Effectiveness and Efficiency of Implementation of Program-Based Budget and Budget Credibility

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Abstract

The full implementation of program-based budgeting offers financial advantages compared to budgeting based on line items. However, in the Ministry of Finance of Timor-Leste, this is not effectively and efficiently implemented, and it fails to maintain the budget's credibility. The main objective of this research is to assess the levels of effectiveness, efficiency, and budget credibility in the Ministry of Finance. To achieve this goal, a quantitative descriptive analysis method is employed. The results indicate that the average budget absorption for the years 2018-2022 has not been effective, with an implementation rate of 78.12%, signifying less effectiveness. The average efficiency level is considered efficient at 78.12%. However, this does not necessarily mean that most programs or activities have been successfully achieved; rather, it is due to some situations at that time that hindered proper implementation.

Meanwhile, budget credibility in the context of budget implementation is considered less credible, with an average percentage of 78.12%. Looking at budget credibility from budget changes (additions or reductions), the average ratio is 5.99%, indicating less credibility over the five-year period. It is recommended that the Ministry of Finance of Timor-Leste provides adequate and regular training for its staff, conducts routine supervision, prepares performance reports, and ensures staff commitment in the budget planning process.

Keywords: effectiveness, efficiency, credibility, budget absorption

I. INTRODUCTION

The need to have an effective, efficient and credible budgeting system is particularly important for government organizations, which by their nature are not profit-oriented, as is the case for businesses, which are more profit-oriented on shareholder investment.
Effectiveness is the relationship between outputs and goals or objectives that must be achieved. That the effective use of the budget sourced from the people is when the budget is spent in accordance with the needs that have been determined in the previous planning or in other words spent in accordance with the goals or objectives that must be achieved. Efficiency according to (Mardiasmo, 2004) is closely related to the concept of productivity. Efficiency measurement is carried out by using a comparison between the output produced and the input used (cost of output). The process of operational activities can be said to be efficient if a certain product or work result can be achieved with the use of resources and funds that are as low as possible (spending well). The efficient use of the budget must achieve the targets that have been prepared previously.

The following illustrates the development of the Ministério das Finanças Budget situation from 2018 to 2022.

![Figure 1. Comparison of Budget Allocation & Realization 2018-2022](chart)

**Source:** Ministério das Finanças from Financial reports (data processed 2023)

The trend graph illustrates a significant difference between the budget realization with the line-item budgeting system in 2018, 2019, and 2020, reaching 89.51%, 88.02%, and 86.68%, respectively. However, the budget realization in 2021 and 2022, when the government began adopting the program-based budgeting system in the Ministry of Finance, experienced a drastic decrease, with budget realizations only reaching 69.11% and 70.13%. This indicates that the effectiveness, efficiency, and credibility of budget implementation are questionable.

From the comparison of budget implementation based on the above graph, it can be inferred that the introduction of program-based budgeting from 2021 onwards is not as smooth as expected by the government. Various challenges are faced, such as the lack of understanding among financial staff who were previously accustomed to traditional line-item budgeting and inadequate training for operational staff. In this context, the
effectiveness, efficiency, and credibility pose challenges in implementing the policy of adopting program-based budgeting.

Therefore, this research will focus on analyzing the effectiveness, efficiency, and credibility of budget absorption at the Ministry of Finance of Timor-Leste from 2018 to 2022 regarding the use of traditional line-item budgeting methods and program-based budgeting methods.

II. LITERATURE REVIEW

A. State Finance

State finances according to (Rahayu, 2010) are the rights and obligations of the state that can be valued in money, as well as everything in the form of money and in the form of goods that can be used as state property in connection with the implementation of these rights and obligations. State finances are managed in an orderly manner, obedient to laws and regulations, efficient, economical, effective, transparent, and responsible with due regard to a sense of justice and propriety.

In the explanation (Law No. 2/2022, 2022) on State Finance of Timor-Leste, it is stated that the approach used in formulating State Finance is in terms of object, subject, process, and purpose.

