12200425008                                   | 4,24%|
| 2019   | 135.922.253.081,07                       | 17%| 1.025.511.661.754,07                  | 8% | 0,1325409141                                    | 8% |
| Avrge  | 96.540.922.277,87                        |    | 940.645.576.175,62                    |    |                                                  |    |
4.4. Expenditures

4.4.1. Operational Expenses / Total Expenses

The fourth ratio of financial factors is the ratio between Operational Expenses / Total Expenses. The following shows the total income and population data in table 7 below:

| Year    | Operational Expenses | %   | Total Expenses | %   | Operational Expenses/Total Expenses | %   |
|---------|----------------------|-----|----------------|-----|--------------------------------------|-----|
| Jambi City |
| 2016    | 1.100.135.850.737,50 | -   | 1.525.413.835.576,45 | -   | 0,72112048462                       |     |
| 2017    | 1.074.300.999.132,30 | 2,34% | 1.495.010.546.734,80 | 2%  | 0,7185909166                       |     |
| 2018    | 1.130.897.273.751,24 | 5,27% | 1.577.311.832.700,20 | 6%  | 0,7169776136                       |     |
| 2019    | 1.227.363.526.703,51 | 8,53% | 1.660.527.631.709,83 | 5%  | 0,7391406823                       |     |
| Avrge   | 1.133.174.412.581,14 |    | 1.564.565.961.680,32 |    |                                      |     |

5. DISCUSSION

5.1. Financial Performance - Local Government Revenues of Jambi City

The following shows the financial ratio data of the Jambi City Regional Government during 2016 - 2019 and the scores according to the Brown model in table 8 below:

| Year | Ratio 1 | Ratio 2 | Ratio 3 |
|------|---------|---------|---------|
| 2016 | 1       | 2       | 2       |
| 2017 | 1       | 0       | 1       |
| 2018 | 2       | 2       | 1       |
| 2019 | 2       | 2       | 2       |
| Sum  | 6       | 6       | 6       |
| Average | 6 |       |   |

Table 9. Total Assessment of District / City Government Financial Condition in Jambi Province according to Brown Model Based on Income

| Revenue | City Government | Rasio 1 | Rasio 2 | Rasio 3 | Average Revenue |
|---------|-----------------|---------|---------|---------|-----------------|
| 1       | Kota Jambi      | 6       | 6       | 6       | 6               |
| 2       | Kabupaten Bungo | 10      | 9       | 8       | 9               |
| 3       | Kabupaten Sarolangun | 10 | 10     | 10      | 10              |
| 4       | Kabupaten Kerinci | 10     | 8       | 7       | 8               |
| 5       | Kabupaten Batanghari | 10 | 9       | 10      | 10              |
| 6       | Kabupaten Tanjatbar | 7      | 5       | 9       | 7               |
| 7       | Kabupaten Tebo  | 9       | 7       | 8       | 8               |
| 8       | Kabupaten Merangin | 7     | 9       | 10      | 9               |
| 9       | Kab. Muaro Jambi | 10      | 8       | 9       | 9               |
| 10      | Kota Sungai Penuh | 10     | 4       | 5       | 6               |
| 11      | Kabupaten Tanjabtim | 10 | 5       | 10      | 8               |
Tables 5.7 and 5.8 above show that the financial performance from the income side of Jambi City gets an average value of 6 according to the Brown model indicating that the financial condition of the Jambi City when compared to the Regency / City in Jambi Province, it can be stated that Jambi City together with Sungai Penuh City is in the lowest rank compared to other regency / municipal governments in Jambi Province.

5.2 Financial Performance - Local Government Expenditure of Jambi City

The following shows the financial ratio data of the Jambi City Regional Government during 2016 - 2019 and the scores according to the Brown model in table 5.9 below:

Table 10. Total Assessment of Local Government Financial Conditions according to the Brown Model Based on Expenditures.

| Year | 2016 | 2017 | 2018 | 2019 | Sum |
|------|------|------|------|------|-----|
| Rasio 4 | 2    | 2    | 2    | 2    | 8   |

Table 5.9 above shows that the financial performance from the expenditure side of Jambi City gets an average value of 8 according to the Brown model indicating that the financial condition of the Jambi City Regional Government when compared to the Regency / City in Jambi Province, it can be stated that Jambi City is better than other regions

6. CONCLUSIONS

1. The performance of the Jambi City Regional Government in 2016 - 2019 in terms of revenue received a score of 6 which means that it has lower performance than other local governments.

2. The performance of the Jambi City Governments in 2016 - 2019 in terms of expenditure received a score of 8 which means it is better than other local governments

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