

Environmental Responsibility through the Effectiveness of Community Activities in Supporting Sustainable Development Goal Programs

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Abstract The issue of environmental pollution has a direct impact on the depletion of natural resources. Companies, as key players in development, exert influence on activities related to the exploration of natural resources. This study seeks to assess the efficacy of corporate social responsibility (CSR) initiatives in enhancing community empowerment within the realm of environmental management. This research employs a mixed-method sequential explanatory approach, incorporating qualitative data analysis using the techniques proposed by Miles and Huberman. Additionally, quantitative data analysis involves the application of single and multiple correlation tests. The findings indicate a significant correlation between the effectiveness of the Community Development (CD) program and Environmental Responsibility (ER), with a correlation coefficient of $r_{y1} = 0.755$ and an explained variance of 56.9%. The observed ER behaviors within the community include environmental protection efforts and active participation in environmental community initiatives. The quality of assistance provided by Community Development Officers (CDOs) serves as compelling evidence of the CD program's effectiveness, particularly in the context of the Green Think Ship Education Forest program. Furthermore, there is a noteworthy relationship between self-efficacy and ER, with a correlation coefficient of $r_{y2} = 0.646$ and an explained variance of $r_2 = 0.417$. This perceived self-efficacy is influenced by several factors: (1) active

community involvement as members of the Green Think Ship Education Forest program group; (2) training received; and (3) assistance received through the CD program. The effectiveness of the CD program and the level of self-efficacy among community members are interconnected and significantly impact ER behavior, with a correlation coefficient of $r_{y1.2} = 0.804$ and an explained variance of $r_2 = 0.646$. These findings are consistent with previous research, highlighting the influence of both internal and external factors on human behavior. In summary, when the CD program is more effective and is supported by a high level of community self-efficacy, it contributes positively to the promotion of responsible environmental behavior.

Keywords Responsibility Environmental Behavior, Sustainable Development Goals /Sdgs, Corporate Social Responsibility (CSR), Self-Efficacy

1. Introduction

Climate change has become one of the problems involving the participation of several parties or the world multi-stakeholder because it affects all sectors [1]. Human activities contribute significantly to the causes of climate change, such as industrialization, transport, forest fires, and

deforestation of the land [2]. Indonesia seeks to play a role in reducing the impact of climate change by committing to reduce greenhouse gas emissions [3]-[4]. At the Conference of the Parties 22nd, the United Nations Framework Convention on Climate Change demonstrated the commitment of the Indonesian government to reduce GHG emissions by 29% by 2030. The mission to achieve is to strengthen collaboration between government and stakeholders, and the key is to reduce the rate of emissions and increase resilience to the effects of climate change [5]-[6]. The government is focusing on the impacts of climate change in five sectors, namely: (1) forests and peat; (2) agriculture; (3) energy and transport; (4) industry and (5) waste.

Numerous studies have explored the implications of climate change in Indonesia, shedding light on various aspects of this multifaceted issue. Case et al. [7] delve into the impacts of climate change in Indonesia, encompassing biodiversity, ecosystem services, human health, and vulnerability. They provide a comprehensive overview of the challenges the country faces. Alisjahbana & Busch [8] focus on developments in forestry and climate change within Indonesia. Their research highlights four pivotal areas of concern for the Indonesian government: commitment to reducing greenhouse gas emissions, land use rights and regulations, forest fire prevention, and the actions of non-state actors, particularly major agribusinesses, in managing forests and peatlands. Djalante & Thomalla [9] investigate how past experiences in disaster risk reduction can inform effective climate change adaptation programs in Indonesia. Their findings emphasize the need for stronger support at the local level, aiming to address the root causes of vulnerability among at-risk communities. Djalante [10] conducts a review of natural hazards, disasters, risk reduction, and climate change in Indonesia. This study identifies a gap in research related to social risks associated with natural hazards and their impact on urban populations. It also assesses progress in research related to natural hazard risks, risk reduction, and climate change impacts, offering recommendations to better manage and reduce these risks in the future and build a resilient and sustainable Indonesia. Rahman et al. [11] explore the effects of adaptation strategies on fishers' income and household food security. Their research reveals that adaptation strategies within the fisheries sector can yield significant positive outcomes, reducing exposure to climate change-related risks.

