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ANALYSIS OF EFFECTIVENESS AND EFFICIENCY OF REVENUE AND EXPENDITURE BUDGET IN MINISTRY OF EDUCATION TIMOR-LESTE

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ABSTRACT

This study aims to determine and analyze the effectiveness and efficiency of the revenue and expenditure budget at the Ministry of Education of Timor-Leste from 2018 to 2022. The analytical tool used in this study is a quantitative descriptive method, namely analyzing target data, spending realization and income using the effectiveness and efficiency ratio while the data used is Primary data and Secondary data. The results of this study indicate that the average value of the effectiveness of the realization of the revenue and expenditure budget from 2018 to 2022 at the Ministry of Education of Timor-Leste is 81.05% which meets the criteria for being quite efficient. For the level of efficiency, the average is 81.05%, the criteria are quite efficient. While the achievement of program planning performance in 2021 to 2022 is measured from the average realization of the program which is quite good.

KEYWORDS: Effective and Efficiency, Quantitative Descriptive Method, Ministry of Education

I. INTRODUCTION

Timor-Leste as one of the newly established countries and is heading towards a developing country after going through almost a decade and facing many challenges, development policies depend on sources of income obtained from the production of Natural Resources (SDA). In 2005/06 Timor-Leste began to receive income from known oil sources (petroleum funds) from the exploration of the Timor gap. The tendency of the Timor-Leste APBN to depend on oil funds is a problem and invites concern because non-renewable resources (non-renewable resources) so that at some point the limited and non-renewable SDA will run out, it is demanded that in managing the use it is necessary to see the sustainability of funds, by making appropriate policies in using oil funds.

Many cases of incorrect management of Natural Resource wealth can cause economic problems in the future. According to Nafziger (1999), the case of the Netherlands in the literature (Dutch Disease), in the 1960s obtained a level of economic welfare due to the abundance of the Natural Resources it had. This situation changed in the 1970s, the country's economy collapsed after rising inflation, declining manufacturing sector exports, declining economic growth, and increasing unemployment (Erani A. Yustika, 2009; 201), why the gift of natural resources turned into a curse. The Timor-Leste government has undergone a continuous process of Public Financial Management reform since independence and its approach reflects the commitment and good progress achieved in nation building. Despite some weaknesses and challenges, the governance and structure of the Public Financial Management system reflect the government's continued commitment to the vision of modern state development and institutional development in line with international standards.

A budget is a financial plan that is systematically prepared to support the implementation of an organization's program activities. While normatively, the budget is the highest limit of expenditure that may be made (Mahmudi, 2007) in an organization, the budget plays an important role where the budget is a guarantee of the sustainability of an agency. Effectiveness is the relationship between output and goals or targets that must be achieved. That the effectiveness of the use of the budget sourced from the people is when the budget is spent according to the needs that have been set in the previous planning or in other words spent according to the goals or targets that must be achieved. Efficiency according to (Mardiasmo, 2004) is closely related to the concept of productivity.

Measurement of efficiency is done by using a comparison between the output produced and the input used (cost of output). The operational activity process can be said to be efficient if a certain product or work result can be achieved with the use of the lowest possible resources and funds (spending well). Efficient use of the budget must achieve the previously set targets. Effectiveness is the ability of a program, activity, or business to achieve predetermined goals by using available resources efficiently. In the context of an organization or government, effectiveness refers to the extent to which a program or activity can achieve its stated goals within the time, cost, and resources available. Effectiveness is often measured by the extent to which the output or results of the program are in accordance with the stated goals. Increasing effectiveness is the goal of ensuring that activities or efforts made can provide maximum benefits in accordance with the stated goals.

Meanwhile, on the other hand, at the practical level, (Working Papers, 2015), the International Budget Partnership defines budget credibility as a picture of the government's ability to accurately and consistently meet its expenditure and revenue targets. Efficiency is a comparison of output/input associated with performance standards or targets set. Then, Effectiveness is the level of achievement of program results with targets that have been set.

Simply put, effectiveness is a comparison between results and outputs. In the absorption of the Timor-Leste State revenue and expenditure budget, there are three very important things that must be played by the government; Transparency, because of the importance of how money is spent, the calculation of proposed spending is very detailed. The proposed expenditure from salaries to staff and on to programs and transport and accommodation and equipment and rentals and interest are all visible to the public. During the Budget formulation process, Parliamentary Committees have the opportunity to seek further information on the figures and objectives of the Budget items. In this regard, a budget can be considered “not credible” if its allocations are technically in line with government priorities, but the budget cannot be realized due to overestimation or underestimation of total revenue and/or expenditure. According to (PEFA 2011 Framework, 2011), budget credibility is used to mean the degree of deviation between planned and actual expenditure over a 12-month period, namely the aggregate expenditure outturn compared to the original approved Budget and comparing the original budget determination compared to the budget amendments, either reductions or additions. Meanwhile, in Law No. 2/2022, 2022 Timor-Leste, Article 10, mandates that the Timor-Leste government change the budgeting system based on line items to a budgeting system based on programs (Orçamentação por programas) and the budget is prepared based on the program structure (O Orçamento Geral Estado estrutura-se em programas).

This law adopts the concept of New Public Management (NPM) thinking, namely management with a more efficient, professional, accountable, and transparent mindset by making changes from traditional budgeting to program-based budgeting, which opens a corridor for the implementation of program-based budgeting in the government environment. In the book PFM reform 2022-2027, 2022, it is explained that the State Financial Management reform is comprehensive in the scope of the State Financial Management function, with the general objective of Strengthening Public Financial Management at all levels of government institutions to ensure efficient, effective and accountable use of public resources as a basis for improved service delivery.

The national budget is indeed the most important political statement made by any government throughout the year. Therefore, it is very important that parliament, as the highest political institution in a country, plays a major role in scrutinizing the national budget and overseeing its proper implementation. It is through the budget that the government makes political choices and seeks adequate allocation of resources to enable it to implement those choices. So the role of parliament is very important, not only in influencing these political choices so that they are truly in accordance with the wishes of the people you have been elected to represent, but also in ensuring that the resources provided for it through the budget are used transparently, responsibly, efficiently and can be accounted for as well as possible for the benefit of budget effectiveness which greatly influences government performance where the government is considered good if the government is able to carry out spending effectiveness and is able to make the budget efficient so that the budget can achieve the desired goals.

Budget effectiveness can be measured by the level of realization (achievement), where in government agencies such as the Ministry of Education it is called spending realization, if spending realization approaches j the amount of budget, reaching the target and on target then shows good performance (good performance). However, if on the contrary the absorption is very far from expectations then it will have a negative impact on the performance of the agency (bad performance). In designing the Timor-Leste state revenue and expenditure budget or commonly called the Orçamento Geral Estado (OGE). The government budget is related to the process of determining the amount of funds allocated for each program and activity in monetary units that use public funds. The public budget is a planning tool as well as a control tool. The budget as a planning tool indicates the targets that must be achieved by the government, while the budget as a control tool indicates the allocation of public funds approved by the legislature to be spent.

Efficiency refers to the ability to carry out an action or activity using available resources optimally. This includes efforts to achieve maximum results with minimal cost, time, or other resources. In the context of business or management, efficiency is often measured by comparing the results achieved with the resources used. In other words, efficiency shows the extent to which an action or activity can be carried out effectively and economically.

The efficiency of budget management in government can be supported by various data and indicators. Some of these data may include;

Economic Growth Rate; Efficient budget management can be reflected in stable and sustainable economic growth. Gross domestic product (GDP) growth data can be an indicator of budget management efficiency because it reflects the overall health of the economy. Productive Public Expenditure: Data on budget allocation to productive sectors, such as infrastructure, education, health, and research and development, can show efficiency in budget management. Productive spending can help strengthen long-term economic growth.

