Evaluation Of Performance Implementation Of Sanitation-Based Community Sanitation Program (SLBM) In Pemalang Regency

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Abstract- Sanitation and waste water become an important issue, as population growth. It is estimated that in the next 2025, almost 68.3% of Indonesians inhabit urban areas. Population access to the basic infrastructure of settlements is influenced by aspects of health, environment, socio-cultural education and poverty. Community-Based Environmental Sanitation (SLBM) is one of the sub areas of DAK in the Infrastructure Sector, sourced from the State Budget (APBN) provided to finance sanitation and wastewater activities in regional affairs and become a national priority. Through this research to get: 1) evaluation of program policy toward implementation performance of SLBM, 2) factors influencing performance of SLBM program implementation, 3) dominant factor influencing to SLBM implementation. The research used qualitative quantitative method of quantitative with multiple linear regression analysis. Regression model formed $Y = 0.966 + 0.093 X1 + 0.207 X2 + 0.190 X3 + 0.191 X4 + 0.097 X5$, where the value of F arithmetic is 36.159 with a significance level of 0.000. The significance level obtained is 0.000 <0.05 so that the regression model is considered feasible to predict the dependent variable (Y) based on the independent variables. Of the five variables tested, community assistance with the coefficient of determination is 32.9% is the dominant variable that affects the success of program implementation performance. The aspect of participation is so important to support the success rate in the development and development of sanitation, therefore the cooperation of all parties between the government and the Sanitation Working Group, the community and all parties is expected to be sustainable.

Keywords: Sanitation, SLBM, Community Assistance, Parsitipation.

1. Introduction

Sanitation issues are an important issue that needs to get the attention of each generation. Until the year 2025 it is expected that sixty-eight point three percent (68.3%) of the Indonesian population will inhabit urban areas. Provision of viable wastewater infrastructure and facilities into massive needs, especially for low-income people (MBR). Community-Based Environmental Sanitation (SLBM) is one of the solutions in the provision of wastewater infrastructure and facilities for MBR in densely populated, slums, poor (pakumis) and sanitation-prone areas, with SLBM activities that are an initiative to promote the provision of infrastructure and facilities community-based waste water with a responsive approach to needs. The focus of SLBM activities is the handling of household wastewater, especially black water and gray water, but it is not closed to handle the

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biodegradable wastewater of natural home industries such as tofu, tempeh, and the like. Through the implementation of SLBM, communities choose their own appropriate infrastructure and wastewater facilities, form self-help groups (KSMs) as implementing groups at the community level, actively develop action plans, and carry out physical development, including managing operations and maintenance, even if need to develop it.

The utilization of the built and sustainable infrastructure is the target to be targeted. At the level of practice is often not as it has been outlined in the provisions of both implementation guidelines and technical guidelines. Many problems are complained either by the local government, the program actors and the community who utilize and maintain the facilities of MCK Plus and / or IPAL Komunal. This research is based on the problems faced at each stage of program implementation, so it is important to conduct an in-depth study on performance evaluation of the implementation of Community Based Sanitation Program (SLBM) in Pemalang Regency

2. Research Methods

a. Types of research

The research type is quantitative descriptive research.

b. Population and Sample Research

Population count of 222, using Slovin formula (Umar, 2003):

$$n = \frac{N}{1 + Ne^2} \quad \text{………….} (3.1)$$

The number of samples taken as many as 169 Respondents

c. Data collection

Technique of collecting data with questioner (using likert scale), observation and documentation.

d. Data Processing and Presentation Techniques

Data are presented in detail in descriptive form, tables, diagrams

e. Method of Analysis Results

Data analysis was done by using computer program that is SPSS (Statistical Package For Social Science) version 20.0.

