

## Determinant Analysis of Public Participation in the Implementation of Greening in Kampung Iklim 2 Ilir, Palembang

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### Abstract

Implementation of greening has a positive impact on anticipating and minimizing the impact of climate change. This study aims to analyze community participation in the implementation of greening that has been carried out in ProKlim 2 Ilir, Palembang. The population of this study was 639 households and there were 90 households as respondents. This research uses quantitative methods with a cross-sectional design. Data collection instruments are questionnaires, observations, interviews, and documentation. Data were analyzed using multiple logistic regression. The results showed participation of the community (54.4%) in the implementation of greening was classified as still bad. Characteristics of the community are mostly aged middle adults (47.8%), mostly female (72.2%), highly educated (>SMA) of 88.9%, medium knowledge (51.1%), including a length of stay in the old enough category (72.2%), and has the highest employment as a housewife (41.1%). The result of multiple logistic regression showed variable that the education level variable (OR=5.174) influence the participation of the community in the implementation of greening.

### Keywords

Implementation of Greening , Public Participation, Program Kampung Iklim

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## 1. INTRODUCTION

Climate change is any change in climate in a period time, either due to natural variability or as a result of human activity (anthropogenic causes) (Corpuz et al., 2009). The issue of global warming and climate change is a reflection of the world community about the occurrence of environmental damage or pollution that has hit the world due to human activities. Fifth Assessment Report, AR5, Intergovernmental Panel on Climate Change (IPCC) mentions the rise in the earth's surface temperature (global) between 1.35°C and is expected to continue to increase between 1.5 – 2°C in the next 30 years (Syakir and Surmaini, 2017). Increase in earth's temperature Increase in the level of risk associated with floods, landslides, drought, crop failure, biodiversity damage, sea-level rise and a decrease in the quality of human health (Faedlulloh et al., 2019). Based on the impact of this problem, the main source of which is a result of human activity, the solution is also needed to come from human

participation.

Indonesia is the 4th most populous country in the world (Devi et al., 2016), which means that Indonesia is one of the countries that dominate the sources of human activity. The contribution of the Indonesian government in efforts to change climate change is to create a national program based on community empowerment in the environmental field through the Program Kampung Iklim (ProKlim). Program Kampung Iklim (ProKlim) is a program developed by the Ministry of Environment (KLH) to encourage active participation of the community and all parties in carrying out local actions to improve the effectiveness of climate change and increase Greenhouse Gas emissions (Faedlulloh et al., 2019).

One of the areas that have implemented ProKlim in Palembang is Kampung Kebumen Gemilang Sejahtera (KGS), located on Jl. Sersan Zaini RW.11, Kelurahan 2 Ilir. Kampung KGS has implemented greening activities in the surrounding environment which are part of the mitigation or

conservation activities contained in the ProKlim in Palembang. Efforts to anticipate and minimize the impact of climate change, it is necessary to stabilize the concentration of CO<sub>2</sub> by expanding CO<sub>2</sub>, natural sinks with greening in settlements (Sarmiento and Gruber, 2003).

The implementation of greening has been carried out by the KGS of the community through the dissemination of fruit plant seedlings, but the implementation of greening in kampung KGS still not optimal because associated with the low level of community knowledge about greening, social status until the habits of the population around the greening area, so that the role of citizens is crucial, both as counselors and as community leaders who are led. Greening management needs to be considered more optimally by utilizing community participation in the implementation and utilization of greening, so further research needs to be done on community participation in implementing of greening in kampung KGS that has applied ProKlim.

## 2. EXPERIMENTAL SECTION

### 2.1 Location and Schedules

This research was carried out in February 2020 in the settlement area of ProKlim, 2 Ilir Palembang. The location of this study was carried out in four RT areas, namely RT 27, RT 28, RT 30, and RT 31. The selection of research sites is based on the status of Kampung Kebumen Gemilang Sejahtera (KGS) 2 Ilir an areas that implements ProKlim and has participated in greening activities in its environment.

### 2.2 Design of Study

This study used a quantitative method by cross-sectional design. Data collected to measure several variables is carried out by distributing questionnaires and interviews.

### 2.3 Data and Sources

Data collected in this study are primary and secondary data. Primary data in this study are the active participation of respondents in the implementation of greening in their environment obtained from questionnaires and interview data as well as data acquisition of respondents' knowledge about ProKlim and implementation of greening obtained from filling multiple-choice questions which answered by respondents. The secondary data in this study is the number population of RT 27, 28, 30, and 31 totaling 639 households obtained from Kelurahan 2 Ilir Palembang.