1) Key Principles of the Budget Cycle

The main principles of the government budget cycle in Timor-Leste according to the Law (Law No. 2/2022, 2022) on Budgets and State Revenue and Expenditure and Public Financial Management of Timor-Leste can be divided into 5 major stages as follows:

2) Budget Preparation Stage

In this stage, expenditure estimates are made based on the estimation of available revenue. It is crucial to note that before approving expenditure estimates, a more accurate estimation of revenue should be conducted. In Timor-Leste, this preparation stage starts from April to June of each running year;

3) Budget Formulation Stage

During this stage, the Ministry of Finance of Timor-Leste allocates the budget to government agencies and state institutions based on annual and multi-annual activities that have been determined. This period takes place between July and September of the current year.

B. Parliamentary Debate and Presidential Enactment Stage

In this stage, the government submits the draft law on the annual state revenue and expenditure budget to the parliament for discussion. This period occurs between October and December of the current year.

Budget Implementation Stage
This stage marks the beginning of budget implementation according to the established plan. This period takes place between January and December of the following year.

**C. Reporting and Evaluation Stage**

This stage is the final phase in the budgeting cycle. During this stage, the budget is accounted for in the form of reports and evaluations of its implementation. This period occurs between March and April of the following year.

**D. Effectiveness, Efficiency and Credibility of Program-Based Budgeting**

1) **Definition of Effectiveness**

According to (Mardiasmo, 2004), effectiveness is the level of achievement of program results with the targets set simply effectiveness is the comparison of outcomes with outputs.

Effectiveness indicators describe the range of consequences and impacts (outcomes) of program outputs or outputs in achieving program objectives. The greater the contribution of outputs to the achievement of goals, the more effective the organization, program or activity.

From several definitions of effectiveness, it can be concluded that effectiveness is the success or failure between outputs and goals or objectives that must be achieved.

According to (Liang Gie, 2000), if someone does an action with a certain intention that he really wants, then that person is said to be effective if it causes an effect or has an intention as desired. In other words, a result is said to achieve effectiveness if the result is actually in accordance with the previously set plan, including applicable regulations.

2) **Definition of Efficiency**

Efficiency is the achievement of maximum output with certain inputs or the use of the lowest input to achieve certain outputs. Efficiency is a comparison of output/input in relation to performance standards or targets that have been set, (Mahmudi, 2007).

Efficiency in the public sector is one of the most popular performance parameters, widely used because it is the answer to the difficulties in calculating government performance measures.

According to (Sutawijaya, 2009), efficiency is the best comparison between input and output, as well as the optimal results achieved with the use of limited resources. In other words, the relationship between what has been accomplished.

3) **Budget Credibility**

According to (PEFA 2011 Framework, 2011), budget credibility is used to define the degree of deviation between planned and actual expenditure over a 12-month period, i.e. "Aggregate expenditure outturn compared to original approved budget” and comparing initial budget setting compared to budget amendments both reductions and additions.
Budget credibility requires consideration from two separate perspectives related to technical and governance aspects.

From a technical point of view, a credible budget is one where implementation is in line with plans. A credible budget means that if an activity has allocated funds, it will happen. And if it does not have allocated funds, it will not happen (Botlhale, 2013); (Fölcher, 2006).

From the governance angle, at the practical level, (Working Papers, 2015), the International Budget Partnership defines budget credibility as a description of the government's ability, to accurately and consistently meet its expenditure and revenue targets.

III. CONCEPTUAL FRAMEWORK

![Conceptual Framework Diagram]

IV. RESEARCH METHOD

A. Type of Research

The type of research used in this study is descriptive which is studied quantitatively. In this case, the financial condition is presented and analyzed the effectiveness, efficiency and credibility in implementing budget management policies based on program-based budgeting at the Ministry of Finance of Timor-Leste.

B. Research Variables

Based on the title of this thesis, the authors identify 3 (three) variables that will be analyzed in this study, namely:

Effectiveness Variable;
Efficiency Variable, and;
Credibility Variable.