1) Instrument Test

a) validity test

$$r_{XY} = \frac{n\sum XY - (\sum X)(\sum Y)}{\sqrt{\left\{ (n.(\sum X^2) - (\sum X^2)) \right\} \left\{ (n\sum Y^2) - (\sum Y^2) \right\}}} \quad \text{…..}(3.2)$$

Information:

rXY = Correlation, X = Number of scores on each question item
n   =   Sample,   Y   =   Total   total   score   of   questions

b) Test reliability

$$r_i = \frac{k}{(k-1)} \left\{ 1 - \frac{\sum s_i^2}{s_t} \right\} \quad \text{……} (3.3)$$

Information:

k   = mean squared between subjects,   St2   = total variance
The sum of Si2   = mean squared error

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2) Hypothesis Testing

Test the hypothesis with multiple regression equation as follows:

$Y = a + b1X1 + b2X2 + b3X3 + b4X4 + b5X5 + e$ ..... (3.4)

Information:

Y = Performance Performance Program, a = Constants

b1 = regression coefficient variable X1, b2 = regression coefficient variable X2

b3 = Regression coefficient variable X3, X1 = Pemicuan / Awareness Society

X2 = Preparation of Community Work Plan, X4 = Construction Assistance

X3 = Community Assistance, X5 = Preparation and Implementation of O & M

e = Error

a. **Test F**

Basic decision-making

If Fcount> Ftable means Ho is rejected, If Fcount <Ftabel means Ho is accepted
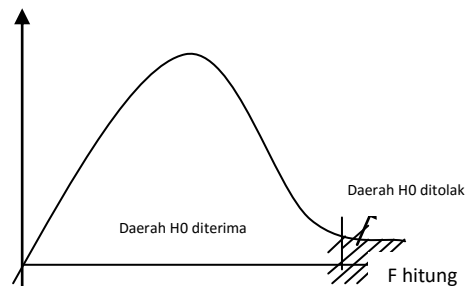

Figure 1.
Curve of F Distribution

b. **Test t**

If the value of t count > ttable, then Ho is rejected means each independent variables affect significantly to the dependent variable. And if thitung < ttable means that each independent variable ti significantly affect the dependent variable.

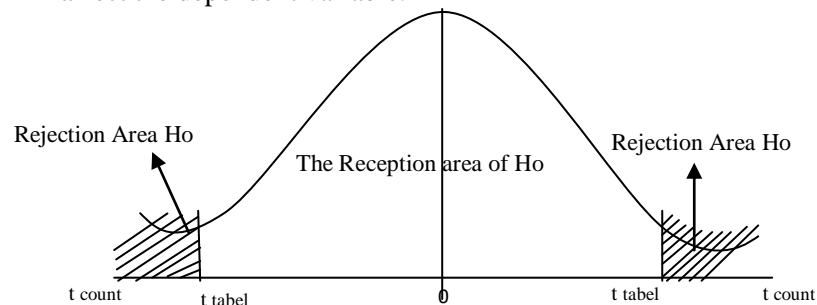**Figure 2.**
Curve of t Distribution

c. **Coefficient of Determination (R2)**

The small value of R2 means that the ability of the independent variables in explaining the dependent variable variation is very limited.

3. Results

This study tested 5 (five) independent variables X which is estimated to have an effect on the dependent variable Y (Success / Performance of SLBM program implementation in Pemalang District). The variables are:

- The independent variable X1 (Pemicuan Masyarakat),
- Independent variable X2 (Preparation of Community Work Plan),
- The independent variable X3 (Community Assistance),
- The independent variable X4 (Construction Assistance),
- The independent variable X5 (Operational and Maintenance (O & M) Preparation and Implementation),
- Non-free variable Y (Performance Performance of Community-Based Environmental Sanitation (SLBM)),

A. Test Validity

Validity test is used to measure the valid (validity) of whether or not each statement item is in the questionnaire. The basis for the decision is to use the Alpha Cronbach's method measured on the Cronbach's Alpha scale between 0-1.

1) The independent variable X1:

The result of validity test for each item statement of X1 free variable (Pemicuan Masyarakat) is presented in the following table:

Table 1. Test Result of Validity of Indicators of Community Development

Variabel	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected item-Total Correlation	r tabel	information
X11	21.1538	10.560	0.611	0.1510	Valid
X12	21.4260	9.317	0.808	0.1510	Valid
X13	21.4793	9.037	0.881	0.1510	Valid
X14	21.4852	8.751	0.877	0.1510	Valid
X15	21.5148	8.799	0.885	0.1510	Valid
X16	21.4320	9.663	0.922	0.1510	Valid

2) The independent variable X2:

The result of validity test for each item statement of X2 free variable (Community Work Plan) is presented in the following table:

