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## THE UTILIZATION OF MANAGEMENT DIFFERENTIAL ACCOUNTING IN DECISION MAKING REGARDING FIXED ASSET INVESTMENT AT PDAM TIRTANADI, NORTH SUMATERA PROVINCE

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### Abstract

PDAM Tirtanadi in North Sumatera province is a provincial- owned utility company that supplies clean water for this province's population. In terms of accomodating the increasing needs and demands of clean water, PDAM Tirtanadi is still facing challenges as there is still a long queue of new installation requests that which could not be processed yet. The purpose of this research is to explore more into the utilization of management accounting information in decision making regarding the company's fixed asset investment and other related factors that contribute to the company's inability to meet the demands of clean water from the population. This research is done in descriptive manner as a case study. The methods applied in gathering necessary data is through documentations and interviews. The result of the conducted research shows that the management of the company has indeed utilized differential accounting information in decision making for fixed asset investment, in which the company both produce clean water on their own and purchase bulk water to strive to keep up with the demands from the population. Other factors found that cause the challenges in meeting the existing demands of clean water from the population in this area is the limited supplies of raw water, the high level of loss water, the limited capacity of production, and the inability to provide water continuity.

**Keywords:** *Management Accounting Information, Decision Making*



## **A. Introduction**

As known that the purpose of the company is to turn out profits. The size of the profits obtained by the company is a measure of management performance. Therefore, management must be able to make accurate and up to date decisions. In decision making, management is the final decider. Decision making is the choice between alternatives regarding a way of acting which is the core of planning, a plan cannot be said to be non-existent if there is no decision, a reliable source, guidance or reputation that has been made (Harold, 2013).

For a company, investment in fixed assets is a company investment that can be in the form of securities or company productivity. Long-term investments are often called permanent investments and are usually reported to be read in estimates of non-current assets. Long-term investment is part of the funds invested in assets outside the company's main activities.

In determining the steps of investment decisions that will be taken, of course, management really needs accounting information as a thinking tool and a tool to communicate the business mind to the manager level both under and above it or the same level and parties outside the company for the progress of the company. Information is a component that is very important for the company because the key to the success of the company is very dependent on the accuracy of decisions taken managerial based on information available at the company concerned.

In the decision making process so that economic resources or corporate wealth are used more effectively and efficiently, accounting information can help management (Mulyadi, 2006). When management will make a decision, reporting is needed, reporting can be in the form of management accounting information. Information management accounting taken must be precise and have maximum benefits. Management accounting information is the development and application of various recording, analysis, interpretation and presentation techniques, making financial



calculations, cost calculations, and other data that are active and effective in carrying out managerial performance functions, namely, planning, decision making and control.

Management accounting information is needed by management from various levels of the organization to develop plans for corporate activities in the future. Management accounting information is very useful for management, especially at the stage of analyzing the consequences of each alternative action used in decision making, making it possible to choose the best alternative among the alternative actions considered. Management accounting information is information that produces output (output) by using input (input) and various processes needed to meet certain management objectives (Hansen, 2012).

PDAM Tirtanadi in North Sumatera province is a provincial-owned utility company that supplies clean water for this province's population particularly Medan City. This company has been established since 1908 and has 19 branches and 14 Water Treatment Plants (IPA). Regional Water Supply Company (PDAM) Tirtanadi is a company that produces clean water to meet water needs for the lives of many people, because the population of North Sumatra is increasing.

Because the population has increased, of course, the community's water needs have also increased. The community's need for clean water is not supported by the availability of raw water that will be processed into drinking water that meets the Minister of Health Regulation No. 492 of 2010 concerning drinking water quality requirements.

From each of the problems described above, before the company takes fixed asset investment decisions for the future, management must carefully consider which alternatives to choose, of course they need careful thinking and planning, management must can see which alternatives are more profitable and more cost efficient.

Based on the problems above, the researcher was interested in studying more deeply about fixed asset investment decisions based on management accounting information, especially differential accounting information, and PDAM Tirtanadi as



the object of research. Therefore, this research was compiled with the title of Utilization of Management Accounting Information in the Decision Making of Fixed Asset Investment in Regional Water Supply Companies of PDAM Tirtanadi, North Sumatra Province.

## **B. Method**

This research is a descriptive research. According to (Meleong, 2013) this type of descriptive research is a form of research aimed at describing or describing existing phenomena, both natural phenomena or human engineering. Descriptive assessment is done by collecting data, classifying data and analyzing data so as to provide a description or description of the phenomenon under study by describing variables, either one or more variables based on the indicators of the variables under study. This study describes the Role of Management Accounting Information in Deciding on Fixed Asset Investment in PDAM Tirtanadi. Data collection techniques used are documentation in the form of retrieving financial data or results of analysis from the company related to the object to be studied regarding management accounting information related to fixed assets, then observation to find out and compare accounting information for future fixed asset investment decisions. The method section describes how the study was conducted. Such a description enables the reader to evaluate the appropriateness of methods and the reliability and the validity of the results.

In this research, the informants were those who held positions in PDAM Tirtanadi, North Sumatera Province. Interviews were conducted for people who understood the related titles to be used as information in this study as many as 3 people interviewed.