In recent decades, the impacts of climate change and human activities have emerged as significant concerns among scientists. Chen et al. [12] conducted a study to assess the accuracy of predictions regarding the effects of climate change and human activities on biogeochemical cycles. Their findings emphasize the importance of data integration and the development of new knowledge in relation to carbon, nitrogen, and phosphorus biogeochemical cycles. Trenberth [13] highlights the substantial impact of climate change resulting from human

activities. The author underscores that human-induced climate change leads to global warming, directly influencing heavy rainfall, droughts, and storms, with substantial costs to both society and the environment. Huang et al. [14] introduce a novel index, the Global Desertification Vulnerability Index (GDVI), which combines the effects of climate change and human activities. This index provides a fresh perspective on desertification vulnerability at a global scale and offers projections for its future evolution. Delinom et al. [15] explore the factors associated with human activities contributing to environmental stresses in the subsurface environments of urban settings in Jakarta. Their research presents compelling evidence of the influence of human activities on the degradation of Jakarta's subsurface environment. Eddudóttir et al. [16] present a new reconstruction of Holocene vegetation and landscape dynamics based on a small lake, Barðalækjartjörn, which is located near the highland margin in Northwest Iceland. This study provides valuable insights into the long-term development of highland ecosystems under both natural and human-influenced conditions.

Indonesia plays a crucial role in the global effort to reduce greenhouse gas emissions, and several studies have addressed various aspects of this challenge. Pradini & Kiswara [17] conducted research on the factors influencing the extent of greenhouse gas emissions disclosure, particularly in the context of ISO 14001 certified Environmental Management Systems (EMS). They found that compliance with the Global Reporting Initiative version 3.1, the PROPER ranking, and firm size significantly influenced the extent of greenhouse gas emissions disclosure based on ISO 14064-1. Dianjaya & Epira [18] proposed a novel concept to combat global warming and climate change through economic activities in Indonesia. They identified a challenge in the implementation of top-down policies, largely due to inadequate regional monitoring. They advocate for an integrated system to respond swiftly to unexpected issues, such as forest fires, which could hinder Indonesia's transition into a Green Economy. Malahayati & Masui [19] assessed the potential impact of mitigation efforts in the Land Use Change and Forestry (LUCF) sector on both the economy and the environment. Using a computable general equilibrium model, they found that intensification alone resulted in less GDP loss but did not significantly reduce deforestation and emissions from LUCF. Farmers continued to cultivate land as usual, and land expansion for commercial plantations, especially palm oil, persisted. Iswara et al. [20] investigated the influence of oil and gas production and energy usage on greenhouse gas emissions. Their study utilized data from 25 upstream fields, including both offshore and onshore fields, collected from 2015 to 2018. They discovered that maintaining a constant level of energy usage led to increased oil and gas production while simultaneously reducing greenhouse gas emissions.

In the realm of Corporate Social Responsibility (CSR),

two main approaches are commonly recognized: mandatory and voluntary [21]-[22]. However, in practical terms, both approaches have sometimes led to a negative perception, where CSR is seen merely as a strategy employed to enhance a company's "positive image" or credibility in the eyes of the public [23]. Companies that have received a green ranking, as seen in Newsweek's 2012 rankings, tend to be more active in sustainability reporting initiatives. This holds true for various stakeholders, including relevant agencies and the media, as compared to companies that did not attain a green rating or did not participate in the assessment process at all [24]. To ensure a holistic approach to sustainability, companies are now mandated to incorporate the concept of sustainable development into their management systems. This transformation results in a three-dimensional sustainable management system, addressing ecological, economic, and social aspects [25]. It is noteworthy that the extent to which CSR principles are applied within a company can influence the level of community participation in CSR programs. However, it is essential to recognize that this level of application does not necessarily correlate with the income level or diversity of livelihoods among program participants, which are key indicators used to measure the success of CSR programs [26]-[28]. This is due to the low participation of the population, which is indicated by (1) the political bias of the actors of the upper elite, (2) the mindset of people who depend on CSR funds, (3) community involvement at all stages of CSR implementation. This means that CSR programs have no impact on changes in people's income sources [29]-[31].

Based on the main issue in above problem, the main objective of this research is to determine the relationship between the effectiveness of community development programs and self-efficacy with environmentally

responsible behaviour. In addition, analyse the strength of the relationship and environmental responsibility behaviour.

2. Methodology

This research was conducted in Cilamayagirang Sub-District, Blanakan Sub-District, Subang Regency, specifically on the green think Kehati Ship Forest program. The study time began from June to October 2019. The research plan uses a sequential explanatory mixed-method (Quantitative-Qualitative), which is a combination of quantitative and qualitative research methods to obtain complete research data, which are valid, reliable, and objective. In this work, the dependent variable is environmentally responsible behavior and the independent variable is the effectiveness of community development programs and self-efficacy.

The research hypothesis proves the correlation between the effectiveness of community development programs and self-efficacy with environmentally responsible behavior. Data were analyzed by mix method. Quantitative method is used to see the correlation between the effectiveness of community development programs and self-efficacy with environmentally responsible behavior. Qualitative method is used to analyze factors causing high and low environmental responsibility behavior more deeply when viewed from the variable effectiveness of community development programs and self-efficacy. In addition, it is also a qualitative method for analyzing other factors besides the two variables that can influence the environmental responsibility behavior variable. The research design is described in Figure 1.