Reduction in Budget Deficit: Data on budget deficits that are decreasing or under control can also be an indicator of budget management efficiency. This shows that the government is able to manage public finances without causing too large a deficit. Reduction in Waste and Corruption: Data that shows the government's efforts to reduce waste and corruption in budget management are also indicators of efficiency. For example, data on the number of corruption cases that have been followed up and the amount of money that has been recovered from corruption can provide an overview of budget management efficiency. Budget Transparency Rating: Data related to budget transparency ratings, both at the national and local levels, can also provide an overview of the extent to which budget management has been efficient and accountable. It is important to note that this data must be presented comprehensively and openly to allow for monitoring, evaluation, and improvement in budget management. This data can also be used by the government, audit institutions, civil society organizations, and the general public to assess the efficiency of budget management by the government.

Budget absorption is the process of spending funds according to the plan that has been prepared in the budget. The effectiveness of budget absorption is the ability to achieve the desired goals using the available funds, while the efficiency of budget absorption is the ability to use funds as efficiently as possible without wasting money. Here are some examples of productive public expenditure data that can support the efficiency of budget management. Increased Fund Flow to Infrastructure: Data showing an increase in budget allocation for infrastructure development can be an indicator of productive public spending. Examples include data showing an increase in spending on the construction of roads, bridges, public transportation, and clean water installations. This increase can improve connectivity, facilitate the flow of goods and services, and increase public access to public services.

Spending on Quality Education: Data showing an increase in spending on the education sector, especially for improving the quality of educational facilities, teacher training, and providing quality learning materials, can be considered productive public spending. Through this expenditure, a more equal opportunity will be created for the community to obtain access and quality education, which in turn will support the development of superior human resources. Investment in Public Health: Data on increased expenditure for the health sector can also support the efficiency of budget management. Expenditure for the construction and maintenance of health facilities, affordable medicines, immunization programs, and public health promotion are examples of productive public spending because they have the potential to improve the welfare of society as a whole.

Research and Development: Data showing increased budget allocations for research and development (R&D) programs can also strengthen the argument for efficient budget management. Investment in R&D can help drive innovation, technological development, and increase a country's economic competitiveness, which will ultimately have a positive impact on long-term economic growth.

Reduction of Unproductive Spending;

In addition to increased spending on productive sectors, data showing reduced spending on programs or projects that are considered unproductive or inefficient can also indicate efficient budget management. For example, data showing a reduction in subsidies that are not well-targeted or the elimination of programs that do not have a significant impact on society. While Timor-Leste relies heavily on the Petroleum Fund to finance its budget and natural resources contribute to it because the Petroleum Fund is limited, Timor-Leste budget strategy seeks to diversify the economy away from dependence on natural resources, while creating jobs, reducing poverty and promoting economic growth.

Based on Table 1, it can be seen that overall there is a fluctuation in the state budget revenue and expenditure of the Ministry of Education from 2018 to 2022. The state budget revenue and expenditure of the ministry's state budget is allocated to finance spending budgets such as Salary Wages, Good Services, Minor Capital, Capital Development, Transfers and Despesas Contigencias. Based on the researcher's observations, the obstacles experienced so far by the Ministry of Education have never conducted an evaluation of the effectiveness and efficiency of the budget allocated to the budget used in the Ministry of Education, so that the ministry itself cannot measure the performance of the financial section, as we know the level of effectiveness of budget absorption reflects that the Ministry of Education has planned programs or activities in accordance with the Vision and Mission stated in the Strategic Plan that has been prepared. Furthermore, the rate of budget growth reflects the increase in a country's economy, because the increase in the budget shows that more and more work programs can be financed.

Table 1. Budget Expenditure in the Ministry of Education, Budget Data Source: Budget Transparency Portal for 2018 to 2022.

Year	Budget Allocation	Implementation of the Budget	Remaining Budget Implementation
2018	$76.771.820,00	$73.762.861,75	$3.008.958,25
2019	$82.429.983,00	$78.911.871,77	$3.518.111,23
2020	$75.651.547,00	$73.980.511,89	$1.671.035,11
2021	$106.341.251,40	$102.263.744,85	$4.077.506,55
2022	$83.191.769,00	$15.060.757,63	$68.131.011,37

Source Data : Timor-Leste Budget Transparency Portal, https://www.mof.gov.tl

Research on the effectiveness of budget absorption has been widely conducted (Sumenge 2013), conducting research with the title of budget in 2008, 2009, 2010, 2012 is said to be effective, but in 2011 the level of effectiveness was still lacking because the realization of the spending budget had a big difference with the target spending budget, this difference occurred because some activities were budgeted but not implemented but for other activities that had been budgeted were effective. Pramitha (2015), revealed in Kebumen Regency in 2019-2013 where it was found that budget absorption in the district was included in the effective category. Furthermore, Amaral (2015), conducted a study entitled Effectiveness of Budget Absorption at the Ministry of Public Works of Timor-Leste in 2009-2013, the results of the study showed that the average budget effectiveness from 2009-2013 was 89.29% with a percentage level of 80% -90% or categorized as very sufficient effectiveness. Based on the problems that have been described empirically whose findings contain the conditions of the research location, this study examines the analysis of the effectiveness and efficiency of the revenue and expenditure budget at the Ministry of Education of Timor-Leste in 2018 to 2022.

II. LITERATURE REVIEW

A. Definition of Budget

A budget is one of the tools for management in carrying out its functions, especially in planning and control. The value of a budget depends on budget planning and control. If there is a deviation from the implementation of the budget due to it being too high in its determination, a way is needed to control it, namely by reviewing the results of the previous budget determination so that during implementation it can be realized properly and used as input for the company in implementing the planning and control of the budget so that in the coming period it can be used as a positive improvement. The budget is also a tool for the company in achieving its main goal, namely obtaining profit by producing goods or services to be sold to consumers so that the company obtains optimal income.

A budget or more often referred to as a budget has various definitions, but if examined more closely, each definition has the same definition. The definition of a budget according to M. Nafarin (2007:9), namely a budget is a periodic financial plan that is prepared based on programs that have been approved. Meanwhile, according to Darsono and Ari Purwanti (2008:1) there are several types of understanding of the budget, including the following;

1. The budget can be in the form of a physical budget and a financial budget. A budget is commonly called a work plan that is written down in the form of financial figures, commonly called a formal budget.

2. A budget is commonly called profit planning and control, which is a process aimed at assisting management in planning and controlling effectively.

3. A budget is a long-term strategic profit plan, a short-term tactical profit plan; an accounting system based on responsibility; a continuous use of the exception principle, as a tool to achieve the goals and objectives of an organization.

4. A budget is a plan about company activities that include various operational activities that are interrelated and influence each other as a guideline for achieving the goals and objectives of an organization. Generally prepared in writing.

5. A budget can be considered a system that has its own specificity or as a sub-system that requires a relationship with other subsystems in an organization or company.

6. A budget is considered autonomous because it has its own targets and working methods that are a whole and different from the targets and working methods of other systems in the company; the budget is also called a sub-system.

7. Budget as a system consists of three layers, namely: core system, supporting subsystems, environmental subsystems. The core system is the profit target; supporting subsystems are various activities that help the smooth running of the core system such as organizational structure, administration, data analysis, standard figures and so on. The environmental subsystem is the external environment of the organization such as economics, social, politics, culture and so on that affect the operation of an organizational system.

8. Budget is the same as profit planning.

Profit planning includes sales planning, production planning, raw material usage planning, direct labor planning, overhead cost planning, marketing cost planning, general and administrative cost planning and so on. This capital is generally called a complete periodic budget or master budget.

In addition, according to Mulyadi (2008:488), the budget is explained as follows:

A budget is a work plan expressed quantitatively which is measured in standard monetary units and other units of measurement, which covers a period of one year. From the several definitions above, it can be concluded that a budget is a management plan regarding the acquisition and use of company resources which is stated formally and in detail in the form of quantities and within a certain period.