Definition of Variables and Measurement

1) Effectiveness
The formula used to measure the ratio between budget realization compared to the budget target in Ministério das Finanças according to (Mahmudi, 2007) is as follows:

\[ \text{Effectiveness} = \frac{\text{Realization of Budget Implementation}}{\text{Target Anggaran Belanja/ Program}} \times 100\% \]

2) Efficiency
The formula used to measure the ratio between direct expenditure divided by budget realization in Ministério das Finanças according to (Mahmudi, 2007) is as follows:

\[ \text{Efficiency} = \frac{\text{Direct Budget Expenditure Realization}}{\text{Budget Expenditure Realization}} \times 100\% \]

3) Credibility
The two formulas used to measure the ratio of actual expenditure divided by budgeted expenditure and budget amendment divided by the original approved budget at the Ministério das Finanças Timor-Leste (PEFA 2011 Framework, 2011) are as follows:

\[ \text{Credibility} = \frac{\text{Realized Expenditure Budget}}{\text{Initial approved budget}} \times 100\% \]

\[ \text{Credibility} = \frac{\text{PAmendment of Expenditure Budget}}{\text{Initial approved budget}} \times 100\% \]

C. Data Collection Technique
The author uses the data collection method "Non-Participant Observation", namely observing budget documents and budget realization for 2018-2022 at the Timor-Leste Ministry of Finance Office.

1) Analysis Technique
a) Analysis Effectivity

<table>
<thead>
<tr>
<th>Persentase Pengukuran</th>
<th>Kriteria Efektivitas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 100%</td>
<td>Highly Effective</td>
</tr>
<tr>
<td>90% until 100%</td>
<td>Effective</td>
</tr>
<tr>
<td>80% until 90%</td>
<td>Moderately Effective</td>
</tr>
</tbody>
</table>

Table 1. Effectiveness Ratio Criteria
### Analysis Efficiency

#### Table 1. Criteria Ratio : Efficiency

<table>
<thead>
<tr>
<th>Measurement Percentage</th>
<th>Efficiency Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 100%</td>
<td>Not Efficiency</td>
</tr>
<tr>
<td>90% until 100%</td>
<td>Less Efficiency</td>
</tr>
<tr>
<td>80% until 90%</td>
<td>Moderately Efficiency</td>
</tr>
<tr>
<td>60% until 80%</td>
<td>Efficiency</td>
</tr>
<tr>
<td>Less than 60%</td>
<td>Highly Efficiency</td>
</tr>
</tbody>
</table>

Source: Mahmudi (2007)

### Analysis of Credibility

#### Table 2. Kriteria Rasio Kredibilitas Dilihat Dari Realisasi Anggaran

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Scoring Methodology</th>
<th>Persention</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
<td>90 until 100 %</td>
<td>Credible</td>
</tr>
<tr>
<td>B until B+</td>
<td>3 until 3.5</td>
<td>80% until 90%</td>
<td>Credible Enough</td>
</tr>
<tr>
<td>C until C+</td>
<td>2 until 2.5</td>
<td>60% until 80%</td>
<td>Less Credible</td>
</tr>
<tr>
<td>D until D+</td>
<td>1 until 1.5</td>
<td>Less than 60%</td>
<td>Not Credible</td>
</tr>
</tbody>
</table>

Source: (PEFA 2011 Framework, 2011)

#### Table 4. Credibility Ratio Criteria Viewed from Budget Changes

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Scoring Methodology</th>
<th>Persention</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>D until D+</td>
<td>1 until 1.5</td>
<td>Up to 9 %</td>
<td>Not Credible</td>
</tr>
<tr>
<td>C until C+</td>
<td>2 until 2.5</td>
<td>5% until 8%</td>
<td>Less Credible</td>
</tr>
<tr>
<td>B until B+</td>
<td>3 until 3.5</td>
<td>2% until 5%</td>
<td>Credible Enough</td>
</tr>
<tr>
<td>A</td>
<td>4</td>
<td>Less Than 2%</td>
<td>Credible</td>
</tr>
</tbody>
</table>

