PERFORMANCE ASSESSMENT ANALYSIS TO DETERMINE THE LEVEL OF HEALTH OF PDAM LAUTÉM CITY DILI TIMOR LESTE IN 2020

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Abstract
Water is a primary need that humans need to support their various life activities. Water needs in urban areas are met by the local Regional Water Company (PDAM). Therefore, PDAM must have good performance in accordance with existing requirements. This study aims to evaluate the performance of PDAM Kota Lautem Dili Timor Leste according to the drinking water supply system of the Ministry of Public Works and Public Housing in 2020. This research is an explanatory research with a quantitative approach. The research data uses the performance report of PDAM Kota Lautem Dili Timor Leste for the 2019 – 2020 time period. The data analysis technique is guided by Decree of the Minister of Home Affairs of the Republic of Indonesia Number 47 of 1999 with assessments on financial aspects, operational aspects, human resource aspects and service aspects. The results of the study prove that the performance of PDAM Kota Lautem Dili Timor Leste is in good health because it is above the set standard.

Keywords: PDAM, Performance, Water

1. Introduction

Water is one of the natural resources that has a very important function for life and the life of all living things, including humans. Water is the origin of all forms of life on this earth. Without water, various life processes cannot take place, so that the supply of raw water for domestic, irrigation and industrial needs is one of the main concerns and priorities. (Samekto & Ewin, 2016) . Clean water that is healthy, of good quality and flowing continuously is really needed by the community, because clean water that is healthy and of good quality and continuously flowing will be able to improve the quality of life of the people themselves. (Arifa, 2020) .

To meet the need for clean water, the community can use water sourced from the services of Regional Drinking Water Companies (PDAMs) in various regions. The Regional Drinking Water Company (PDAM) as a State-Owned Enterprise (BUMN) is responsible for providing clean water for the community in each region. PDAM establishment was initiated by the regional government and all or most of its capital is owned by the region through direct participation originating from separated regional assets specifically formed as the Operator (PP Number 16 of 2005) .

PDAM carries out the Implementation of a Drinking Water Supply System (SPAM) whose activities aim to build, expand and/or improve physical (technical) and non-physical (institutional, management, financial, community participation, and legal) systems in a unified whole to carry out water supply drinking to the community towards a better condition (PP No. 16 of 2005) .

The success rate of SPAM management by PDAM can be measured by evaluating its performance. This performance assessment is the result of a development compiled by the Drinking Water

Supply System Improvement Agency (BPPSPAM) team in collaboration with BPKP, Perpamsi and several PDAMs based on 4 (four) performance aspects, namely: financial aspects, service aspects, operational aspects and resource aspects. human power. Based on Presidential Regulation No. 90/2016 concerning BPPSPAM explains that the Agency for the Improvement of the Implementation of Drinking Water Supply Systems, hereinafter abbreviated as BPPSPAM, is an Agency established to improve the operation of drinking water supply systems. BPPSPAM has the function of evaluating the performance of the operation of the drinking water supply system by BUMN and/or BUMD in order to fulfill the requirements for quality, quantity and continuity of drinking water supply system services. Furthermore, the results of the performance appraisal are classified into 2 (two) categories, namely: good PDAM and Bad PDAM

PDAM Kota Lautém Dili Timor Leste is a government-owned company engaged in the provision of clean water for the general public of Lautém City Dili Timor Leste. The existence of this PDAM is very important for the people of Lautém Dili City, Timor Leste because it is the center for providing clean water. Therefore, PDAM Kota Lautém Dili Timor Leste is required to have a good performance in providing clean water for the community. If the PDAM Kota Lautém Dili Timor Leste does not perform well, the process of supplying clean water will be hampered or the clean water provided will not comply with existing quality standards. Therefore, researchers are interested in conducting research entitled " **Performance Assessment Analysis To Determine the Health Level of PDAM Kota Lautém Dili Timor Leste in 2020** " . The purpose of this study was to analyze the performance of PDAM Kota Lautem, Dili, Timor Leste, assessed based on the Research Guidelines in the form of technical guidelines for evaluating the performance of PDAMs, the agency for improving the administration of the drinking water supply system, the Ministry of Public Works and Public Housing. year 2020.