B. Public Sector Budget Definition

Mardiasmo (2004:62) Public spending budget as a plan that represents income and expenditure as a monitor and also the function of the budget as social and economic development, response to social welfare and government responsibility to citizens.

Bastian (2006) 5 financial systems;

Line item budgeting, Incremental budgeting, Planning Programming Budgeting system (PPBS), Zero based budgeting and Performance budgeting system (PBS). Budget categories and budget revenues in Timor-Leste according to public financial management law No.13/2009: 5 categories of Public expenditure such as; Salaries & Wages, goods & services, small capital, development capital and Public Transfer Funds and 2 sources of budget revenue, namely: domestic revenue and petroleum revenue.

Mardiasmo (2004:4) Effectiveness is the level of achievement of program results with effectiveness targets simply by comparing realization and target. According to (Sujarweni 2015:28) Budget is a financial operation plan that includes estimates of proposed expenditures, and expected sources of income to finance them in a certain period of time. The contents of the budget are about activity plans in a period represented in the form of revenue and expenditure plans in monetary units. The budget is in the form of a document that shows the financial condition of a public sector organization which includes information on income, expenditure, and activities.

According to (Halim and Kusufi 2016:48) the budget is a document that contains performance estimates, both in the form of income and expenditure, which are presented in monetary terms that will be achieved in a certain period of time and include past data as a form of performance control and assessment.

Based on Law No. 13/2009/21 October, concerning the budget and Financial Management of Timor Leste. The budget is about the mechanism by which the Government obtains parliamentary approval for its proposed expenditures and proposed revenue searches, the meaning of the Budget's impact is much broader than the concept of finance:

1). In a country with a parliamentary system of government, the National Budget is a very important tool to ensure transparency, accountability and Good Governance.

2). The budget itself and the procedures associated with its implementation emphasize the constitutional relationship between the Executive and the Legislature. In a parliamentary system, the Executive receives a mandate from the voters to run the government;

3) The budget is the single most important policy statement made by any Government during the course of the year. Although it is given more attention in terms of numbers, it is a fundamental policy statement that outlines the Government's view of the socio-economic state of the nation. It is a political statement of the Government's policy, conveying what it has done and what it intends to do.

C. Functions and Benefits of Budget

According to Muchlis and Bathtiar (2002), there are three functions of the budget as follows;

1). As a guideline for state management, the budget is a plan and guideline for implementation in the organization of the state in a certain period.

2). As a priority tool, the amount of income is very limited while the amount of spending continues to increase.

3). As a political negotiation tool, the existence of financial resources managed by the government is a means of political negotiation, which consists of various political parties with different goals and the budget as: a). Planning tool, b). Control tool and c). Evaluation tool.

According to Bastian (2006) Sita in Ferina et al 2015, there are 3 budgeting systems, namely;

1). Line Item Budgeting

Line item is the preparation of a budget that is implemented to and from where it comes (revenue items) and for which funds are used for expenditure items.

The characteristics of the line item budgeting system are;

a. The focus of attention is on the implementation and accountability aspects.

b. Emphasis is only on the administrative aspect.

Line items also have their own advantages and disadvantages such as. The advantages of line items such as; relatively easy preparation and help in securing commitment among participants so that it can reduce conflict. Weaknesses of line items such as: attention to reports on the implementation of the recipient and expenditure budget is very lacking in consideration, ignoring the achievements achieved on the realization of budgeted revenues and expenditures and budget preparers do not have rational reasons in setting revenue and expenditure targets.

2). Incremental Budgeting

Incremental budgeting uses the current year's revenue and expenditure budget to determine the budget for the coming year. The focus is on the marginal or incremental difference between the annual budget and the previous year, not on the budget as a whole and the reason for using this incremental budgeting is that all activities carried out in the previous budget year are activities that must be continued in the following year.

The incremental system also has its own advantages and disadvantages such as Weaknesses: the same as the line item system. Advantages: helps overcome the complexity of the budget preparation process, does not require too high knowledge to understand new programs and can reduce conflict.

3). Planning Programming Budgeting System

Planning Programming Budgeting System (PPBS), is a process of planning the creation of programs related to a system as a whole and inseparable unit and contains the identification of organizational goals, problems that may arise in achieving goals and the process of considering the implications of decisions on various future activities.

D. Budget Basics in Timor-Leste

1) Article 145 of the RDTL Constitution clearly states that:

a) The State Budget (ABPN) is prepared by the Government and approved by the National Parliament.

b) Financial laws must be based on effectiveness and efficiency, a description of state revenues and expenditures and ensure that there is no secret storage of funds, (Lei Gestão Finanças Publicas, Lei no.13/2009)

c) Budget implementation will be supervised by the highest tax administration and financial audit court (Tribunal de contas) and the National Parliament.

2) Public Finance Law no. 13/2009 (Lei Gestão Finanças Publicas), this law regulates the principles and rules for the use of public budgets and loans guaranteed by the government, the content and structure of the government budget and the law for the annual budget including rules for special funds, budget amendment procedures, budget implementation and including content for the implementation of the annual budget. And also other regulations related to the government budget.

3) Timor-Leste petroleum law of 2005; this law regulates the transfer of public revenues from petroleum to the territory of Timor-Leste for the government as the owner of the petroleum funds.

4) Other regulations made by the Ministry of Finance of Timor-Leste.

E. Definition (APBN)

The State Budget (APBN) is the government's annual financial plan. The APBN/OGE in the context of Timor-Leste based on the 2019 citizen guideline 2019 is a document that includes calculations regarding the predicted revenue and expenditure budget for the following year based on government priorities, the Ministry of Finance holds a financial workshop called the Jornada orçamento to discuss government priorities in the following budget year and then the Ministry of Finance includes all priorities from all ministries in a document called pasta verde after the pasta is approved by the government, it is submitted to parliament and if parliament approves, parliament will submit it to the President to be approved and promulgated in the government journal after which it is called the Orçamento General do Estado (OGE) Budget Revenue and Expenditure (APBN).

The State Budget (APBN) called Orçamento Geral do Estado in Timor-Leste is prepared and submitted by the government, approved by the Parliament (house of representatives) and ratified by the President. In the preparation of the annual budget in general based on the public finance law (Lei Gestão Finanças Públicas No.13/2009) article 22 based on three main information, namely;

1) There must be general information about finance.

2) There must be clear planning regarding the budget and planning and also information regarding income predictions/estimates (Receitas).

3) Information regarding financial activities and passives.

Furthermore, the specifications regarding the annual budget will be regulated in articles 24 and 25 and based on article 30 the government must submit the State Budget (APBN)/Orçamento Geral do Estado to Parliament on October 15 for a normal fiscal year, this date does not apply to a non-normal fiscal year such as when the government is in a state of non-recognition (governor demitido), in the process of inaugurating a new government cabinet (occasionally a tomada de posse ao novo membro do Governo) and there are legal problems (occasionally a legislative period).

F. Types of Budgets in the Government of Timor-Leste

The government has 2 types of budgets, namely; expenditure budget and revenue budget from each budget has its own category.

1) Expenditure Budget (Expenditure/Despesas)

The expenditure/despesas budget consists of 5 categories as follows;

a) Salari e Vensimento/Salary and allowances: this budget category is used to pay salaries, allowances, allowens and overtime for all civil servants including the police and military (PNTL no FFDTL).

b) Bens e Serviços/Routine Budget: this budget category is used to pay for providers that are used up such as office equipment, vehicle operating costs, supplies of medicines, school books, electricity, telephone, water and so on. In addition, it is also used to pay for consultant services, catering, membership, pay for travel money for domestic and foreign work including paying for plane tickets.

c) Capital Menor/Capital Expenditure Budget: used to fund small capital needs or purchase government assets such as printing machines, computers, printers, two-wheeled and four-wheeled vehicles.

d) Public Transfer Fund: used to fund public organizations.

e) Capital Desenvolvimento/Development Budget: funds for national development such as, construction of highways, government buildings, schools, health centers, provision of electricity, clean water, road repairs and anticipation for flood control.