Table 2. Validity Test Results Indicators of Community Work Plans

Variabel	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected item-Total Correlation	r tabel	Information
X21	30.7396	11.110	0.828	0.1510	Valid
X22	30.7692	10.821	0.849	0.1510	Valid
X23	30.7515	11.009	0.864	0.1510	Valid
X24	30.7574	10.935	0.869	0.1510	Valid
X25	30.7692	11.036	0.863	0.1510	Valid
X26	30.7574	11.006	0.846	0.1510	Valid
X27	30. 8284	11.036	0.757	0.1510	Valid
X28	30.7041	11.257	0.773	0.1510	Valid

3) The Independent variable X3:

The results of validity test for each point of Indicator Indicator is presented in the following table:

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Table 3. Test Result Validity Indicators Mentoring Community

Variabel	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected item-Total Correlation	r tabel	Information
X31	29.6450	14.445	0.790	0.1510	Valid
X32	29.6923	14.369	0.865	0.1510	Valid
X33	29.6568	14.632	0.864	0.1510	Valid
X34	29.6805	14.326	0.868	0.1510	Valid
X35	29.6805	14.493	0.878	0.1510	Valid
X36	29.6982	13.974	0.871	0.1510	Valid
X37	29.8047	14.158	0.745	0.1510	Valid
X38	29.8521	14.984	0.550	0.1510	Valid

4) The Independent variable X4:

The results of validity test for each item of statement indicator of Construction Assistance is as presented in the following table:

Table 4. Test Result of Validity of Indicator of Construction Assistance

Variabel	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected item-Total Correlation	r table	Information
X41	21.5385	7.833	0.839	0.1510	Valid
X42	21.5799	7.709	0.842	0.1510	Valid
X43	21.4675	7.977	0.859	0.1510	Valid
X44	21.5089	7.025	0.808	0.1510	Valid
X45	21.5503	7.892	0.810	0.1510	Valid
X46	21.5858	7.923	0.737	0.1510	Valid

5) The Independent variable X5:

The result of validity test for each item of statement Indicator of Preparation and Implementation of O & M is as presented in the following:

Table 5. Validity Test Results Indicator of Preparation and Implementation of O & M

Variabel	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected item-Total Correlation	r tabel	Information
X51	22.6391	6.387	0.842	0.1510	Valid
X52	22.5917	6.481	0.874	0.1510	Valid
X53	22.5858	6.530	0.854	0.1510	Valid
X54	22.5917	6.505	0.864	0.1510	Valid
X55	22.5207	6.811	0.787	0.1510	Valid
X56	22.5148	6.847	0.774	0.1510	Valid

6) The Independent variable Y:

The results of validity test for each item statement of the dependent variable (Y) Performance of Program Implementation is as presented in the following table:

Table 6. Results of validity test The performance of the SLBM program (Y)

Variabel	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected item-Total Correlation	r tabel	Information
Y11	30.4320	8.354	0.610	0.1510	Valid

Variabel	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected item-Total Correlation	r tabel	Information
Y12	30.3964	8.717	0.681	0.1510	Valid
Y13	30.4142	8.125	0.636	0.1510	Valid
Y21	30.3728	8.128	0.650	0.1510	Valid
Y22	30.4379	8.010	0.671	0.1510	Valid
Y31	30.4734	8.394	0.603	0.1510	Valid
Y32	30.3491	8.133	0.641	0.1510	Valid
Y33	30.3846	8.988	0.401	0.1510	Valid

B. Reliability Test

Reliability test is used to measure the consistency (reliability) of the questionnaire used as a measuring tool in research.

1) The Independent Variabel X1:

Reliability Statistics

Cronbach's Alpha	N of Items
0.911	6

2) The Independent Variabel X2:

Reliability Statistics

Cronbach's Alpha	N of Items
0.955	8

3) The Independent Variabel X3:

Reliability Statistics

Cronbach's Alpha	N of Items
0.942	8

4) The Independent Variabel X4:

Reliability Statistics

Cronbach's Alpha	N of Items
0.938	6

5) The Independent Variabel X5:

Reliability Statistics

Cronbach's Alpha	N of Items
0.945	6

6) **The** Dependent **Variabel (Y)**

Reliability Statistics

Cronbach's Alpha	N of Items
0.863	8

C. Analysis of Descriptive Statistics

Descriptive statistical results obtained from SPSS to describe or illustrate the 5 independent variables X and 1 independent variable Y as the following table.

