THE EFFECT OF PERFORMANCE MEASUREMENT ASPECTS ON PDAM MAKASSAR CITY COMPETITIVENESS

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ABSTRACT

The purpose of this research is examine the effect or measuring the performance of PDAM Makassar City on competitiveness in terms of financial and non-finacial performace using the Balanced Scorecard approach through four perspectives: financial, customer, internal business, and growth and learning. This research uses a quantitative approach and is a type of explanatory research. The sample used in this study was 20 employes and 20 customers of PDAM Makassar City. To test the hypothesis, multiple linear analysis was tested using SPSS version 22.00. The results of this study indicate that there is a significant positive relationship between in the Balanced Scorecard on the competitiveness of PDAM Makassar City.

Keywords: Balanced Scorecard, Competitiveness.

ABSTRAK

Tujuan dilakukan penelitian ini adalah menguji pengaruh pengukuran kinerja PDAM Kota Makassar terhadap daya saing dari segi kinerja keuangan dan non keuangan dengan menggunakan pendekatan *Balanced Scorecard* melalui empat perspektif yaitu : keuangan, pelanggan, internal bisnis, dan pertumbuhan dan pembelajaran. Penelitian ini menggunakan pendekatan kuantitatif dan merupakan jenis penelitian penjelasan. Sampel yang digunakan dalam penelitian ini adalah 20 orang karyawan dan 20 orang karyawan PDAM Kota Makassar. Untuk menguji hipotesis, dilakukan pengujian analisis linear berganda dengan menggunakan SPSS versi 22.00. Hasil dari penelitian ini menunjukkan terdapat hubungan positif signifikan antara *Balanced Scorecard* terhadap daya saing PDAM Kota Makassar.

Kata Kunci: *Balanced Scorecard,* Daya Saing.

PRELIMINARY

Performance measurement is no longer considered good if it is only seen from the financial side which is considered unable to reflect the complexity and value inherent in the company. The PDAM performance evaluation has basically been carried out so that the assessment can be used as a reference in order to improve service quality. The performance measurements carried out have been based on performance measurement based on the Balanced Scorecard, there are four main perspectives namely financial perspective, customer perspective, internal business process business perspective, and growth and learning. so that in order to

support water services in a sustainable manner, various efforts need to be made, such as encouraging the recovery of problematic PDAM, improving aspects of supervision, strengthening institutional aspects and strengthening infrastructure so that in the future they will be able to compete and be equal with water companies in the world. The objectives of this study are 1) Measuring the performance of financial ituperspectives, customer perspectives, internal business process perspectives, and learning and growth perspectives in PDAM Makassar based on performance appraisal issued by BPPSPAM *(Government Regulation No.16 of 2005 concerning Development of Drinking Water Supply Systems);* 2) Analyzing and describing the influence of financial aspects in the Balanced Scorecard on company competitiveness in PDAM Makassar City; 3) Analyzing and describing the influence of financial aspects in the Balanced Scorecard on company competitiveness in PDAM Makassar City; 4) Analyzing and describing the influence of customer aspects in the Balanced Scorecard on the company's competitiveness in PDAM Makassar City; 5) Analyzing and describing the influence of aspects of the Internal Business Process in the Balanced Scorecard on the company's competitiveness in PDAM Makassar City; 6) Analyzing and describing the influence of aspects of Learning and Growth in the Balanced Scorecard on company competitiveness in PDAM Makassar City. According to Hesti Sugesti (2017) and Tifany A. Lokatili and Devie (2013), there is a significant influence between the Balanced Scorecard on competitiveness. The results of these studies become the background of the authors conducting this research.

LITERATURE REVIEW
Public Sector Performance

Performance measurement according to Mahmudi (2015: 7) includes the activity of determining a set of performance measures or indicators that provide information making it possible for public sector performance units to monitor their performance in producing outputs and outcomes on society.

Performance evaluation according to Mulyadi and Setyawan (2000: 353) is a periodic determination of the operational effectiveness of an organization, parts of the organization and its employees based on predetermined targets, standards and criteria.

The main purpose of performance appraisal according to Mulyadi and Setyawan (2000; 14) is to motivate personnel in achieving organizational goals and in complying with predetermined behavioral standards in order to produce the results desired by the organization.

Balanced Scorecard Concept

Kaplan and Norton (1992) in Gaspersz (2002: 2) suggest that the Balanced Scorecard is an assessment of performance that is oriented on strategic customers into the future. Gaspersz (2002: 3) further explained that the Balanced Scorecard is

basically a management system for companies to invest in the long term consisting of four perspectives, namely financial, customer, internal business, learning and growth.