G. Revenue Budget (Receitas)

Sources of Revenue (Receitas) from the Timor-Leste government based on the definition of Livru Orsamentu 1 OGE 2019 are divided into two parts;

a. Receitas Domesticas/domestic taxes

Receitas domesticas/domestic income is taxation received from domestic sources such as personal income, this also includes income received from private business taxation. Domestic taxes in Timor-Leste consist of Tax (imposto), Interest (juros), fees (encargos) taxes from autonomous government agencies and Taxes from ZEEMS. Tax revenues and fees are obtained from administrative costs, usage payments, individual income.

b. Receitas Fundo Petrolifero/Oil Tax

Timor sea tax: this tax is received by the government from the activities of oil companies operating in the Timor Sea. Royalty and Interest Income: royalty payments received from mining companies for the right to explore and develop mineral resources within Timor-Leste such as interest received from investments in overseas banks, royalties from investments in oil companies.

H. Effectiveness Ratio Analysis

Effectiveness defined by Hans Kartikahadi in Agoes Sukirmo (2000:180) is the final product of an operational activity that has achieved its goals both in terms of the quality of work results, quantity of output work results and targeted time limits while efficiency is defined as acting in a way that can minimize losses or waste of resources in implementing or producing something. While Ruchayat Kosasih in (Agoes Sukirmo 2000,180) defines effectiveness as a comparison of input and output in various activities, until the achievement of the set goals both in terms of the quality (volume) of work results, quality of work results and targeted time limits and efficiency as acting to make the most appropriate sacrifice compared to the desired results.

Mardiasmo (2009:132) effectiveness is basically related to the achievement of policy goals or targets (efficacy). Effectiveness is the relationship between output and goals or targets that must be achieved. Operational activities are said to be effective if the activity process achieves the goals and final targets of the spending wisely policy. Hidayat 1986, in a banking article, explains that effectiveness is a measure that states how far the target of a measure that states how far the target of quantity, quality, and time has been achieved. Where the greater the percentage of targets achieved, the higher the effectiveness.

I. Effectiveness

The word effective comes from English, namely effective, which means successful or something that is done well. Effectiveness (Melati, 2015:8) is how well the work is done, the extent to which someone produces output according to expectations, it can be interpreted that if a job can be done well according to plan, it can be said to be effective. In simple terms, effectiveness is a comparison of outcome with output. The definition of effectiveness according to (Mardiasmo, 2004, p. 132) is basically related to the achievement of policy goals or targets (efficacy). Effectiveness is the relationship between output and goals or targets that must be achieved. Operational activities are said to be effective if the activity process achieves the goals and final targets of the policy (spending wisely). Because the output produced by public sector organizations is more intangible output that is not easy to quantify, measuring effectiveness often experiences difficulties.

The difficulty is because the achievement of results (outcomes) cannot be known in the short term but in the long term after the program ends so that the measure of effectiveness can usually be expressed qualitatively in the form of a judgment statement. Thus, effectiveness is a condition regarding the occurrence of a desired effect or consequence. According to (Liang Gie, 2000), if someone does an act with a certain intention that is indeed desired, then that person is said to be effective if it causes an effect or has the intention as desired. In other words, a result is said to achieve effectiveness if the result is truly in accordance with the previously determined plan, including applicable provisions. A credible and accountable budget is one of the prerequisites for the effectiveness of the budget in encouraging national development, and/or in order to eradicate other national strategic problems so that they can be overcome. Therefore, the budget needs to be understood by all levels of citizens, both in terms of function, process, mechanism, underlying regulations, time period and responsibility, so that in its implementation it is carried out effectively, efficiently and on target on the main problems that the government wants to overcome.

The effectiveness of program-based budget implementation seen from a rational perspective is a technical issue. Performance measurement system based on the concept of value for money, and result-oriented budget emphasizes logical/rational and technical thinking in managing a change in an organization. Effectiveness indicators describe the range of consequences and impacts (outcomes) of program outputs in achieving program objectives. The greater the contribution of output to achieving 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 output and goals or targets that must be achieved. According to (Mardiasmo, 2004), Effectiveness is the level of achievement of program results with targets that are set simply, effectiveness is a comparison of outcomes with outputs that can be formulated as follows;

$$\mathbf{Effectiveness} = \frac{\mathbf{Shopping\ Realization}}{\mathbf{Budget\ Target}} \mathbf{X100}\ \%$$

Table 2. Effectiveness Classification Criteria

Effectiveness Value	Effectiveness Criteria
> 100 %	Very Effective
90 % - 100 %	Effective
80 % - 90 %	Quite Effective
60 % - 80 %	Less Effective
< 60 %	Ineffective

Source: Decreto Governo No 9/2019

From the formulation above, the assessment of effectiveness by looking at the relationship between the objectives of the program and the results that have been achieved. Results are not solely assessed from the output alone, but also include input and process. Generally, the theory of organizational effectiveness still prioritizes output alone as an assessment of effectiveness, sometimes input and process are often ignored. Based on this understanding, it can be concluded that effectiveness is a comparison between output and objectives, so that to determine the effectiveness of the implementation of program-based budgeting, namely by comparing the realization of implementation with the objectives to be achieved. Thus, to analyze the effectiveness of the implementation of program-based budgeting in the Ministry of Education, it can be seen from the comparison between the realization of implementation with the objectives to be achieved x 100%.

J. Efficiency

Efficiency is related to the concept of productivity put forward by (Mardiasmo 2018; 165), When measuring the efficiency of the output achieved compared to the input used output costs. Operational activities are considered efficient if certain products or activities are carried out with minimal resources and means (if fully spent). Efficiency is one of the performance parameters which is theoretically one of the performances that underlies the entire performance of an organization. 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 (the result between profit and the resources used), as well as the optimal results achieved with the use of limited resources. In other words, the relationship between what has been completed. According to (Sumanth, 1985), the definition of efficiency is a comparison or ratio of output to input. Efficiency refers to how well resources are used to produce output. While effectiveness is the degree of achievement of the objectives of the system measured by the comparison or ratio of the actual output achieved with the expected standard output. Efficiency is the saving of resource use in organizational activities, where efficiency is in utility.

Efficiency is intended to use fewer resources to achieve the same results. Efficiency is a measure that compares the planned use of input with the realization of its use. 100% efficiency is very difficult to achieve, but efficiency approaching 100% is highly desired. This concept is more oriented towards input than output. Thus, it can be concluded that efficiency is the ratio between the implementation of program-based budgeting in the Ministry of Education of Timor-Leste which includes the budget structure and goal setting, employee attitudes and readiness for program implementation, resolution of challenges faced, accountability, budget credibility, this measure is used to achieve certain program objectives used as minimally as possible, so efficiency is to see efforts to optimize the combination of input use, or to produce a certain level of output with a minimum amount of cost, or the ability to produce the greatest possible output from a certain amount of input.

$$\boldsymbol{Efficiency} = \frac{\boldsymbol{Direct\ Shopping\ Realization}}{\boldsymbol{Budget\ Realization}}\ \boldsymbol{X100}\%$$

Table 3. Efficiency Ratio Criteria

Efficiency Value	Efficiency Criteria
> 100 %	Not efficient
90 % - 100 %	Less Efficient
80 % - 90 %	Quite Efficient
60 % - 80 %	Efficient
< 60 %	Very Efficient

Source: Decreto Governo No 9/ 2019

III. RESEARCH METHODS

A. Type of Research

The type of data used in this study is quantitative descriptive research. According to (Sugiono 2008), descriptive research is research conducted to determine the value of independent variables, either one or more independent variables without making comparisons or connecting with other variables. This descriptive research is one type of non-experimental quantitative research that is relatively easy. This research describes quantitative data obtained concerning the condition of the subject or phenomenon of a population.