Source: (PEFA 2011 Framework, 2011)
v. RESULTS AND DISCUSSION

A. Research Results

Table 5. Summary of MF Expenditure Budget Realization Year 2018-2022

<table>
<thead>
<tr>
<th>Years</th>
<th>Type of Expenditure</th>
<th>Target Indicator</th>
<th>Target Achieved IOP</th>
<th>IOP Achievement (%)</th>
<th>Alokasi Anggaran $ (BA)</th>
<th>Budget Realization $ (BR) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>Personnel Expenditure (Salário e Vencimento)</td>
<td>95</td>
<td>92</td>
<td>97.00</td>
<td>3,256,785.00</td>
<td>3,159,081.45</td>
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<tr>
<td></td>
<td>Goods &amp; Services Expenditure (Bens e Serviços)</td>
<td>90</td>
<td>78</td>
<td>87.00</td>
<td>9,433,987.00</td>
<td>8,207,568.69</td>
</tr>
<tr>
<td></td>
<td>Capital Expenditure (Capital Minor)</td>
<td>90</td>
<td>80</td>
<td>89.00</td>
<td>1,344,993.00</td>
<td>1,197,043.77</td>
</tr>
<tr>
<td></td>
<td>Total Budget Allocation &amp; Realization</td>
<td></td>
<td></td>
<td></td>
<td>89.51</td>
<td>14,035,765.00</td>
</tr>
<tr>
<td>2019</td>
<td>Belanja Pegawai (Salário e Vencimento)</td>
<td>95</td>
<td>86</td>
<td>90.00</td>
<td>3,456,785.00</td>
<td>3,111,106.50</td>
</tr>
<tr>
<td></td>
<td>Belanja Barang &amp; Jasa (Bens e Serviços)</td>
<td>95</td>
<td>80</td>
<td>89.00</td>
<td>15,519,593.00</td>
<td>13,812,437.77</td>
</tr>
<tr>
<td></td>
<td>Belanja Modal (Capital Minor)</td>
<td>90</td>
<td>74</td>
<td>82.00</td>
<td>3,675,428.00</td>
<td>3,013,850.96</td>
</tr>
<tr>
<td></td>
<td>Total Budget Allocation &amp; Realization</td>
<td></td>
<td></td>
<td></td>
<td>88.02</td>
<td>22,651,806.00</td>
</tr>
<tr>
<td>2020</td>
<td>Employee Expenditure (Salário e Vencimento)</td>
<td>95</td>
<td>86</td>
<td>98.50</td>
<td>3,560,800.00</td>
<td>3,507,388.00</td>
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<tr>
<td></td>
<td>Goods &amp; Services Expenditure (Bens e Serviços)</td>
<td>100</td>
<td>80</td>
<td>83.00</td>
<td>11,567,431.00</td>
<td>9,600,967.73</td>
</tr>
<tr>
<td></td>
<td>Capital Expenditure (Capital Minor)</td>
<td>95</td>
<td>74</td>
<td>87.00</td>
<td>1,385,104.00</td>
<td>1,205,040.48</td>
</tr>
<tr>
<td></td>
<td>Total Budget Allocation &amp; Realization</td>
<td></td>
<td></td>
<td></td>
<td>86.68</td>
<td>16,513,335.00</td>
</tr>
<tr>
<td>2021</td>
<td>Programa 346-02318: Economic Statistics and Policy</td>
<td>80</td>
<td>57</td>
<td>71.00</td>
<td>570,265.00</td>
<td>404,888.15</td>
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<tr>
<td></td>
<td>Programa 348-02304: Budget and expense management</td>
<td>100</td>
<td>65</td>
<td>65.00</td>
<td>432,558.00</td>
<td>281,162.70</td>
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<td></td>
<td>Programa 349-02316: Revenue</td>
<td>95</td>
<td>66</td>
<td>69.00</td>
<td>12,962,358.00</td>
<td>8,944,027.02</td>
</tr>
<tr>
<td>Programa</td>
<td>Description</td>
<td>2022</td>
<td>2023</td>
<td>Average Level</td>
<td></td>
<td></td>
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<tr>
<td>----------</td>
<td>---------------------------------------------------------</td>
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<td>------</td>
<td>---------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>346-02318</td>
<td>Economic Statistics and Policy</td>
<td>95</td>
<td>67</td>
<td>70.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>348-02304</td>
<td>Budget and expense management</td>
<td>100</td>
<td>67</td>
<td>67.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>349-02316</td>
<td>Revenue Collection Management</td>
<td>100</td>
<td>60</td>
<td>60.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>350-02315</td>
<td>Mobilization and management of external resources</td>
<td>80</td>
<td>60</td>
<td>75.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>352-02319</td>
<td>Finance and Asset Management</td>
<td>90</td>
<td>66</td>
<td>73.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>353-02301</td>
<td>Public Financial Management Reform</td>
<td>80</td>
<td>59</td>
<td>74.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>354-02302</td>
<td>Budget execution and accountability</td>
<td>100</td>
<td>70</td>
<td>70.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>510-51002</td>
<td>Good Institutional Governance and Management</td>
<td>95</td>
<td>74</td>
<td>78.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Budget Allocation &amp; Realization</strong></td>
<td></td>
<td></td>
<td><strong>Average Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>70.13</td>
<td></td>
<td>70.13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6. Summary of Changes in MF Expenditure Budget 2018-2022