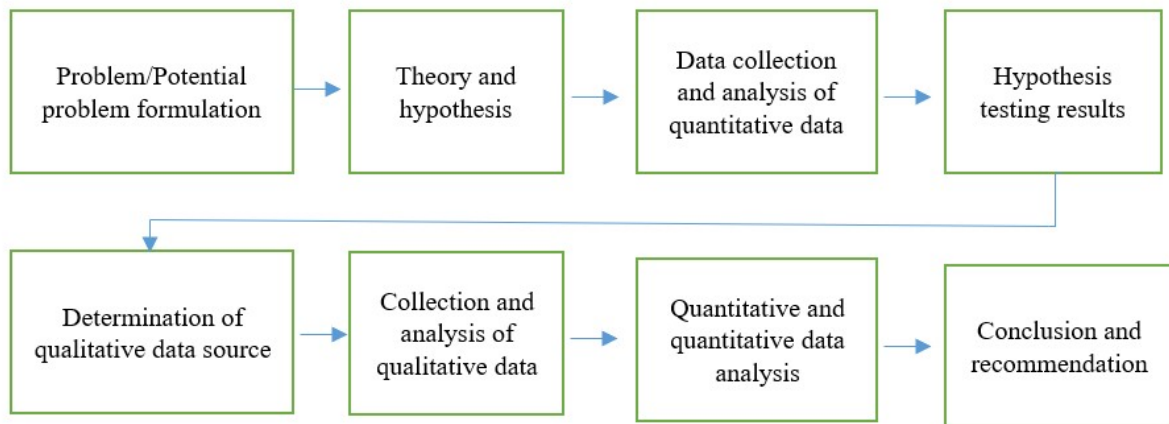


Figure 1. Research Steps in Sequential Explanatory Design

In this study, a non-test instrument in the form of a questionnaire was employed. This questionnaire utilized a Likert scale, which is a commonly used measurement tool for assessing individuals' attitudes, opinions, and perceptions related to a specific phenomenon. The Likert scale typically comprises a series of statements, which can be both positive and negative in nature. Respondents are asked to indicate the extent to which they agree or disagree with each statement, typically using a range of response options, such as "strongly disagree," "disagree," "neutral," "agree," and "strongly agree." This scale allows researchers to quantitatively assess and analyze respondents' subjective responses and gather valuable data for their research or study.

The initial study of this research is to test the validity and reliability of the data. Validity is a testing technique to measure the precision and accuracy of a measuring instrument in carrying out its measuring function. In this work, we have proposed external validity by comparing the criteria in the instrument with the empirical facts in the field. Meanwhile, reliability is the skill level of the measurement results. If it is used several times, it will give relatively the same and consistent results.

2.1. Environmentally Responsible Behavior Instrument

a. Conceptual Definition

Environmentally responsible behavior is an individual action that seeks to maintain and protect the environment and the places visited in order to contribute to environmental conservation in a sustainable manner. Environmentally responsible behavior is shown by indicators: protecting the environment (waste recycling, consumption of environmentally friendly energy, green consumerism, use of environmentally friendly transportation), involvement in the environmental community, and educating others about the environment.

b. Operational Definition

Environmentally responsible behavior is the result of a scale score of answers to questions/statements in an instrument designed in a rating scale with five choices based on the weight of the answers. For positive statements, the scale and answer scores are Always (SL) = 5, Often (SR) = 4, Sometimes (KD) = 3, Rarely (JR) = 2, and Never (TP) = 1. As for Negative statements are Always (SL) = 1, Often (SR) = 4, Sometimes (R) = 3, Rarely (JR) = 4, and Never (TP) = TP.

c. Preparation of Environmental Responsibility Behavior Instruments

The statements based on indicators on the environmental responsibility behavior variable are shown in the following in the Table 1.

Table 1. The environmentally responsible behavior instrument

No	Indicator	Statement		Total
		Positive	Negative	
1	Protecting the environment	1, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 16	2, 9, 15	16
2	Involvement in the environmental community	17, 18, 19, 20, 21, 22, 23, 24, 25	0	9
3	Educating others about the environment	28, 29, 30, 31, 32, 33, 32, 35	26, 27	

d. Instrument Calibration

The validity was carried out by instrument item test using the Pearson product moment correlation technique. The requirements for the validity of the instrument items are $r_{xy} > r_{table}$. Meanwhile, the reliability of the instrument uses the Cronbach Alpha analysis technique.

The validity test process carried out resulted in 35 valid questions out of 40 questions. The invalid question items were question items number 9, 11, 12, 19, and 21. The valid questions were then tested for reliability using the Spearman Brown split technique (Split Half) with an instrument reliability of 0.995. An instrument is declared reliable if the reliability coefficient is greater than 0.6. Research on research respondents will use a research questionnaire with a new numbering that has adjusted to 35 valid and reliable question items.