2. Theoretical Review

2.1. Public sector accounting

Public sector accounting has been prepared to meet the information needs for the relationship between *stewards* and *principals* . Accounting as a driving force for the passage of transactions is moving in an increasingly complex direction and is followed by the growth of specialization in accounting and the development of public sector organizations. Public sector accounting is an information tool for the government as a management and information tool for the public. For the government, accounting information is used in management control processes ranging from strategic planning, programming, budgeting, performance evaluation, and performance reporting. (Yuesti, 2019) . Accounting information is useful for decision making, especially assisting managers in allocating resources. Accounting information can be used to determine the cost of a program, project or activity and its feasibility both economically and technically.

2.2.Performance

According to Fahmi (2018) , performance is the result obtained by an organization, both the organization is profit oriented and non-profit oriented which is produced over a period of time. More explicitly Armstrong and Baron said that performance is the result of work that has a strong relationship with the organization's strategic objectives, customer satisfaction and economic contribution. According to Moeheriono (2012) , Performance or performance is a picture of the level of achievement of the implementation of a program of activities or policies in realizing the

goals, objectives, vision and mission of the organization as outlined through the strategic planning of an organization. Performance can be identified and measured if individuals or groups of employees have criteria or standards of success or benchmarks set by the organization.

2.3.Performance Measurement

Performance *measurement* is a process of assessing work progress against predetermined goals and objectives, including information on; the efficiency of the use of resources in producing goods and services, the quality of goods and services (how well goods and services are delivered to customers and to what extent customers are satisfied), the results of activities are compared with the desired intentions the effectiveness of actions in achieving goals (Robertson, 2002 in Mahsun, 2006)

The success rate of PDAM management is measured through a process of evaluating PDAM performance based on performance indicators for four important aspects, namely: (1) Finance; (2) Service; (3) Operations, and (4) Human Resources (HR) in accordance with the provisions in the 2020 Drinking Water BUMD Performance Book by the Ministry of Public Works and Public Housing, Directorate General of Cipta Karya, Directorate of Drinking Water. These types of aspects have indicators with their respective assessments. This Performance Assessment aims to determine the level of success of the company in carrying out its operations, so that the success of the PDAM can be identified in the form of very good, sufficient, poor or not good performance categories.

2.4. PDAM performance

Regional company is a company whose shares are owned by the Regional Government, and the regulation of which is regulated in the regional regulation concerned. What is meant by "Companies" are all companies established based on the Regional Companies Law, which were established by Regional Regulation and are legal entities and their position is obtained by the enactment of said regional regulation. (UU No. 5 of 1962, 1962) . Based on the Drinking Water BUMD Performance Book 2020 it is stated that the purpose of establishing PDAM is to fulfill the service and need for clean water for the community as well as a source of PAD.

PDAM performance is measured based on 4 aspects, namely: (1) Finance; (2) Service; (3) Operations, and (4) Human Resources (HR) . The financial aspect contains several indicators such as ROE, Operating Ratios, Cash Ratios, Billing Effectiveness and Solvability. Service Aspect consists of indicators of Technical Service Coverage, Customer Growth, Domestic Water Consumption, Complaint Resolution Rate and Customer Water Quality. Operational Aspect consists of indicators Production efficiency (production utilization factor) , Non-accounted water-ATR (NRW) , Hours of service operation , Water pressure at customer connection and Replacement and (or) calibration of customer water meters . Meanwhile, the Human Resources (HR) aspect consists of indicators for the ratio of employees , the ratio of employee education and training and the ratio of education and training expenses to staff expenses .