Table 7. Test of Descriptive Statistics Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
Variabel X1	169	2.83	5.00	4.2830	0.60650
Variabel X2	169	3.00	5.00	4.3952	0.47250
Variabel X3	169	3.00	5.00	4.2447	0.53941

	N	Minimum	Maximum	Mean	Std. Deviation
Variabel X4	169	3.00	5.00	4.3082	0.55834
Variabel X5	169	3.00	5.00	4.5147	0.51075
Variabel Y	169	3.13	5.00	4.3464	0.40574
Valid N (listwise)	169				

D. Classical Assumption Testing Results

1) Testing Data Normality

Normality test results of data with Normal P-P Plots:
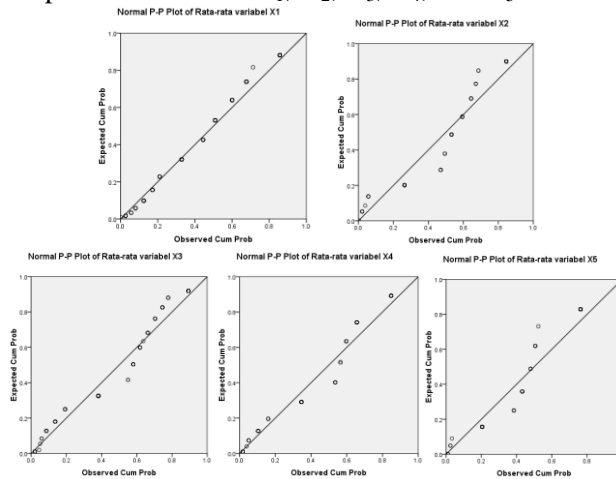
- The Independent Variabel X_1, X_2, X_3, X_4, dan X_5

Figure 2. Normal Test Results of Normal Data For Each the independent Variabel (X_1, X_2, X_3, X_4, dan X_5)
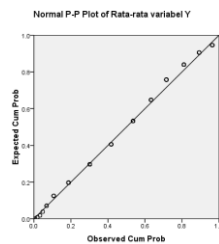
- Dependent Variabel Y

Figure 3. Normal Test Results of Normal Data For Each Dependent Variable (Y)

2) Multicolinearity Test

Multicollinearity of a condition where there is a strong correlation between the independent variables (X) that are included in the formation of a linear regression model. Multicollinearity test results with SPSS as the following table.

Table 8. Multicollinearity Test

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	Variabel X1	0.683	1.464
	Variabel X2	0.709	1.410
	Variabel X3	0.646	1.548

Model	Collinearity Statistics	
	Tolerance	VIF
Variabel X4	0.687	1.455
Variabel X5	0.894	1.119

3) Heteroscedasticity Testing

The result of heteroscedasticity assumption test from SPSS output can be seen through the scatterplot chart below
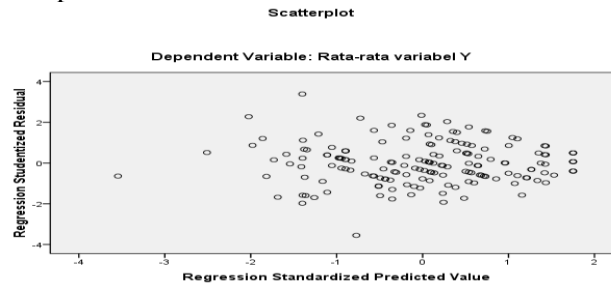

Figure 4. The Result of Heteroscedasticity Testing

E. Hypothesis Testing

Hypothesis testing performed in multiple regression analysis, F Test Analysis and Test t. The results of hypothesis testing analysis in multiple linear regression method are as follows:

1) Correlation Coefficient Analysis and Determination

The results of correlation and determination coefficient analysis are as described below:

Table 9. Results of Correlation Coefficient Analysis and Determination
Model Summary

Model	R	R Square	Adjusted R Square	Std.Error of the Estimate	Durbin – Watson
1	0.725	0.526	0.511	0.28363	1.835

The result of the analysis shows that the R number is 0.725. This shows that the relationship between SLBM program implementation performance and the five independent variables is strong. The number of R Square or Coefficient of Determination is 0.526. This means the amount of independent variables (X1, X2, X3, X4, and X5) to the dependent variable Y (SLBM program implementation performance) is 0.526 x 100% = 52.6%. The rest, ie 100% - 52.6% = 47.4% change in the performance variables SLBM program implementation caused by factors or other causes.