The four perspectives of the Balanced Scorecard provide a balance between the company's short-term and long-term goals. Measurement of financial performance shows whether the planning, implementation and implementation of strategies provide fundamental improvements. Customer perspective is considered important given the increasingly fierce competition to retain old customers and recruit new customers, the current product and service performance is getting closer to or even exceeding what is expected and perceived by consumers. In addition to the two perspectives, measurement of the internal business perspective is also considered important where the assessment is based on the processes, decisions and actions that occur within the organization. The three perspectives are complemented by learning and growth perspectives in which efforts that can be done by companies in this perspective are by investing in infrastructure, namely reskilling employes, increasing the ability of information systems and maintaining employee motivation, as well as giving authority and direction to organizations and individuals. This learning and growth perspective provides future investment efforts so as to enable the organization to achieve its long-term financial growth goals.

Competitiveness

Porter (1995: 5) says: "competition is the core of the success or failure of firms". Competition is the core of a company's success or failure.

Dimensions of competitiveness of a company as stated by Muhardi (2007: 40) by quoting Ward et all (1998: 1036-1037) are composed of costs, quality, delivery, and flexibility.

Business power to obtain competitive advantage according to Kotler (2001: 295) is the value of building customer relationships based on: customer value and customer satisfaction.

RESEARCH METHODS

The place of this research in the Makassar Municipal Water Company (PDAM), the sample used in this study were 20 employees and 20 customers. The type of data in this study is quantitative data that is quantitative, while the source of data is primary data with data collection techniques using a questionnaire. Questionnaire *(questionnaire)* is a data collection technique that is done by giving a set of statements or questions in writing to the respondent, statements or questions in the questionnaire /questionnaire need to be varied between positive statements and negative statements.

Data analysis methods in this research are instrument test, classic assumption test, performance measurement based on BPPSPAM guidelines, multiple linear regression test, hypothesis test. The test was carried out through

SPSS version 22. Based on the hypothesis proposed in this study, the statistical hypothesis was formulated which was tested as follows:

H_{01}: $\beta_1 < 0$: The aspect of performance measurement in the Balanced Scorecard does not significantly influence the competitiveness of PDAM Kota Makassar.

H_{a1}: $\beta_1 > 0$: The aspect of performance measurement in Balanced Scorecrad has a significant effect on the competitiveness of PDAM Kota Makassar.

RESULTS AND DISCUSSION

The first test carried out is the instrument test, which consists of a validity test and a reliable test. The validity test results show that all instruments are valid. The result of correlation r shows that the instrument is greater than 0,444. While the reliability test, the test results are as follows:

Table 1. Reliability Test Result

Reliability Statistics

Cronbach's Alpha	N of Items
.977	5

From the reliability test results that have been described in the table above shows that all instruments are reliable. The results of correlation r on Crobach Alpha show that all instruments are greater than 0,60.

The second test is the classic assumption test which consists of a normality test using the Kolmogorov-Smirnov statistical test (K-S) and heteroscedasticity test. The results of this normality test are as follows:

Table 2. Kolmogorov-Smirnov Test Result

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		20
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.67430599
Most Extreme Differences	Absolute	.148
	Positive	.058
	Negative	-.148
Test Statistic		.148
Asymp. Sig. (2-tailed)		.200[c,d]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.

Kolmogorov-Smirnov results show the number 0,200 with a significance level which means it is above 0,05, so it can be concluded that the variable has been normally distributed. while the heteroscedasticity test results are as follows:
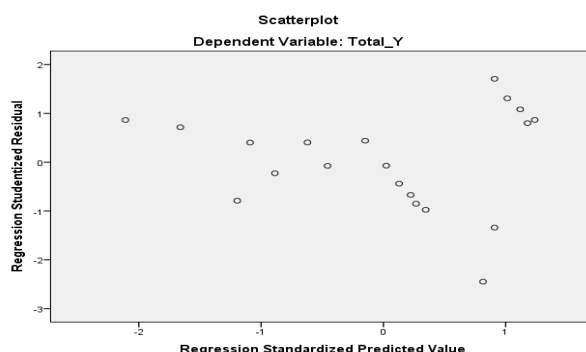
Fig. 1. Heteroscedasticity Test Result

According to Iman Ghozali (2011: 139) heteroscedasticity does not occur, if there is no clear pattern *(Corrugated, widened then narrowed)* in scatterplot images, and points spread above and below the number 0 on the Y axis. From the picture above it appears that no there are symptoms of heteroscedasticity.