2.5.Frameworks

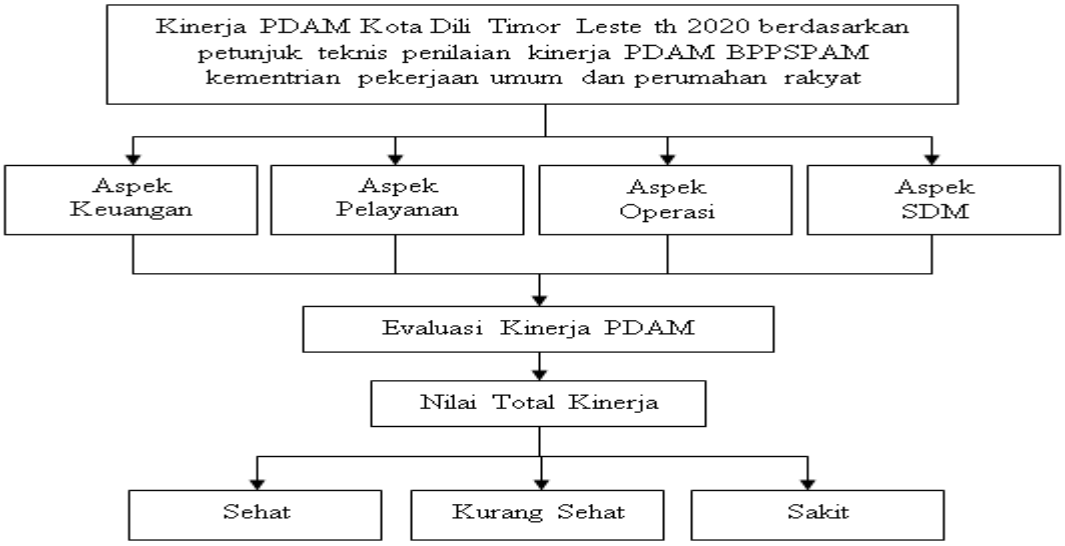

Figure 1 . Research Framework

3. Research Methods

3.1. Research Design

The design of this research is explanatory research *using* a quantitative approach.

3.2. *Object of* Research

The object of this research is the Regional Drinking Water Company (PDAM) in Lautem City, Dili, Timor Leste.

3.3. Research Data

The data used in this study is a *time series* , from the time period 2019 – 2020.

3.4. Data Collections

Data collection was carried out using a literature study method, namely collecting the required data by studying and studying and analyzing some literature and documents to get an overview related to the issues discussed. Document issued by the Regional Drinking Water Company of Lautem City, Dili, Timor Leste.

3.5. Conceptual and Operational Definitions

Performance can be interpreted as a result of optimal work performance carried out by a person or group or business entity (Kurnianto, 2019) . Aspects that will be discussed in this study are aspects of finance, service, operations and human resources. Based on the financial concept, financial reports are needed to measure business results and research developments from time to time. Following are the Conceptual and Operational Definitions from the financial, service, operational and human resource aspects:

1. Financial Performance is a description of the company's financial condition in a certain period regarding aspects of raising funds and distributing funds, which are usually measured by indicators of capital adequacy, liquidity and profitability (Jumingan, 2006: 239 ; Sarmento, 2018)
2. Performance aspect of service is a description of the PDAM's condition from several service perspectives that describe the level of PDAM's ability to meet the needs of its customers.
3. The performance of the operational aspect is an overview of conditions at the operational perspective level such as: production and distribution effectiveness, amount of water loss, continuity of water service to customers, appreciation of buying and selling transaction measuring instruments, products sold to customers and average water pressure to customers.
4. The performance aspect of human resources is a description of the condition of the level of innovation and learning in relation to PDAM management.

3.6. Data processing

Data processing is a process of obtaining summary data or summary figures using certain methods or formulas. Data processing aims to change the raw data from measurement results into finer data so as to provide direction for further study. This study will use data taken from the financial reports of PDAM Kota Lautem Dili Timor Leste. The data will be processed according to research needs.