<table>
<thead>
<tr>
<th>Years</th>
<th>Initial Allocation ($)</th>
<th>Change in Budget Allocation ($)</th>
<th>Final Allocation ($)</th>
<th>Credibility %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Additions</td>
<td>Subtraction</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2018</td>
<td>13,522,765.00</td>
<td>513,000.00</td>
<td>0</td>
<td>14,035,765.00</td>
</tr>
<tr>
<td>2019</td>
<td>21,151,806.00</td>
<td>1,500,000.00</td>
<td>0</td>
<td>22,651,806.00</td>
</tr>
<tr>
<td>2020</td>
<td>17,863,785.00</td>
<td>0</td>
<td>1,350,450.00</td>
<td>16,513,335.00</td>
</tr>
<tr>
<td>2021</td>
<td>34,133,354.00</td>
<td>0</td>
<td>2,301,364.00</td>
<td>31,831,990.00</td>
</tr>
<tr>
<td>2022</td>
<td>31,369,289.00</td>
<td>0</td>
<td>1,500,000.00</td>
<td>29,869,289.00</td>
</tr>
<tr>
<td>Average</td>
<td>118,040,999.00</td>
<td>2,013,000.00</td>
<td>5,151,814.00</td>
<td>114,902,185.00</td>
</tr>
</tbody>
</table>

Source: MF Budget Realization Report (data processed 2023)

B. Analysis Research

Analysis of the Effectiveness of Expenditure Budget Absorption

![Graph of Effectiveness of Expenditure Budget Implementation 2018-2022](image)

**Figure 3. Level of Effectiveness of Expenditure Budget Realization 2018-2022**

*Source: MF Budget Realization Report 2018-2022 (data processed 2023)*

The results of the above calculations can be found out the level of effectiveness at the Ministério das Finanças for five years from 2018 to 2022 as follows:
Expenditure budget absorption in 2018 amounted to $12,563,693.91 of the total expenditure budget received of $14,035,765.00 and budget effectiveness of 89.51% so that it can be categorized as quite effective (80% - 90%).

The absorption of the expenditure budget in 2019 amounted to $ 19,937,395.23 from the total expenditure budget received of $ 22,651,806.00 and the effectiveness of the expenditure budget was 88.02% so that it could be categorized as Quite Effective (80% - 90%). Experienced a decrease in the effectiveness of absorption of expenditure budgets from the previous year by 1.49%.

The absorption of the expenditure budget in 2020 amounted to $ 14,313,396.21 of the total budget received of $ 16,513,335.00 and the effectiveness of the expenditure budget was 86.68% so that it could be categorized as Quite Effective (80% - 90%).

The absorption of the expenditure budget in 2021 amounted to $21,999,668.97 from the total expenditure budget received of $ 31,831,990.00 and the effectiveness of the expenditure budget was 69.11% so that it could be categorized as Less Effective (60% - 80%).