### 2.4 Methods

This research uses an analytic observational method with a cross-sectional design that aims to analyze the active participation citizens in the implementation of greening in ProKlim KGS 2 Ilir Palembang with quantitative methods. The total population in that study was 639 households with a total sample was 90 respondents. Variable in that study consist of dependent and independent variable. The dependent variable is active participation citizens while

the independent variables consist of age, gender, education level, knowledge, length of stay, and employment status. Data analysis was performed univariate and bivariate, and multivariate by Test the validity of using SPSS, the test used Chi-Square test with a confidence level of 95% ( $\alpha = 0.05$ ) and logistic regression test used to test more than two variables .

## 3. RESULTS AND DISCUSSION

The results of the univariate analysis show that most respondents are middle adults (47.8%), and 72,2% are dominated by female respondents. The highest education of respondents was the high level of education ( $\geq$ SMA) of 88.9%, with a medium level of knowledge which amounted to 51.1%. Besides that, most of the respondents were people who had lived for a long time enough ( $\leq$ 30 years) in the ProKlim KGS 2 Ilir (72.2%) with the most employment status as a housewife (41.1%). Meanwhile, for the public participation variable, it is known that 54.4% of respondents have bad participation in the implementation of greening in ProKlim KGS 2 Ilir Palembang. The frequency distribution of the characteristics of respondents can be seen in Table 1.

**Table 1.** Frequency Distribution of Characteristics Respondent's of Greening Implementation in ProKlim KGS 2 Ilir

Number	Variables	n	%
1	Age		
	Young adults (17-37 tahun)	36	40
	Middle adults (38-58 tahun)	43	47.8
	Older adults (59-79 tahun)	11	12.2
2	Gender		
	Male	25	27.8
	Female	65	72.2
3	Education Level		
	High ( $\geq$ SMA)	80	88.9
	Low ( $<$ SMA)	10	11.1
4	Knowledge		
	High ( $>$ 15)	36	40
	Medium (11-15)	46	51.1
	Low (1-10)	8	8.9
5	Length of Stay		
	Old ( $>$ 30 tahun)	25	27.8
	Old enough ( $\leq$ 30 tahun)	65	72.2
6	Employment Status		
	Housewife	37	41.1
	Self-employed	12	13.3
	BUMN	2	2.22
	Civil servants	3	3.33
	Other	36	40
7	Public Participation		
	Good ( $>$ 23)	41	45.6
	Bad ( $\leq$ 23)	49	54.4

The results of the bivariate analysis of the correlation of age to public participation can be seen in Table 2.

Based on Table 2, respondents young adults (17-37 years) with good participation were 41.7%, while respondents with middle adults (38-58 years) with good participation were 51.2% while old adults (59-79 years) with good participation were 36.4%. Statistical results show that the  $p\text{-value} > \alpha$  is 0.566. This shows that the  $p\text{-value} > \alpha$ , which means that the age variable does not have a significant relationship with the active participation of respondents. The results showed that respondents of old adults tended to have less favorable participation in the implementation of greening in ProKlim KGS 2 Ilir compared with respondents with young adults and middle adults. Age is a factor that influences a person's attitude toward existing social activities [6]. Someone who is in the productive age, namely the age range of 15-64 years, has the potential to make a maximum contribution in the form of material and non-material (Antika et al., 2017).

The results of the bivariate analysis of the correlation of gender to public participation can be seen in Table 3.

Based on Table 3, the number of male respondents with good participation was 20%, while the number of female respondents with good participation was 55.4%. Statistical results show that the  $p\text{-value}$  is 0.005. This indicates that the  $p\text{-value} < \alpha$ , which means that the gender variable has a significant relationship with the participation of respondents. Female respondents in this study had better participation in the implementation of greening compared to male respondents. This is because most of them are not family income earners so that they live more at home and have more free time so that female respondents are more active in greening their surrounding environment.

The results of the bivariate analysis of the correlation of education level to public participation can be seen in Table 4.

Table 4 shows that the number of the high education level of respondents with good participation was 48.8%, while the number of the low education level of respondents with good participation was 20.0%. Statistical results showed that the  $p\text{-value}$  was 0.104. It is indicated that the  $p\text{-value} > \alpha$ , which means that the variable level of education does not have a significant relationship with the participation of respondents. So, the level of high education may not necessarily have the greatest attention to development activities carried out for the surrounding environment.

The results of the bivariate analysis of the correlation of knowledge to public participation can be seen in Table 5.

The number of the high knowledge of respondents with good participation was 66.7%, the medium knowledge of respondents was 32.6%, while the low knowledge of respondents was 25.0%. The statistical results showed that the  $p\text{-value}$  was 0.004. It is indicated that the  $p\text{-value} < \alpha$ , which means that the knowledge variable has a significant relation with respondent participation. Respondents with a low level of knowledge tend to have bad participation, but

the data in table 5. does not indicate the level of knowledge of the respondents is directly proportional to their participation because many factors influence participation in the implementation of greening.