The third test is the result of performance measurement analysis based on BPPSPAM guidelines. The test results are as follows:

Table 3. The Third Test Result

		2016		2017	
		Condition	Score	Condition	Score
A.	Finance				
	1. Profitability				
	a. ROE	19,10%	5	20,66	5
	b. Operation Ratio	0,77%	3	0,82	3
	2. Liquidity				
	a. Cash Ratio	315,54%	5	219,28%	5
	b. Billing Effectiveness	98,39%	5	98,36%	5
	3. Solvency	888,16%	5	661,72%	5
Performance weight – Financial Sector		0,83		1,14	
B.	Service				
	1. Service Coverage	69,59%	4	70,13%	4
	2. Customer Growth	2,50%	1	1,00%	1
	3. Level of Complaint Resolution	93,46%	5	92,88%	5
	4. Customer Water Quality	100,00%	5	100,00%	5
	5. Domestic Water Consumption	20,31	3	19,92%	2
Performance weight – Service Sector		0,90		0,85	
C.	Operation				
	1. Produksi efficiency	100,00%	5	95,86%	5
	2. Level of Water Loss	49,09%	1	48,49%	1

3. Operating Hours of Service/ Day	22	5	22	5
4. Customer Connection Pressure	29,93%	2	42,76%	3
5. Water Meter Replacement	4,72%	1	3,54%	1
Performance weight – Operation Sector	1,02		1,08	
D. SDM				
1. Rasio of number of employess/100 customers	5,50	5	5,14	5
2. Employee education/ Training ratio/ Comptency improvement	24,62%	2	65,79%	4
3. Training costs against employee costs	1,94%	1	1,86%	1
Performance weight – SDM Sector	0,47		0,55	
Total Performance Value	3,53		3,62	
Category	Healthy		Healthy	

Based on the table above, the accumulation of performance measurements according to the BPPSPAM performance appraisal standard resulted in a total 2017 performance of 3,62, which is in the higher health category than the previous year at 3,53 *(healthy category)* so that it can be concluded that the performance of PDAM Kota Makassar produced a healthy performance.

The fourth test is multiple linear regression test, using processed primary data. The test results are as follows:

Table 4. Linear Regression Test Result

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-14.717	4.553		-3.232	.006		
Total_X1	.354	.138	.323	2.568	.021	.358	2.792
Total_X2	.247	.076	.289	3.261	.005	.721	1.387
Total_X3	.332	.137	.271	2.423	.029	.453	2.206
Total_X4	.770	.134	.748	5.748	.000	.334	2.994

a. Dependent Variable: Total_Y

Based on the table above can be obtained the regression equation model as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$$
$$Y = -14{,}717 + 0{,}354 X_1 + 0{,}247 X_2 + 0{,}332 X_3 + 0{,}770 X_4$$

The fifth test is a hypothesis that consists of a partial test (T) and a coefficient of determination test (R^2). Hypothesis testing results (T) are as follows:

Table 5. Hypothesis Test Result

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	-14.717	4.553		-3.232	.006
	Total_X1	.354	.138	.323	2.568	.021
	Total_X2	.247	.076	.289	3.261	.005
	Total_X3	.332	.137	.271	2.423	.029
	Total_X4	.770	.134	.748	5.748	.000

a. Dependent Variable: Total_Y

Based on the table above with a known sig value of 0,05, it can be concluded that the aspect of the Balanced Scorecard performance measurement has a significant positive effect on the competitiveness of PDAM Makassar City companies. This is consistent with the research of Hesti suggestion (2017) and Tifany A. Lokatili and Devie (2013). While the results of the coefficient of determination (R^2). The test results are as follows:

Table 6. Regression Test Result

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.957[a]	.915	.893	.493

a. Predictors: (Constant), Total_X4, Total_X2, Total_X3, Total_X1

The results of the regression calculation in the table above can be seen that the coefficient of determination *(adjusted R square)* obtained is 0,893. This means that 89,3% of the competitiveness of the Makassar City PDAM company is influenced by performance measurement in the Balanced Scorecard (X) consisting of financial perspective (X_1), customer perspective (X_2), internal business process perspective (X_3) and learning perspective and growth (X_4), while the remaining 10,7 PDAM Makassar City's competitiveness is influenced by variables not examined in this study.

CONCLUSION

Based on the results of measurements of company performance using the concept of the Balanced Scorecard that has been done, the conclusions can be drawn as follows:

a. Performance measurements at the Makassar City PDAM are in accordance with the performance appraisal issued by BPPSPAM *(Government Regulation Number 16 of 2005 concerning the Development of Water Supply Systems).*

b. Performance measurement based on financial perspective has a significant positive effect on competitiveness.

c. Performance measurement based on customer perspective has a significant positive effect on competitiveness

d. Performance measurement based on internal business process perspective has a significant positive effect on competitiveness

e. Performance measurement based on learning and growth perspective has a significant positive effect on competitiveness.

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