The absorption of the expenditure budget in 2022 amounted to $20, 947,367.84 of the total expenditure budget received of $29, 869,289.00 and the effectiveness of the expenditure budget was 70.13% so that it could be categorized as Less Effective (60% - 80%).

From the analysis of the results above, it shows that the average effectiveness level from 2018 to 2022 refers to the effectiveness criteria, it is declared less effective with a percentage of only 78.12%.

Efficiency Analysis of Expenditure Budget Absorption

![Efficiency Chart of Expenditure Budget Implementation (2018-2022)](chart)

**Figure 4. Efficiency Level of Expenditure Budget Realization 2018-2022**


The results of the above calculations can be known the level of efficiency at the Ministério das Finanças for five years from 2018 to 2022 as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Realisasi Anggaran/ Program</th>
<th>% (Realisasi Anggaran/ Program)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>12,563,693.91</td>
<td>89.51</td>
</tr>
<tr>
<td>2019</td>
<td>19,937,395.23</td>
<td>88.02</td>
</tr>
<tr>
<td>2020</td>
<td>14,313,396.21</td>
<td>86.68</td>
</tr>
<tr>
<td>2021</td>
<td>21,999,668.97</td>
<td>69.11</td>
</tr>
<tr>
<td>2022</td>
<td>20,947,367.84</td>
<td>70.13</td>
</tr>
</tbody>
</table>
The absorption of the expenditure budget in 2018 amounted to $12,563,693.91 of the total expenditure budget received of $14,035,765.00 and the efficiency of the expenditure budget was 89.51% so that it could be categorized as quite efficient (80% - 90%).

The absorption of the expenditure budget in 2019 amounted to $19,937,395.23 of the total expenditure budget received of $22,651,806.00 and a budget efficiency of 88.02% so that it can be categorized as quite efficient (80% - 90%).

The absorption of the expenditure budget in 2020 amounted to $14,313,396.21 of the total expenditure budget received of $16,513,335.00 and budget efficiency of 86.68% so that it can be categorized as Quite efficient (80% - 90%). However, the implementation of the expenditure budget in 2020 has decreased from the previous two years with a percentage decrease of 1.34% from 2019.

The absorption of the expenditure budget in 2021 amounted to $21,999,668.97 from the total expenditure budget received of $31,831,990.00 and a budget efficiency of 69.11% so that it can be categorized as efficient (60% - 80%).

The absorption of the expenditure budget in 2022 amounted to $20,947,367.84 of the total expenditure budget received of $29,869,289.00 and the efficiency of the expenditure budget of 70.13% so that it can be categorized as efficient (60% - 80%).

From the analysis of the results above, it shows that the average efficiency level from 2018 to 2022 refers to the efficiency criteria, it is declared efficient with a percentage reaching 78.12%.

Credibility Analysis of Expenditure Budget Realization 2018-2022

![BUDGET EXECUTION CREDIBILITY CHART (2018-2022)](chart)

**Figure 5.** Credibility Level of Expenditure Budget Realization 2018-2022

*Source: Ministry of Finance Budget Realization Report (data processed 2023)*
Analysis of the level of credibility seen from the aspect of budget realization from 2018-2022, presented in Figure 6. as follows:

The realization of the expenditure budget in 2018 amounted to $12,563,693.91 of the total budget received of $14,035,765.00, or reached 89.51% realized and can be categorized as Moderately Credible (80% - 90%).

The realization of the expenditure budget in 2019 amounted to $19,937,395.00 of the total budget allocated of $22,651,806.00 or reached 88.02% so that it can be categorized as Moderately Credible (80% - 90%).

The absorption of the expenditure budget in 2020 amounted to $14,313,396.00 of the total expenditure budget received of $16,513,335.00 or reached 86.68% realized so that it can be categorized as Moderately Credible (80%-90%).

The realization of the expenditure budget in 2021 was $21,999,668.97 of the total expenditure budget received of $31,831,990.00 or 69.11% realized so that it could be categorized as Less Credible (60%-80%).