The results of the bivariate analysis of the correlation of length of stay to public participation can be seen in Table 6.

Based on Table 6, the total length of stay of respondents for more than 30 years with good participation was 48.0%, while the length of stay less than 30 years with good participation was 44.6%. Statistical results show that the  $p\text{-value}$  is 0.958. This indicates that the  $p\text{-value} > \alpha$ , which means that the variable length of stay does not have a significant relationship with respondent participation. So, there is no influence between the length of stay and active participation.

The results of the bivariate analysis of the correlation of employment status to public participation can be seen in Table 7.

Based on Table 7, the highest good participation was obtained from employment status was housewives which were 51.4%. The statistical results showed the  $p\text{-value}$  was 0.557. It is indicated that the  $p\text{-value} > \alpha$ , which means that the employment status variable does not have a significant relation to the respondents' participation. Based on the results of observations and interviews conducted, the housewives are often involved in greening activities both individuals and groups. Most of the group members from greening activities are housewives. they have two active groups in carrying out about implementation of greening, the names are Pos Daya KGS and Kelompok Wanita Tani (KWT). Employment status influences participation because it affects activities in the organization. Work affects the form of a person's participation because work is related to leisure time.

The results of multivariate analysis showed that the independent variable that most influenced the dependent variable was the education level variable because it had the highest OR value, which was 5.174. This means that respondents with an education level in the high category can increase their participation in the implementation of greening surrounding environment by 5.1 times higher than respondents with the education level in the low category in ProKlim KGS 2 Ilir Palembang. Meanwhile, the gender variable has OR change  $> 10\%$  with  $p\text{-value} > 0.05$  so that it is classified as a confounding variable. The result of the final model can be seen in Table 8.

#### 4. CONCLUSIONS

This study showed that the characteristics of the community are mostly aged middle adults (47.8%), mostly female (72,2%), highly educated ( $\geq$ SMA) of 88.9%, medium knowledge (51.1%), including a length of stay in the old enough category (72.2%), and has the highest employment as a housewife (41.1%). The majority of the public participation had a bad participation the implementation of greening

**Table 2.** The Correlation of Age to Public Participation

Age	Public Participation				Total N	%	<i>p- value</i>
	Good		Bad				
	n	%	n	%			
Young Adults	15	41.7	21	58.3	36	100	0.566
Middle Adults	22	51.2	21	48.8	43	100	
Old Adults	4	36.4	7	63.6	11	100	

**Table 3.** The Correlation of Gender to Public Participation

Gender	Public Participation				Total N	%	<i>p- value</i>
	Good		Bad				
	n	%	n	%			
Male	5	20	20	80	25	100	0.005
Female	36	55.4	29	45	65	100	

**Table 4.** The Correlation of Education Level to Public Participation

Education Level	Public Participation				Total N	%	<i>p- value</i>
	Good		Bad				
	n	%	n	%			
High	39	49	41	51	80	100	0.104
Low	2	20	8	80	10	100	

**Table 5.** The Correlation of Knowledge to Public Participation

Knowledge	Public Participation				Total N	%	<i>p- value</i>
	Good		Bad				
	n	%	n	%			
High	24	66.7	12	33.3	36	100	0.004
Medium	15	32.6	31	67.4	46	100	
Low	2	25	6	75	8	100	

**Table 6.** The Correlation of Length of Stay to Public Participation

Length of Stay	Public Participation				Total N	%	<i>p- value</i>
	Good		Bad				
	n	%	n	%			
Old	12	48	13	52	25	100	0.958
Old Enough	29	44.6	36	55.4	65	100	

**Table 7.** The Correlation of Employment Status to Public Participation

Employment Status	Public Participation				Total N	%	<i>p- value</i>
	Good		Bad				
	n	%	n	%			
Housewives	19	51.4	18	48.6	37	100	0.557
Self-Employed	5	41.7	7	58.3	12	100	
BUMN	0	0	2	100	2	100	
Civil Servants	2	66.7	1	33.3	3	100	
Others	15	41.7	21	58.3	36	100	

**Table 8.** Final Model

Variables	B	p-value	OR	95% CI For EXP (B)	
				Lower	Upper
Gender	-1.811	0,002	0,163	0,051	0,527
Education Level	1.644	0,064	5,174	0,909	29,442
Knowledge	1.155	0,006	3,175	1,400	7,200

in ProKlim KGS 2 Ilir (52.2%) and 47.8% of others were categorized as good participation. The variable that has a significant relation to participation is the education level variable

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