3.7. Data analysis

The analytical tool used to determine the performance of PDAM Dili City, Timor Leste, both from the financial aspect, the service aspect, the operational aspect, the human resource aspect is based on the 2020 Regional Drinking Water Company Performance Evaluation Manual

Assessment of the performance of services for the development of the PDAM Drinking Water Supply System is carried out by measuring the aspects of finance, service, operations and human resources. Performance measurement is carried out on four aspects, namely the financial aspect (25% weight), service aspect (25% weight), operational aspect (35% weight), and human resources aspect (15% weight). Weights, standards and standard values of performance indicators are reference numbers used to calculate PDAM performance values with the same or different magnitude for each PDAM performance indicator as explained below :

a. Financial Aspects with a weight of 25% or 0.25 include:
   1) ROE with a weight of 0.055

      $$\text{ROE} = \frac{Net\ Profit\ After\ Tax\ (Rp)}{Equity(Rp)}$$

   2) Operating Ratio with a weight of 0.055

      $$\text{Operating Ratio} = \frac{Operating\ Expenses(Rp)}{Operating\ income\ (Rp)}$$

   3) Cash Ratio with a weight of 0.055

      $$\text{Cash Ratio} = \frac{Total\ Cash + Cash\ Equivalents\ (Rp)}{Total\ Current\ Liabilities\ (Rp)}$$

4) Billing Effectiveness with a weight of 0.055

Billing effectiveness = $\frac{Total\ Receipt\ of\ Water\ Account\ (Rp)}{Number\ of\ Water\ Accounts\ (Rp)}\ x\ 100\%$

5) Solvency with a weight of 0.03

Solvency = $\frac{Total\ Assets\ (Rp)}{Total\ Liabilites\ (Rp)}\ x\ 100\%$

b. Service Aspects have a weight of 25% or 0.25, including:

1) Service Coverage with a weight of 0.05

$$Technical\ Service\ Coverage = \frac{Number\ of\ Served\ Population\ (Person)}{Number\ of\ Population\ in\ the\ service\ area\ (Person)}\ x\ 100\%$$

2) Customer Growth with a weight of 0.05

$$Customer\ Growth = \frac{Total\ customers\ for\ this\ period\ (SR) - \ total\ customers\ for\ the\ past\ period\ (SR)}{Number\ of\ customers\ in\ the\ past\ period\ (SR)}\ x\ 100\%$$

3) Domestic Water Consumption with a weight of 0.05

$$Domestic\ Water\ Consumption = \frac{Raverage\ amount\ of\ water\ sold\ to\ domestic\ customers\ in\ a\ certain\ period\ (m3/month)}{Number\ of\ domestic\ customers\ (SR)}\ x\ 100\%$$

4) Complaint Resolution Rate with a weight of 0.025

$$Complaint\ Resolution\ Rate = \frac{Number\ of\ customer\ complaints\ handled}{Number\ of\ Complaints}\ x\ 100\%$$

5) Customer Water Quality with a weight of 0.075

Customer Water Quality = $\frac{Qualified\ test\ count}{Number\ tested}\ x\ 100\%$

c. Operational Aspects have a weight of 35% or 0.35, including:

1) Product Efficiency (Production Utilization Factor) with a weight of 0.07

Production efficiency = $\frac{Production\ Realization\ (m3)}{Installed\ capacity\ (m3)}\ x\ 100\%$

2) Non-revenue water-ATR (NRW) with a weight of 0.07

Non-revenue water-ATR = $\frac{Water\ distribution\ (m3) - Water\ sold\ (m3)}{Water\ distribution\ (m3)}\ x\ 100\%$

3) Service operating hours with a weight of 0.08

$$Service\ Operation\ Hours = \frac{water\ distribution\ time\ to\ customers\ during\ the\ evaluation\ period}{Evaluation\ period\ (days)}$$

4) Water pressure on customer connections with a weight of 0.065

$$Water\ Pressure\ at\ Customer\ Connection = \frac{The\ number\ of\ customers\ served\ with\ a\ pressure\ of\ 0.7\ bar\ (SR)}{Number\ of\ subscribers\ (SR)}\ x\ 100\%$$

5) Replacement and (or) calibration of customer water meters with a weight of 0.065

$$Replacement\ (Calibration)\ of\ Customer's\ water\ meter = \frac{Number\ of\ customer\ water\ meters\ replaced\ (units)}{Number\ of\ subscribers\ (SR)}\ x\ 100\%$$

d. Aspects of Human Resources have a weight of 15% or 0.15 , including:

1) The ratio of employees to 1000 customers with a weight of 0.07

Ratio of employees to 1000 customers = $\frac{Number\ of\ employees}{(Number\ of\ subscribers/1000)}$

2) The ratio with a weight of 0.04

$$Employee\ Training\ Ratio = \frac{Number\ of\ employees\ who\ attended\ the\ training\ (people)}{Number\ of\ employees\ (people)}\ x\ 100\%$$

3) The ratio of education and training expenses to employee expenses with a weight of 0.04

$$Ratio\ of\ Education\ and\ Training\ Expenses\ to\ employee\ expenses = \frac{Total\ training\ load\ (Rp)}{Number\ of\ employee\ expenses\ (Rp)}\ x\ 100\%$$

The weight of the assessment of each aspect is:

Table 1 Weight of Financial Aspect Performance Rating

No.	Performance Indicator	Weight	Standard	Standard Value
1.	Profitability			
	Return On Equity (ROE)	0.055	≥ 10 (%)	5
			7 - <10 (%)	4
			3 - <7 (%)	3
			0 - <3 (%)	2
			< 0 (%)	1
	Operating Ratio	0.055	≤ 0.5	5
			>0.5 – 0.65	4
			>0.65 – 0.85	3
			>0.85 – 1.0	2
			>1.0	1
2.	Liquidity			
	Cash Ratio	0.055	≥ 100 (%)	5
			80 - <100 (%)	4
			60 - <80 (%)	3
			40 - <60 (%)	2
			<40 (%)	1
	Billing effectiveness	0.055	≥ 90 (%)	5
			85 - <90 (%)	4
			80 - <85 (%)	3
			75 - <80 (%)	2
			<75 (%)	1

No.	Performance Indicator	Weight	Standard	Standard Value
3.	Solvability	0.03	≥ 200 (%)	5
			170 - <200 (%)	4
			135 - <170 (%)	3
			100 - <135 (%)	2
			<100 (%)	1

(Source: PDAM Performance Handbook, 2020)

Table 2 Weight of Service Aspect Performance Assessment

No.	Performance Indicator	Weight	Standard	Standard Value
1.	Technical service coverage	0.05	≥ 80 (%)	5
			60 - <80 (%)	4
			40 - <60 (%)	3
			20 - <40 (%)	2
			<20 (%)	1
2.	Customer growth	0.05	≥ 10 (%)	5
			8 - <10 (%)	4
			6 - <8 (%)	3
			4 - <6 (%)	2
			<4 (%)	1
3.	Domestic water consumption	0.05	≥ 30 (m^3 / month)	5
			^{30} (m3 /month)	4
			^{25} (m3 /month)	3
			15 - <20 (m3 / month)	2
			^{15} (m3 /month)	1
4.	Complaint Resolution Rate	0.025	≥ 80 (%)	5
			60 - <80 (%)	4
			40 - <60 (%)	3
			20 - <40 (%)	2
			<20 (%)	1
5.	Customer Water Quality	0.075	≥ 80 (%)	5
			60 - <80 (%)	4
			40 - <60 (%)	3
			20 - <40 (%)	2
			<20 (%)	1

(Source: PDAM Performance Handbook, 2020)

Table 3 Operational Aspect Performance Assessment Weight

No.	Performance Indicator	Weight	Standard	Standard Value
1.	Production efficiency (production factor) utilization	0.07	≥ 90 (%)	5
			80 - <90 (%)	4
			70 - <80 (%)	3
			60 - <70 (%)	2
			<60 (%)	1

2.	Unbilled water-ATR (NRW)	0.07	≤ 25 (%) >25 - 30 (%) >30 - 35 (%) >35 - 40 (%) >40 (%)	5 4 3 2 1
3.	Service operating hours	0.08	21 - 24 (hours) 18 - <21 (hours) 16 - <18 (hours) 12 - <16 (hours) <12 (hours)	5 4 3 2 1
4.	Water pressure at customer connection	0.065	≥ 80 (%) 60 - <80 (%) 40 - <60 (%) 20 - <40 (%) <20 (%)	5 4 3 2 1
5.	Replacement and (or) calibration of customer water meters	0.065	≥ 20 (%) 15 - <20 (%) 10 - <15 (%) 5 - <10 (%) <5 (%)	5 4 3 2 1