The realization of the expenditure budget in 2022 amounted to $20,947,367,668.84 of the total budget received of $29,869,289.00 or reached 70.13% realized so that it can be categorized as Less Credible (60% - 80%).

From the analysis of the results above, it shows that the average level of credibility from 2018 to 2022 refers to the credibility criteria, it is declared Less Credible with a percentage reaching 78.12%.

Credibility Analysis of Expenditure Budget Realization 2018-2022

![Graph of Changes in Expenditure Budget 2018-2022](image)

*Figure 6. Credibility Level of Expenditure Budget Realization 2018-2022*

*Source: Ministério das Finanças Budget Realization Report (data processed 2023)*

A detailed analysis of the level of credibility in terms of changes in expenditure budgets from 2018-2022 is presented as follows:
1. Changes in the expenditure budget in 2018 amounted to $513,000.00 (increase) from the total initial allocation received of $13,522,765.00, so that it became $14,035,765.00 in the final allocation. Thus, there was a change of 3.79% from the initial allocation and is therefore categorized as Moderately Credible (2%-5%);

2. The change in expenditure budget in 2019 amounted to $1,500,000.00 (addition) to the initial allocation of $21,151,806.00, resulting in a final allocation of $22,651,806.00. Thus, there was a change of 7.09%, so it is categorized as Less Credible (5%-8%);

3. Changes in the expenditure budget in 2020 amounted to $1,350,450.00 (reduction) against the initial allocation of $17,863,785.00, resulting in the final allocation being $16,513,335.00. Thus, there was a change of -7.56%, so it is categorized as Less Credible (5%-8%);

4. Perubahan anggaran belanja pada tahun 2021 sebesar $2,301,364.00 dari alokasi anggaran awal sebesar $34,133,354.00 sehingga alokasi final hanya sebesar $31,831,990.00. Dengan demikian maka terjadi perubahan sebesar -6.74%, maka dikategorikan Kurang Kredibel (5% - 8%);

The change in expenditure budget in 2021 amounted to $2,301,364.00 from the initial budget allocation of $34,133,354.00 so that the final allocation was only $31,831,990.00. Thus, there is a change of -6.74%, so it is categorized as Less Credible (5% - 8%);

Changes in the expenditure budget in 2022 by $1,500,000.00 from the initial budget allocation of $31,396,289.00 so that the final allocation is only $29,869,289.00. Thus, there was a change of 14.78%, hence categorized as Moderately Credible (2% - 5%).

VI. CONCLUSIONS AND SUGGESTIONS

A. Conclusions

1) Effectiveness Level

The results of the analysis show that the level of effectiveness of budget implementation in 2018 and 2020 using budgeting based on economic classification (line item) is Moderately Effective. Meanwhile, the level of effectiveness of budget implementation in 2021 and 2022 using Program Based Budgeting (PBP) is Less Effective, this is due to the lack of understanding and readiness of staff to implement the new budget system.

2) Efficiency Level

The average level of absorption seen from the analysis of the efficiency level during the 2018-2022 period is Efficient. However, this efficiency is not in line with the expected program achievements because some programs are not implemented in accordance with the plan because in addition to the transfer of a number of funds, it is also influenced by the readiness and knowledge of the budget implementers.

3) Level of Credibility

The results of the analysis show that the level of credibility of the budget at the Ministério das Finanças seen from the aspect of budget realization, the average level of credibility is less credible.
While the analysis of the level of change in the budget expenditure ratio of the results of the analysis of the level of credibility from 2018 to 2022 can be declared Less Credible with an average percentage level of changes in expenditure budgets reaching 5.99%.

B. Suggestions

1. Maintain the level of effectiveness and efficiency in the realization trend of budget implementation by using the budgeting system and budget execution based on line items in 2018, 2019 and 2020;
2. The dimension of budget changes needs special attention so that budget credibility is maintained, in this case strengthening program planning at the budget preparation stage based on strategic objectives so as to avoid budget changes in the middle of budget execution;
3. Improving the quality of human resources (HR) through regular training on the new budget system is needed in order to implement the new budget law (Law No.2/22, 2022).

REFERENCES