## **C. Research Finding**

The factors that cause the community's needs for water have not been fulfilled, among others, as follows:

1. Availability of raw water

Because the raw water source used by PDAM Tirtanadi, North Sumatra Province is derived from springs, surface water and ground water, among others, the utilization rate has not been



maximized. The available discharge of raw water sources is 8,159 liters / second and PDAM Tirtanadi has used a pumping and gravity system for extracting raw water with a discharge of 6,951 liters / second or with a maximum utilization rate. In addition, there are water sources that have the potential to be used as raw water sources, including Sei Bingei, Sei Sigara-gara, Sei Percut, Sei Lau Burah, Sei Wampu and Simeimei Lau Simeme Dam. However, not all raw water sources can be processed by PDAM Tirtanadi, North Sumatra Province, because it requires a large investment.

2. High rates of water loss occur

The high level of water loss or it can be said that the level of water loss has not reached the maximum standard. The cause of the level of water loss consists of the level of loss of production units, the percentage of the level of water loss diunit production in 2017 amounted to 4.07% of the volume of real production, while in 2016 amounted to 0.92%. The production unit water loss rate in 2017 rose 3.15% compared to 2016. The level of water loss in the production unit was due to backwash, chemical dissolution, sludge disposal (automatic and manual dislodge), drainage, cleator cleaning / RTW / prasedimentase and sampling pipes water to the laboratory. The cause of the subsequent water loss rate is NRW Distribution, the percentage of NRW distribution in 2017 was 29.99% of water distributed, whereas in 2016 it was 27.64%, an increase of 2.35% compared to 2016. The percentage of NRW was still higher than predetermined standard of 20%. The high level of NRW distribution in 2017 is caused by the calculation still using estimates because the master water meter is not in zone 2, the water meter damage that has not been identified, the percentage of water meters that are not monitored is compared to the number of connections still low.

3. Production Capacity

The production capacity that is still unused is because it cannot be utilized because the existing distribution pipeline is not able



to accommodate the number of available debits and the unavailability of distribution pipelines to customers.

4. Does not meet water continuity

Distributed water continuity is only around 20 hours per day because there is no continuity standard due to existing reservoirs and booster pumps that are unable to reach all service areas where water pressure decreases to customers far from reservoir and booster pumps as well as increasing residential areas especially in densely populated areas which requires a new connection while the pressure and water discharge from the PDAM have not increased so that PDAM water cannot be distributed to all consumers / customers for 24 hours.

**D. Discussion**

**Table 1. Comparison of Taking Steps Decision to Buy Bulk Water**

<b>Theory</b>	<b>Field Fact</b>	<b>Compatibility</b>
To Identify	The production department reviews and re-check the condition of the company so that it finds problems and looks for solutions. The problem that arises is that the community's need for water has not been fulfilled so that it needs to increase the flow of water	Compatible
Data Collection	The production	Compatible



and Analyzer	department reports to the directors about drinking water needs in PDAM Tirtanadi that have not been fulfilled.	
Making Policy Alternatives The Selection of Best Alternatives	In the report contains a proposal to buy bulk water The Board of Director recommends forming a team, so a team is formed to conduct an assessment of bulk water requirements and bulk water prices	Compatible
Decision Making	Then the team handed over to the committee to auction off to third parties to offer those who were willing to provide the bulk water needed by PDAM Tirtanadi	Compatible
Monitoring and Evaluation		Compatible



**Table 2. Percentage Service Level**

<b>No</b>	<b>Service Area</b>	<b>Total Customer</b>	<b>Populasi Served</b>	<b>Total Populasi</b>	<b>% Level Service</b>
1.	Kota Medan dan sekitarnya	430.663	2.583.978	3.002.627	86,06%
2.	Kab. Karo (Berastagi)	7.288	43.728	48.050	91,01%
3.	Kab. Tapsel (P.Sidimpuan)	13.911	133.015	687.027	19,36%
4.	Kab. Deli Serdang (Lubuk Pakam)	20.906	125.436	788.519	15,91%
5.	Kab.Tapteng (Pandan)	6.141	38.652	48.312	80,00%
6.	Kab.Tobasa (Balige)	6.123	33.214	89.972	36,92%
7.	Kab. Samosir (Pangururan)	3.501	21.006	29.970	70,09%
8.	Kab. Nias Selatan (TelukDalam)	1.667	10.53	50.555	20,84%
<b>Total</b>		<b>490.200</b>	<b>2.989.565</b>	<b>4.745.032</b>	<b>63,00%</b>

Data Source: PDAM Tirtanadi

PDAM Tirtanadi of North Sumatra Province in its efforts to improve efficiency and to ensure that companies will get maximum profits will always use management accounting information especially differential accounting information, so that the policy of treatment of alternatives can be determined.

Management accounting has the role of processing input data to produce output in the form of information needed by users. In making management decisions PDAM Tirtanadi North Sumatra Province uses differential accounting information especially differential assets (assets defferential) which is differential accounting information that is only concerned with assets, especially fixed assets, and also uses differential cost information (differential cost) which is differential accounting information which is only concerned with costs, and uses about future costs in various alternatives that will occur, each manager





uses relevant costs. Costs in the future we have never encountered in the accounting of a company, the bookkeeping in the company is a historical record, therefore to determine the relevant costs required the ability to predict (Mulyadi, 2006).

## **E. Conclusion**

Management accounting information plays an important role in determining investment decisions for fixed assets of PDAM Tirtanadi, North Sumatra Province. The company uses management accounting information that is differential accounting information by choosing between two alternatives namely producing their own clean water or buying bulk water from the private sector. The decision taken, namely PDAM Tirtanadi, North Sumatra Province, continues to produce its own water, but also buys bulk water to meet customers' water needs.

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