(Source: PDAM Performance Handbook, 2020)

Table 4 Weight of Human Resources Aspect Performance Assessment

No.	Performance Indicator	Weight	Standard	Standard Value
1.	Employee ratio	0.07	≤ 6 (people) >6 - 8 (people) >8 - 10 (people) >10 - 12 (people) > 12 (persons)	5 4 3 2 1
2.	Employee training ratio	0.04	≥ 80 (%) 60 - <80 (%) 40 - <60 (%) 20 - <40 (%) <20 (%)	5 4 3 2 1
3.	The ratio of education and training expenses to employee expenses	0.04	≥ 10 (%) 7.5 - <10 (%) 5 - <7.5 (%) 2.5 - <5 (%) <2.5 (%)	5 4 3 2 1

(Source: PDAM Performance Handbook, 2020)

The results of the assessment produce a total value that is grouped into 3 categories, namely:

1. PDAM performance is healthy, if the total value of all indicators is > 2.8
2. PDAM performance is not healthy, if the total value of all indicators is between 2.2 and 2.8
3. PDAM performance is bad, if the total value of all indicators < 2.2

4. Analysis and Discussion

Based on the calculation of each aspect that has been carried out, condition values and standard values are obtained in 2019 and 2020, including:

a. Financial performance

Table 5 Financial Performance of PDAM Dili City, Timor Leste in 2019-2020

Financial Performance Summary			2019		2020	
			Condition	Score	Condition	Score
A	FINANCE					
	1.	Profitability				
		a. ROE	17653.27	5	17976.26	5
		b. Operation Ratio	0.47	5	0.49	5
	2.	Liquidity				
		a. Cash Ratio	1796.81	5	2611.95	5
		b. Billing Effectiveness	58.31	1	75.41	2
	3.	Solvability	468.40	5	584.77	5
Performance Weight - Finance Sector			1.03		1,085	

(Source: Researcher Calculation Results, 2022)

Judging from the 2019 period, profitability for ROE and operating ratio has a score of 5, and can be maintained until 2020 at a score of 5. So that profitability is said to be very good. The financial performance of liquidity also experienced the same thing where 2019 had a score of 5 and 2020 had a score of 5 in the very good performance category. However, from the effectiveness of billing, in 2019 it has a score of 1, increasing in 2020 to a score of 2. So it is said that the company's liquidity has experienced an increase in performance. The financial performance of solvency also experienced the same thing where 2019 had a score of 5 and 2020 had a score of 5 in the very good performance category.

In the financial aspect, the value obtained in 2019 was 1.03 and in 2020 it increased to 1.085 , this value increased because the effectiveness of billing in 2020 increased by 17.1 %. And a dissertation with an increase in profitability, liquidity and solvency ratios. To improve financial performance in the following year, namely by increasing *Return on Equity (ROE)* and employee operating ratios.

b. Service Performance

Table 6 Service Performance of PDAM Dili City, Timor Leste in 2019-2020

Service Performance Summary			2019		2020	
			Condition	Score	Condition	Score
B.	SERVICE					
	1.	Service Coverage (%)	18.73	1	22.42	2
	2.	Customer Growth (%)	5.82	2	9.17	4

Service Performance Summary		2019		2020	
		Condition	Score	Condition	Score
3.	Complaint Resolution Rate (%)	41.95	3	44.22	3
4.	Customer Water Quality (%)	16.67	1	30.77	2
5.	Domestic Water Consumption	26.95	4	25.37	4
Performance Weight - Field of Service		0.535		0.775	

(Source: Researcher Calculation Results, 2022)

Judging from the 2019 period, the service coverage indicator has a score of 1, and has increased in 2020 to a score of 2. So it can be said that the service coverage indicator has improved performance. Service performance from customer growth is also experiencing the same thing where in 2019 it has a score of 2 and in 2020 it has increased with a score of 4. So it can be said that the customer growth indicator has increased performance. Service performance from the level of complaint resolution also experienced the same thing where in 2019 it had a score of 3 and in 2020 it had a score of 3 with a fairly good performance category. The service performance of customer water quality also experienced the same thing where in 2019 it had a score of 1 and in 2020 it has increased with a score of 2. So it can be said that the customer's water quality indicators have improved performance. The service performance of domestic water consumption also experienced the same thing where in 2019 it had a score of 4 and in 2020 it had a score of 4 in the good performance category.