According to (Arikunto, 2006) that the quantitative descriptive research method is a method that aims to create a picture or description of a condition objectively using numbers, starting from data collection, interpretation of the data and its appearance and results.

B. Location and Time of Research

Based on the title of this Thesis, the author took the location of the research at the Office of the Ministry of Education of Timor-Leste located on Road Vila-Verde. This research was conducted from 2018 to 2022.

C. Research Variables

Research variables are attributes or characteristics or values of people, objects, organizations, or activities that have certain variations determined by researchers to be studied and then conclusions drawn (Sugiyono, 2016). Thus, research variables are a term that can be given a numerical value (quantitative) or a quality value (qualitative).

Based on the title of this study, the author identifies (3) variables consisting of two (2) dependent variables and one (1) bound variable, which are categorized as follows;

1) Effectiveness

2) Efficiency

b. Operational Definition of Research Variables

According to Sugiyono (2012:61) a research variable is an attribute or characteristic or value of a person, object or activity that has certain variations determined by the researcher to be studied and then conclusions drawn. According to (Sugiyono 2011:61) an independent variable is a variable that influences or causes changes or the emergence of a dependent variable. The independent variables in this study are effectiveness and efficiency of performance. The dependent variable is a variable that is influenced or caused by the existence of an independent variable (Sugiyono, 2011:61). From the definition of the concept of these variables, it can be operated as aspects of planning and implementation with input process and output indicators. The definition and measurement of variables in this study, based on each variable with the following indicators;

Effectiveness

Effectiveness is to analyze the level of budget and spending management over the past five years as seen from the realization of the spending budget divided by the spending budget target.

The formula used to measure the ratio between budget realization compared to the spending budget target in the Ministry of Education according to (Mahmudi, 2007) is as follows;

$$\boldsymbol{Effectiveness} = \frac{\boldsymbol{Shopping\ Realization}}{\boldsymbol{Target\ Budget}} \boldsymbol{X100\%}$$

Efficiency

Efficiency is to analyze the level of budget management and spending over the last five years as seen from the analysis of direct spending divided by the realization of the spending budget. The formula used to measure the ratio between direct spending divided by the realization of the spending budget in the Ministry of Education according to (Mahmudi, 2007) is as follows;

$$\boldsymbol{Efficiency} = \frac{\boldsymbol{Direct\ Shopping\ Realization}}{\boldsymbol{Budget\ Realization}} \boldsymbol{X100\%}$$

D. Data and Data Sources

Data

The data used is secondary data, namely data collected from the website www.mof.gov.tl in the form of financial reports in the Ministry of Education for the year 2018 to 2022. Meanwhile, according to (Nugrahani, 2014) qualitative research data is generally soft data.) in the form of words, expressions, sentences and actions, not hard data in the form of statistical figures, as in quantitative research. Research is conducted according to scientific expectations, therefore it is necessary to understand the various elements that form the basis of research. In this research, the variable to be measured is the effectiveness and efficiency of the Revenue and Expenditure Budget in the Ministry of Education.

Data Source

According to (Nugrahani, 2014), different data sources in qualitative research can be grouped into types and positions, from the most obvious to the opaque, from primary to secondary. Therefore, when choosing data sources, researchers must consider the completeness of the information to be collected and its validity. In this research, data sources are divided into two, namely primary data and secondary data. The primary data is the data obtained by the researchers directly (first hand) through interviews with related parties, while the secondary data is the data obtained by the researchers from the available sources, namely the achievement report for the last five years on for the implementation of the expenditure budget, the performance report of the Ministry of Education of Timor-Leste and the performance evaluation report of various international institutions as well as other documentation relevant to this research.

Data Collection Techniques

Data collection technique is a very important factor for the success of a study. The quality of a data is largely determined by the tools or instruments used to collect the data. According to (Suharsimi Arikunto 2006:223), there are several data collection techniques that can be used in research, namely;

Non-Participant Observation

According to (Mundir 2013:186) the observation method is direct observation or sensing of an object, condition, situation, process or behavior. Broadly speaking, observation according to (Nasution 2011:107) is divided into two, namely participant observation and non-participant observation:

a. Non-participant observation, namely the researcher is only an observer of the object to be studied, without being directly involved.

b. In this observation technique, the researcher uses a non-participant observation technique where the author observes the financial report documents at the Ministry of Education, because the researcher is not directly involved with the object being studied by the researcher. The nature of the researcher is as an independent observer.

c. The data sought by the researcher from this non-participant observation technique is to adjust or prove directly about program-based budgeting data and its realization, both from the results of interviews with the ministry of selection and other supporting data.

Interview

That is, data collection by conducting a question and answer session with parties related to the effectiveness and efficiency of the Ministry of Education's environmental budget to provide an explanation of problems related to the research variables. Furthermore, Sugiyono (2006) said that the Likert scale is used to measure attitudes, opinions, and perceptions of individuals or groups related to social phenomena that are currently the object of research.

Responses from face-to-face interviews are cross-checked and analyzed together with various documentation and reports related to the budget. For example, the Fiscal Report for each year is reviewed and compared with the responses obtained from the interview. Also, interview responses are compared with several important reports issued by international donors for the government budget. Two of these reports are the Public Expenditure and Financial Accountability (PEFA 2018) in Timor-Leste and the Public Expenditure Report (World Bank 2020). This comparative review enlightens the credibility of the research findings.

IV. RESEARCH RESULTS

Budget Realization Report of the Ministry of Education of Timor-Leste for 2018 to 2022.

The development of the realization of the Ministry of Education of Timor-Leste budget is in the spotlight of the public and there are many obstacles faced by the Ministry of Education, especially the ability of Human Resources (HR) so that it has an impact on the execution of the budget revenue and expenditure that has been budgeted.

This can be seen in the table below;

Table 4. Budget Realization of the Ministry of Education of Timor-Leste for 2018.

Category	Budget Allocation	Implementation of the Budget	Remaining Budget Implementation	Budget Realization %
Salary & Wages	$ 5.879.475.000,00	$ 5.797.376.009,00	$ 82.098.991,00	98,60 %
Routine Budget (Good & Service)	$ 1.275.238.200,00	$ 1.128.263.074,00	$ 146.975.126,00	88,47 %
Public Transfer Budget	$ 102.560.000,00	$ 101.738.400,00	$ 821.600,00	99,20 %

Source: Ministry of Education Youth and Sports Including SEJD

From Table 4, can be described as follows;

1. Salary & wages budget realization of 98.60%, in general the budget is effective, budget absorption in the overtime line item does not absorb the budget at all 0%. salary items do not absorb 100%

2. Routine Budget (good & service) Budget realization of 88.47%, in general the budget is quite effective.

3. Public Transfer Budget, budget realization reaches 99.20%, in general the budget is effective, absorption of budget allocations in line items partly does not absorb and some line items that absorb the budget exceed the allocated budget.

Table 5. Realization of the Ministry of Education of Timor-Leste's Budget in 2019

Category	Budget Allocation	Implementation of the Budget	Remaining Budget Implementation	Budget Realization %
Salary & Wages	$ 6.103.744.200,00	$ 6.101.307.819,00	$ 2.436.381,00	99,96 %
Routine Budget (good & service)	$ 1.775.047.900,00	$ 1.454.655.069,00	$ 320.392.831,00	81,95%
Capital Budget (Minor capital)	$ 41.150.000,00	$ 14.905.120,00	$ 26.244.880,00	36,22 %
Public Transfer Budget	$ 274.441.000,00	$ 272.098.490,00	$ 2.342.510,00	99,14 %

Source: Ministry of Education Youth and Sports Including SEJD

From Table 5, can be described as follows;

1. Salary & Wages (salary & wages) budget realization of 99.96%, in general the budget is effective, but the budget in the salary item does not absorb 100%.