1) Test F

Test F is a test to see how the influence of all independent variables together on the dependent variable. The results of the analysis using SPSS are as follows:

Table 10. Test F Results
Analysis of Variance

	Model	Sum of Suared	Df	Mean square	F	Sig.
1	Regression	14.545	5	2.908	36.159	0.000
	Residual	13.113	163	0.080		

Model	Sum of Suared	Df	Mean square	F	Sig.
Total	27.657	168			

From ANOVA or F Test test it can be seen that F count is 36.159 with significance level 0.000. Because the significance level value is 0.000 <0.05, the regression model is declared eligible to predict the dependent variable (Y) based on the input of the independent variables (X1, X2, X3, X4, and X5).

2) Test t

The t test is to test how the influence of each independent variable individually to the dependent variable. The t test results from the analysis using SPSS are as follows:

Table 11. Test t Results
Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std.Error	Beta			Tolerance	VIF
1 (Constant)	0.966	0.273		3.539	0.001		
Variabel X1	0.093	0.044	0.140	2.140	0.034	0.683	1.464
Variabel X2	0.207	0.055	0.242	3.772	0.000	0.709	1.410
Variabel X3	0.190	0.050	0.253	3.772	0.000	0.646	1.548
Variabel X4	0.191	0.047	0.262	4.030	0.000	0.687	1.455
Variabel X5	0.097	0.045	0.123	2.149	0.033	0.894	1.119

From these results it can be seen that the coefficients for the regression equation can be seen in column B (Unstandardized Coefficients). So the regression model that is formed is:

$$Y = 0.966 + 0.093\ X1 + 0.207\ X2 + 0.190\ X3 + 0.191\ X4 +\ 0.097\ X5.$$

From the results of the coefficient as the table above, the variables X1 (Pemicuan Masyarakat), X2 (Community Work Plan (RKM), X3 (Community Assistance), X4 (Construction Assistance), and X5 (Preparation and Implementation of Operations and Maintenance (O & P) (partial) also has an important contribution in supporting the performance of the SLBM program, with respective contributions 24.2%, 27.5%, 32.9%, 30.6%, and 10.7%, respectively. the greatest contribution to the ups and downs of the implementation of the SLBM Program is the Community Assistance Variables, which is 32.9% The next largest is the construction assistant variable, which is 30.6% .In other words, the dominant factors that affect the success or performance of the SLBM program are Mentoring Society and Construction Assistance.

4. Conclusion

From the results of the discussion concluded that the implementation of SLBM policy in Pemalang District Government has been running and is considered quite good, the community as the program actor is sufficiently understood and aware of the benefits of the implementation of sanitation, and just change the mindset of the community. Important factors affecting the successful implementation of SLBM programs: community triggers (significance level X1 of 0.034), preparation of community work plans (significance level X2 of 0,000), community assistance (0,000 significance level X3), construction assistance (significance level X4 of 0.000), and the preparation and implementation of O & M (significance level X5 of 0.033).

The magnitude of correlation coefficient R^2 of 0.725. This indicates that the relationship between the five variables to the success of the SLBM program is strong and has a contribution of 52.6%. The rest, 47.4% change in the performance variables of SLBM program implementation caused by other causes. From the regression model that is formed, based on the value of F arithmetic is 36.159 with a significance level of 0.000. Because the significance level value is 0.000 <0.05, the regression model is declared eligible to predict the dependent variable (Y) based on the input of the independent variables (X1, X2, X3, X4, and X5).

Of the five independent variables tested, the variable that gives the biggest contribution in influencing the ups and downs of the implementation performance of SLBM program in Pemalang Regency is the variable of Community Assistance, which is 32.9%.

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