service aspect value obtained in 2019 was 0.535 and in 2020 it experienced an increase of 0.775 . This is due to the increase in service coverage, customer growth, complaint settlement rates, and customer water quality. For technical service coverage, there was an increase of 3.69 %, this was because the number of residents of Dili City, Timor Leste served, increased by 7992 people . the increase in the number of people served was followed by an increase in customer growth of 3.35 %. Complaint issues as a whole were successfully handled by PDAM employees, the quality of clean water received by customers was good overall. In order to increase the PDAM's performance in the following year, the PDAM must conduct more water quality tests that meet the requirements and increase domestic water sales.

c. Operational Performance

Table 7 Operational Performance of PDAM Dili City, Timor Leste in 2020

Operational Performance Summary			2019		2020	
			Condition	Score	Condition	Score
C.	OPERATIONAL					
	1.	Production Efficiency (%)	34.99	1	55.95	1
	2.	Unbilled water-ATR (%)	14.88	5	18.72	5
	3.	Hours of Operation/Service/Day	14.65	2	20.50	4
	4.	Customer Connection Pressure (%)	0.00	1	0.00	1
	5.	Water Meter Replacement (%)	1.66	1	1.63	1
Performance Weight - Operational Field			0.71		0.87	

(Source: Researcher Calculation Results, 2022)

Judging from the 2019 period, the production efficiency indicator has a score of 1 and in 2020 it is scored 1. So it is said that the production efficiency indicator has the same quality of performance. The operational performance of Unbilled Water-ATR has also experienced the same thing where in 2019 it has a score of 5 and in 2020 with a score of 5. So it can be said that the indicator of Unbilled Water-ATR has the same performance quality. The operational performance of Operating Hours/Services/Days has increased where in 2019 it has a score of 2 and in 2020 it has a score of 4 with a good performance category. The operational performance of customer connection pressure is also experiencing the same thing where in 2019 it has a score of 1 and in 2020 it has a score of 1. So it is said that the customer connection pressure indicator has the same performance. The operational performance of replacing water meters also experienced the same thing where in 2019 it had a score of 1 and in 2020 it had a score of 1 with the performance category having the same performance quality.

In the operational aspect, the value obtained in 2019 was 0.71 and in 2020 it experienced an increase of 0.87 . For production efficiency in 2019 , it obtained a value of 34.99 %, in 2020 it increased to 55.95 %, this was caused by the realization of increased PDAM production. For non-revenue water, it also experienced an increase, in 2019 the percentage of non-revenue water was 14.88 % and in 2020 it became 18.72 %.

Service operating hours in 2017 and 2018 increased from 14.65 hours/day in 2019 to 20.5 hours/day in 2020 . Water pressure at customer connections with a pressure of 0.5-0.7 Bar in 2019 and 2020 is the same, namely 0%. The replacement of water meters has decreased from before, in order to improve PDAM performance in the following year PDAM Dili Timor Leste is required to increase the replacement of customer water meters that have been damaged.

The production efficiency approach measured in this study uses the level of utilization of the PDAM's production capacity. The higher the capacity utilization, the higher the efficiency value because high production capacity is associated with high operational costs. High production capacity but not balanced with high water production will lead to inefficiencies.

d. HR performance

Table 8 Performance of PDAM City of Dili Timor Leste HR in 2020

HR Performance Summary			2019		2020	
			Condition	Score	Condition	Score
D.	HR					
	1.	Ratio Number of Peg / 1000 plg	9.37	3	8.76	3
	2.	Supervisor Training/Competency Improvement Ratio (%)	6.25	1	22.45	2
	3.	Education and training costs to employee costs (%)	0.13	1	0.24	2
Performance Weight - HR Sector			0.29		0.33	