2. Routine Budget (good & service) Budget realization of 81.95%, in general the budget is quite effective in several line items that do not absorb, and there are also line items that exceed the allocated budget. the budget uses Duodesimo only for important purposes, and the entire country is experiencing difficulties due to economic instability due to the Covid-19 virus problem, all activities are not carried out according to the established program.

3. Capital Budget (Minor capital), budget realization reached 36.22%, in general the budget is not effective

4. Public Transfer Budget, budget realization reached 99.14%, in general the budget is effective.

Table 6, Realization of the Ministry of Education of Timor-Leste's Budget in 2020

Category	Budget Allocation	Implementation of the Budget	Remaining Budget Implementation	Budget Realization %
Salary & Wages	$ 5.934.134.900,00	$ 5.933.872.587,00	$ -262.313,00	99,99 %
Routine Budget (good & service)	$ 953.180.900,00	$ 907.379.622,00	$ -45.801.278,00	95,19 %
Public Transfer Budget	$ 111.819.300,00	$ 111.663.100,00	$ -156.200,00	99,86 %

Source: Ministry of Education Youth and Sports Including SEJD

From Table 6, it can be explained as follows:

1. Salary & Wages budget realization is 99.99%, in general the budget is effective, but the budget in the line item allowances and salary items does not absorb 100%

2. Routine Budget (good & service) Budget realization is 95.19%, in general the budget is effective in several line items that do not absorb up to 100%.

3. Public Transfer Budget, budget realization reaches 99.86%, in general the budget is effective, because it has been implemented according to the established program very well.

Table 7. Realization of the Ministry of Education of Timor-Leste's Budget in 2021.

Category	Budget Allocation	Implementation of the Budget	Remaining Budget Implementation	Budget Realization %
Salary & Wages	$ 6.497.738.454,00	$ 6.492.578.653,00	$ 5.159.801,00	100%
Routine Budget (good & service)	$ 1.241.887.546,00	$ 1.113.242.826,00	$ 128.644.720,00	89,64 %
Capital Budget (Minor capital)	$ 306.805.000,00	$ 265.545.500,00	$ 41.259.500,00	86,55 %
Contingency Budget	$ 280.638.040,00	$ 49.670.129,00	$ 230.967.911,00	17,69 %
Public Transfer Budget	$ 2.307.056.100,00	$ 2.303.414.377,00	$ 3.641.723,00	99,84 %

Source: Ministry of Education Youth and Sports Including SEJD

From Table 7, it can be explained as follows;

1. Salary & Wages budget realization is 100%, in general the budget is effective, but the budget in the salary item does not absorb 100%.

2. Routine Budget (good & service) Budget realization is 89.64%, in general the budget is quite effective in several line items that do not absorb, and there are also line items that exceed the allocated budget.

3. Capital Budget (Minor capital), budget realization reaches 86.55%, in general the budget is effective

4. Contingency Budget, budget realization reaches 17.69%, in general the budget is not effective

5. Public Transfer Budget, budget realization reaches 99.84%, in general the budget is effective.

Table 8. Realization of the Ministry of Education of Timor-Leste Budget in 2022

Category	Budget Allocation	Implementation of the Budget	Remaining Budget Implementation	Budget Realization %
Salary & Wages	$ 65.946.458,00	$ 6.554.503.910,00	$ -6.488.557.452,00	99,39 %
Routine Budget (good & service)	$ 1.376.334.700,00	$ 1.201.307.287,00	$ 175.027.413,00	87,28 %
Public Transfer Budget	$ 1.141.977.400,00	$ 1.141.287.400,00	$ 690.000,00	99,93 %

Source: Ministry of Education Youth and Sports Including SEJD

From Table 8, can be described as follows;

1. Salary & Wages budget realization of 99.39%, in general the budget is effective, but the budget in the line item allowances and salary items does not absorb 100%.

2. Routine Budget (good & service) Budget realization of 87.28%, in general the budget is quite effective in several line items that do not absorb up to 100%.

3. Public Transfer Budget, budget realization reaches 99.93%, in general the budget is effective, because it has been implemented in accordance with the established program very well.

V. RESEARCH ANALYSIS

The discussion of the results of this study will discuss the level of effectiveness and efficiency of the budget and spending used to analyze the effectiveness and efficiency of the Ministry of Education of Timor-Leste in 2018 to 2022.

Effectiveness Analysis

Effectiveness is a measure of the success or failure of achieving an organization's goals. To calculate the effectiveness of the Ministry of Education's budget, the following formula is used;

$$\boldsymbol{Effectiveness} = \frac{\boldsymbol{Shopping\ Realization}}{\boldsymbol{Target\ budget\ Shopping}}\ \boldsymbol{X100}\%$$

Based on the formula above, the outcome is defined by comparing the realization of the Ministry of Education's budget in 2018 to 2022 as follows;

$$Effectiveness\ of\ the\ year\ 2018 = \frac{73{,}762{,}861.75}{76{,}771{,}820.00}\ X\ 100\%$$
$$= 96{,}08\ \%$$

$$Effectiveness\ of\ the\ year\ 2019 = \frac{78{,}911{,}871.77}{82{,}429{,}983.00}\ X\ 100\%$$
$$= 95{,}73\ \%$$

$$Effectiveness\ of\ the\ year\ 2020 = \frac{73{,}980{,}511.89}{75{,}651{,}547.00}\ X\ 100\%$$
$$= 97{,}79\ \%$$

$$Effectiveness\ of\ the\ year\ 2021 = \frac{102{,}263{,}744.85}{106{,}341{,}251.40}\ X\ 100\%$$
$$= 96{,}16\ \%$$

$$Effectiveness\ of\ the\ year\ 2022 = \frac{15{,}060{,}757.63}{83{,}191{,}769.00}\ X\ 100\%$$
$$= 18{,}10\ \%$$

Table 9, Explains that the results of the calculations above can be seen at the level of effectiveness in the Ministry of Education for five years from 2018 to 2022 as follows;

Table 9. Level of Budget Effectiveness in the Ministry of Education of Timor-Leste from 2018 to 2022

Fiscal year	Target/Output	Realization/Outcome	Level of Effectiveness	Criteria
2018	$ 76,771,820.00	$ 73,762,861.75	96,08 %	Effective

2019	$ 82,429,983.00	$ 78,911,871.77	95,73 %	Effective
2020	$ 75,651,547.00	$ 73,980,511.89	97,79 %	Effective
2021	$ 106,341,251.40	$ 102,263,744.85	96,16 %	Effective
2022	$ 83,191,769.00	$ 15,060,757.63	18,10 %	Ineffective
Average Realization	$ 42,438.637.040	$ 34,397.974.789	81,05 %	Quite Effective

Source Data ; Timor-Leste Budget Transparency Portal, https://www.mof.gov.tl

1. The budget in 2018, the Ministry of Education received a budget realization of $73,762,861.75 from the total budget received of $76,771,820.00 and a budget effectiveness of 96.08% so that it can be categorized as effective (90-100%). This is categorized as there are activities that run smoothly, so the budget execution is said to be good, in accordance with the financial report in 2018 where the realization of the spending budget increased, so that the unused budget became the remaining budget so that it had an impact on the realization of outcomes at the end of the year.

2. The budget in 2019, the Ministry of Education received a budget realization of $78,911,871.77 from the total budget received of $82,429,983.00 and a budget effectiveness of 95.73% so that it can be categorized as effective (90-100%). This is categorized as having activities that are running well enough, so the budget execution is said to be quite good, in accordance with the financial report in 2019 where the realization of the spending budget decreased, so that the unused budget became the remaining budget, thus impacting the realization of the outcome at the end of the year.

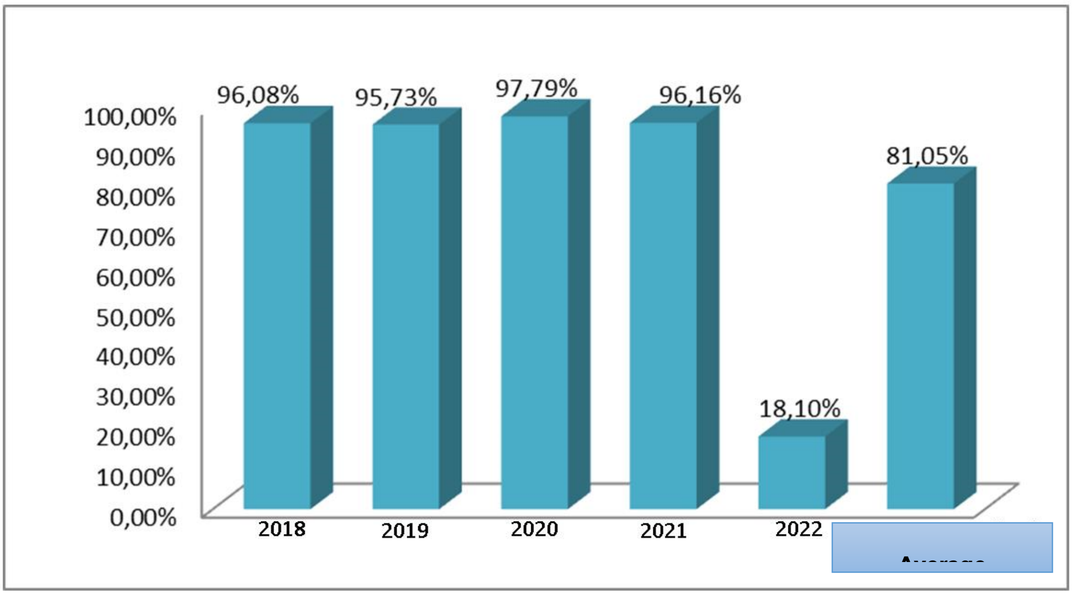
3. The budget in 2020, the Ministry of Education received a budget realization of $73,980,511.89 from the total budget received of $75,651,547.00 and a budget effectiveness of 97.79% so that it can be categorized as effective (90-100%). Where this year the realization/outcome was good due to the capital expenditure budget and several activities were not implemented, so the budget execution was said to be good.

4. The budget in 2021, the Ministry of Education received a budget realization of $102,263,744.85 from the total budget received of $106,341,251.40 and a budget effectiveness of 96.16% so that it can be categorized as effective (90-100%). There was an increase in the effectiveness of the spending budget where the most effective level of the spending budget occurred in 2020 due to the highest percentage index of the previous four (4) years.

5. The budget in 2022, the Ministry of Education received a budget realization of $15,060,757.63 from the total budget received of $83,191,769.00 and a budget effectiveness of 18.10% so that it can be categorized as ineffective (10-60%). There was an increase in the effectiveness of the spending budget

where the least effective level of the spending budget occurred in 2022 due to the lowest percentage index of the previous four (4) years.

In table 9, it can be seen that the development pattern of the Ministry of Education's budget effectiveness is 81.05% categorized as Quite Effective (80-90%). Shown with an average level of effectiveness from 2018 to 2022, which means that the budget and spending are Quite Effective.



Graph 1. Level of Budget Effectiveness in the Ministry of Education of Timor-Leste from 2018 to 2022

Judging from the graph, it can be concluded that the level of effectiveness of the Ministry of Education's budget for 2018 to 2020 increased as in 2021, 2022 was very bad, the percentage was less or, and in 2022 the percentage decreased to 18.10%, so (not effective).

Efficiency Analysis

The analysis conducted on the budget expenditure in the Ministry of Education with revenue using the efficiency level measure, namely comparing the realization of expenditure (spending) with the revenue (income) of the Ministry of Education multiplied by 100%. According to (Deddy and Ayuntingtyas 2010), efficiency is the relationship between goods and services produced by an activity or activity with the resources used. An organization of activities or programs is said to be efficient if it is able to produce a certain output with the lowest input, or with a certain input is able to produce the greatest output. The efficiency level of the Ministry of Education is calculated using the following formula;

Efficiency Formula in 2018 by Category;

$$\boldsymbol{Efficiency} = \frac{\boldsymbol{Direct\ Shopping\ Realization}}{\boldsymbol{Budget\ Realization}}\ \boldsymbol{X100}\%$$

$$Salary \,\&\, Wages = \frac{57{,}973.760.09}{58{,}794.750.00} \; X \; 100\%$$

$$= 82{,}098.991$$

$$= 98{,}60\ \%$$

$$Goods \,\&\, services = \frac{11{,}282{,}630{,}74}{12{,}752.382.00} \; X \; 100\%$$

$$= 146{,}975.126$$

$$= 88{,}47\ \%$$

$$Public\ Transfer = \frac{1{,}017{,}384{,}00}{1{,}025.600.00} \; X \; 100\%$$

$$= 821.600$$

$$= 99{,}19\ \%$$

Efficiency formula in 2019 by Category;

$$Efficiency = \frac{Direct\ Shopping\ Realization}{Budget\ Realization} X100\%$$

$$Salary \,\&\, Wages = \frac{61{,}013{,}078.19}{61{,}037.442.00} \; X \; 100\%$$

$$= 2{,}436.381$$

$$= 99{,}96\ \%$$

$$Goods \,\&\, services = \frac{14{,}546.550.69}{17{,}750.479.00} \; X \; 100\%$$

$$= 320{,}392.831$$

$$= 81{,}96\ \%$$

$$Capital\ Budget = \frac{149.051.20}{411.500.00} \; X \; 100\%$$

$$= 26.244.880$$

$$= 36{,}22\ \%$$

$$Public\ Transfer = \frac{2{,}720.984.90}{2{,}744.410.00} \; X \; 100\%$$

$$= 2{,}342.510$$

$$= 99{,}14\ \%$$

Efficiency formula in 2020 by Category;

$$Efficiency = \frac{Direct\ Shopping\ Realization}{Budget\ Realization} X100\%$$

$$Salary \,\&\, Wages = \frac{59{,}338.725.87}{59{,}341.349.00} \; X \; 100\%$$

$$= 262.313$$

$$= 99{,}99\ \%$$

$$Goods\ \&\ services = \frac{9{,}073{,}796.22}{9{,}531.809.00}\ X\ 100\%$$

$$= 45{,}801.278$$

$$= 95{,}19\ \%$$

$$Public\ Transfer\ = \frac{1{,}116.631.00}{1{,}118.193.00}\ X\ 100\%$$

$$= 156.200$$

$$= 99{,}86\ \%$$

Efficiency formula in 2021 by Category;

$$Efficiency = \frac{Direct\ Shopping\ Realization}{Budget\ Realization} X100\%$$

$$Salary\ \&\ Wages\ = \frac{64{,}925.786.53}{64{,}977.384.54}\ X\ 100\%$$

$$= 5{,}159.801$$

$$= 99{,}92\ \%$$

$$Goods\ \&\ services\ = \frac{11{,}132.428.26}{12{,}418.875.46}\ X\ 100\%$$

$$= 128.644.720$$

$$= 89{,}64\ \%$$

$$\text{Capital Budget}\ = \frac{2.655.455.00}{3.068.050.00}\ X\ 100\%$$

$$= 41.259.500$$

$$= 86{,}55\ \%$$

$$\text{Contingency Budget}\ = \frac{496.701.29}{2.806.380.40}\ X\ 100\%$$

$$= 230.967.911$$

$$= 17{,}69\ \%$$

$$Public\ Transfer\ = \frac{23{,}034.143.77}{23{,}070.561.00}\ X\ 100\%$$

$$= 3{,}641.723$$

$$= 99{,}84\ \%$$

Efficiency formula in 2022 by Category;