(Source: Researcher Calculation Results, 2022)

Judging from the 2019 period, the employee ratio indicator has a score of 3 and in 2020 it is scored 3. So it is said that the production efficiency indicator has the same quality of performance. HR performance from the employee education and training ratio has increased where in 2019 it has a score of 1 and in 2020 it has increased with a score of 2. So it is said that the employee education and training ratio indicator has an increased quality of performance. HR performance from the ratio of education and training expenses to employee expenses has increased where in 2019 it has a score of 1 and in 2020 it has increased with a score of 2. So it is said that the indicator for the ratio of education and training expenses to employee expenses has increased performance.

In the aspect of human resources, the total value obtained in 2019 was 0.29 and in 2020 it experienced an increase of 0.33 . To maintain the improvement in the aspect of human resources in PDAM Kota Dili Timor Leste, namely by increasing the ratio of employees to attend training and training and budgeting training costs to attend training at least 5% of the annual budget .

The higher the increase in HR competency, the higher the PDAM's performance. PDAM's efforts to increase human resource competence through education and training activities will increase technical knowledge and skills as well as improve conceptual and decision-making abilities for managerial level employees. The lack of education and training conducted by the PDAM will make the competence of officers less than optimal. By increasing education and training, employees can carry out their duties better. Overall good employee performance will improve PDAM performance.

Based on the results of the Performance Summary of PDAM Dili City Timor Leste in 2020 , it states that PDAM Dili City Timor Leste in 2020 is in a Healthy condition with a total performance value of all indicators of 3.06 , which fulfills the criteria , namely the total value of all indicators must be greater than 2.8 on Research Guidelines technical guideline for evaluating the performance of PDAMs, the agency for improving the administration of drinking water supply systems, the ministry of public works and public housing year 2020.

5. Conclusion, limitations and suggestions

The conclusion of this study is that the performance of PDAM Kota Dili Timor Leste in 2020 is assessed based on the technical guidelines for evaluating PDAM performance, the agency for improving the implementation of the drinking water supply system of the Ministry of Public Works and Public Housing is healthy. This happened because the results of calculating the performance value based on the decision of the Ministry of BUMN, were above the set standard. The conclusions obtained are:

a. The performance success rate for 2019-2020 using performance measures of profitability, liquidity and solvency has increased. The level of ability to obtain profit from existing capital (equity) / *return on equity* (ROE) which was carried out experienced a good increase, namely 322.99. Meanwhile, the effectiveness of billing in 2020 increased by 17.1 %. This shows that the company's performance in obtaining profits has increased.
b. PDAM Dili Timor Leste's performance in 2020 has increased by 3.69% in serving customers, this shows that it is quite good at retaining its customers as evidenced by the increase in the number of resistant customers compared to last year and the improvement in water quality based on Permenkes Number 492/MENKES/ PER/V/2010 Concerning Drinking Water Quality Requirements. In measuring the performance of PDAM customer complaint settlement rates,

Lautem City, Dili, Timor Leste, their performance is considered good because of an increase in PDAM response to customer complaints.

c. The operating performance based on the operational aspects of the value in 2020 experienced an increase of 0.87 . For production efficiency in 2020 it increased to 55.95 %, this was caused by the realization of increased PDAM production. Service operating hours from 14.65 hours/day in 2019 to 20.5 hours/day in 2020 . The replacement of water meters has decreased from before, in order to improve PDAM performance in the following year PDAM Dili Timor Leste is required to increase the replacement of customer water meters that have been damaged.

d. In measuring the performance of human resources, the authors consider that in this measurement, PDAM Kota Dili Timor Leste is able to increase the number of its employees. Judging from the training (education and training) ratio of employees, there has been an increase in the number of employees attending training and training .

Suggestions from the results of this study are a) For PDAM Dili City, Timor Leste, it can increase and use profits more effectively and can immediately overcome the problems that occur in PDAM Dili City, Timor Leste, such as spending on pipe leaks so that it does not cause losses to PDAM Kota. Dili Timor Leste and b) For subsequent authors it is advisable to look for more recent data and use other ratios to get even better results.

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