$$Efficiency = \frac{Direct\ Shopping\ Realization}{Budget\ Realization} X100\%$$

$$Salary\ \&\ Wages\ = \frac{65{,}545.039.10}{65{,}946458.00}\ X\ 100\%$$

$$= 40{,}141.890$$

$$= 99{,}39\ \%$$

$$Goods\ \&\ services\ = \frac{12{,}013.072.87}{13{,}763.347.00}\ X\ 100\%$$

$$= \ 175{,}027.413$$

$$= 87{,}28\ \%$$

$$Public\ Transfer\ = \frac{11{,}412.874.00}{11{,}419.774.00}\ X\ 100\%$$

$$= \ 690.000$$

$$= \ 99{,}93\ \%$$

Table 10. Recapitulation of the Results of Calculation of the Level of Effectiveness and Efficiency of Budget and Expenditure at the Ministry of Education of Timor-Leste in 2018 to 2022

Year	2018	2019	2020	2021	2022
Budget Effectiveness	96,08	95,73	97,79	96,16	18,10
Criteria	Very Effective	Very Effective	Very Effective	Very Effective	Ineffective
Budget Efficiency	96,08	95,73	97,79	96,16	18,10
Criteria	Less Efficient	Less Efficient	Less Efficient	Less Efficient	Very Efficient

Source Data: Timor-Leste Budget Transparency Portal, https://www.mof.gov.tl

To be calculated regarding the effectiveness of the spending budget each year, the criteria are Very Effective and Inefficient, For 2018 it reached the criteria of very effective. In 2019 and 2020 with the criteria of quite efficient, and in 2021 and 2022 with the criteria of ineffective and very efficient. From there it shows that for each year the realization of the spending budget does not exceed that set, with the results of calculations from year to year the Ministry of Education can save funds in preparing the spending budget.

VI. DISCUSSION

Analysis of the Effectiveness of the Implementation of the 2018 to 2022 Budget

Based on the results of the analysis above, it can be seen the analysis of the effectiveness of the implementation of the Timor-Leste Ministry of Education's budget from 2018-2022 for five (5) years of changes in percentage values. The realization of the budget in 2018 at the Ministry of Education with a total realization of spending of $ 73,762,861.75 from the total budget received of $ 76,771,820.00

and a budget effectiveness of 96.08% so that it can be categorized as Effective (90% -100%). In 2019 the Ministry of Education received a budget realization of $ 78,911,871.77 from the total budget received of $ 82,429,983.00 and a budget effectiveness of 95.73% so that it can be categorized as effective (90% -100%).

In 2020, the Ministry of Education received a budget realization of $73,980,511.89 from a total budget received of $75,651,547.00 and a budget effectiveness of 97.79% so that it can be categorized as effective (90%-100%). In 2021, the Ministry of Education received a budget realization of $102,263,744.85 from a total budget received of $106,341,251.40 and a budget effectiveness of 96.16% so that it can be categorized as ineffective (90%-100%). In 2022, the Ministry of Education received a budget realization of $15,060,757.63 from a total budget received of $83,191,769.00 and a budget effectiveness of 18.10% so that it can be categorized as ineffective (10%-60%). Although not effective, there was a decrease in the percentage of effectiveness of budget realization from the previous year by 81.05%. This is because there are several programs that were not realized due to changes in political policies.

Analysis of Budget Implementation Efficiency 2018-2022

Based on the results of the analysis above, it can be seen the analysis of the effectiveness of the implementation of the Ministry of Education of Timor-Leste budget from 2018 to 2022 for five (5) years of changes in percentage values. The realization of the budget in 2018 at the Ministry of Education with a total realization of $73,762,861.75 from the total budget received of $76,771,820.00 and a budget efficiency of 96.08% so that it can be categorized as Efficient (90% -100%). In 2019 the Ministry of Education received a budget realization of $78,911,871.77 from the total budget received of $82,429,983.00 and a budget efficiency of 95.73% so that it can be categorized as efficient (90% -100%). In 2020, the Ministry of Education received a budget realization of $73,980,511.89 from a total budget received of $75,651,547.00 and a budget efficiency of 97.79% so that it can be categorized as Efficient (90%-100%). In 2021, the Ministry of Education received a budget realization of $102,263,744.85 from a total budget received of $106,341,251.40 and a budget efficiency of 96.16% so that it can be categorized as Efficient (90%-100%). In 2022, the Ministry of Education received a budget realization of $15,060,757.63 from a total budget received of $83,191,769.00 and a budget efficiency of 18.10% so that it can be categorized as Inefficient (10%-60%).

Although Inefficient, there was a decrease in the percentage of effectiveness of budget realization from the previous year by 81.05%. This is because there were several programs that were not realized due to changes in political policies. From the analysis of the results above, it shows that the average level of efficiency from 2018 to 2022, the Ministry of Education refers to the criteria of being quite efficient with a percentage reaching 81.05%. The results of this study are not in line with the research of Erika Z. Lasupu, Lintje Kalangi, Lidia M. Mawikere (2021) which shows that the results of the study obtained that the Effectiveness and Efficiency of Budget Implementation at the National Unity and

Politics Agency of Tojo Una-Una Regency, on average, fall into the effective and efficient criteria according to the criteria level according to the Decree of the Minister of Home Affairs Number 690.900.327 of 1996.

VII. CONCLUSION AND SUGGESTIONS

A. Conclusion

Based on the results of the discussion, it can be concluded that the level of effectiveness, efficiency and credibility of the absorption of the Ministry of Education's budget for 2018 to 2022 can be seen from the results of measuring the level of effectiveness, efficiency and budget absorption as follows;

Effectiveness Level

Based on the findings and analysis regarding the level of effectiveness of the absorption of the Timor-Leste Ministry of Education's budget for 2018-2022, the effectiveness criteria vary. The highest level of effectiveness was in 2018 and the lowest occurred in 2018. The trend of the level of effectiveness from 2018, 2019, 2020 and 2021 always decreases from ineffective to quite effective. While in 2022 there was an increase from the previous year, but the effectiveness criteria remained less effective. This shows that the effectiveness of the implementation of the budget that has been budgeted has not been implemented properly by the Timor-Leste Ministry of Education, over a period of 5 (five) years from quite effective to less effective.

The results of the analysis show that the level of effectiveness of budget implementation in 2018 and 2022 using budgeting based on economic classification (line item) is Quite 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.

Efficiency Level

The results of calculations and analysis regarding the level of efficiency of budget absorption at the Ministry of Education for 2018 and 2019 with the results of calculations from the ratio, it can be seen that the level of efficiency of budget realization with the predicate quite efficient occurred in 2018, 2019 and 2020. While the level of budget absorption in 2021 and 2022 saw an increase in the level of efficiency from Quite Efficient to Efficient.

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

B. Suggestions

Based on the findings and analysis results concluded above, the author suggests to the Ministry of Education of Timor-Leste as follows;

In preparing the budget, supporting and inhibiting factors should be considered so that budget implementation can realize budget effectiveness, efficiency and credibility and be consistent with planning and implementation commitments.

The implementation of a program-based budgeting system must be based on a clear budget classification structure including organic classification, classification based on function, economic classification and classification based on program so that in implementation it does not become an obstacle to effectiveness, efficiency and credibility and must take into account performance achievements. Improving the quality of human resources (HR) through regular training on the new budget system is very necessary in the context of implementing the new budget law (Law No. 2/22, 2022) so that the understanding and abilities of budget implementers can be improved so that the use of public resources is effective, efficient, credible, transparent, accountable and better service provision to the community.

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