2.2. Community Development Program Effectiveness Instrument

a. Conceptual Definition

Community Development (CD) is the compatibility between planning and implementation of the CD program as indicated by the achievement of the CD program outcomes. The effectiveness of the CD program is measured by looking at: the quality of community development program assistance by the CDO and the achievement of the CD program outcomes according to PROPER, in the form of: social and environmental innovation, CD program beneficiaries, program impacts in the social, economic, and environmental fields, and program sustainability.

b. Operational Definition

The effectiveness of the CD program is measured by looking at: the quality of community development program assistance by the CDO and the achievement of the CD program outcomes according to PROPER, in the form of: (1) social and environmental innovation, (2) CD program beneficiaries, (3) the impact of the program in the social sector, economy, and environment, and (4) program sustainability. Measuring the effectiveness of the CD

program will use a questionnaire instrument with a rating scale with five choices based on weighted answers.

c. Community Development Program Effectiveness Instrument

Table 2 displays the statements that have been assembled using indicators related to the effectiveness of community development programs.

d. Instrument Calibration

The evaluation procedure conducted led to the identification of 35 out of 40 questions as valid. The questions found to be invalid were numbered 2, 7, 18, 19, and 20. Subsequently, the reliability of the valid questions was assessed using the Spearman Brown split technique (Split Half), resulting in an instrument reliability score of 0.995. An instrument is considered reliable when the reliability coefficient exceeds 0.6. For future research involving respondents, a modified questionnaire with 35 valid and reliable questions will be utilized, featuring a new numbering system.

2.3. Instruments of Self-Efficacy

a. Conceptual Definition

Self-efficacy is a person's self-confidence to be able to achieve the goals that have been set by believing that he has the ability, capacity and experience that can help in facing challenges and pressure from outside.

b. Operational Definition

Indicators in determining personnel self-efficacy are (1) environmental values, (2) ability/capacity of personnel related to the environment, and (3) challenges or pressure from the environment. Self-efficacy results from a scale score of answers to questions/statements in an instrument designed on a Likert scale with five choices based on weighted answers.

c. Lattice Preparation of Self-Efficacy Instruments

The distribution of the questions that were arranged based on the indicators of the self-efficacy variable is presented in Table 3.

Table 2. The environmentally responsible behavior instrument

No	Dimensions	Indicators	Statements		Total
			Positive	Negative	
1	Quality of community development assistance program	Existence of a program assistant	1, 2, 3,	0	3
		Assistance frequency	12, 13, 14	0	3
		Assistance activities	4, 5, 6, 7, 8, 9, 19	0	7
		Companion attitude	15, 16	0	2
		Program follow-up	17, 18, 19, 20	0	3
2	Achievement of community development program outcomes	Program innovation	21, 22, 23	0	3
		Program beneficiaries	27, 28	0	2
		Social, economic, and environmental impacts	24, 25, 26	0	3
		program sustainability	29, 30, 31, 32, 33, 34, 35	0	7

Table 3. The environmentally responsible behavior instrument

No	Indicators	Statements		Totals
		Positive	Negative	
1	Have self-confidence or environmental values that are owned	3, 4, 5, 6, 7	1, 2	7
2	Have a background of experience, education, and other resources capable of achieving goals (capacity of personnel).	8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 25, 26, 27, 28, 29, 30	18, 24	23
3	Can handle environmental challenges or pressures.	31, 32, 33, 34, 35	0	5

d. Instrument Calibration

Instrument calibration was carried out in communities outside the research sample but still within the scope of the research population with validity and reliability tests. Validity is the validity of the measuring instrument so that it can measure what you want to measure. There are four types of validity, namely visual validity, content validity, criterion validity, and construct validity. Based on the four types of validity, construct validity is the broadest in scope compared to the others. The criteria used in testing use the product moment.

The testing technique to be used is Bivariate Pearson (Pearson Moment Product). This analysis is done by correlating each item's score with the total score. The requirements for the validity of the instrument items are $r_{xy} > r_{table}$ with a significance level of 0.05. Meanwhile, the reliability of the instrument uses the Cronbach Alpha analysis technique. The invalid question items were question items 1, 2, 4, 7, and 8.

2.4. Data Analysis Techniques and Hypothesis Testing

Quantitative data analysis will begin with conducting a pre-requisite test, namely the normality test and homogeneity test. The normality test aims to assess whether the distribution of data on a variable is normally distributed, while the homogeneity test aims to test whether the population data used comes from a homogeneous population or not. The normality test can use two techniques, namely opportunity paper and chi square. The data is transformed into a Z value so that the normal curve area can be calculated as a normal cumulative probability. The difference between the normal cumulative probability and the empirical cumulative probability will be sought and then compared with the Liliefors Table. Meanwhile, the homogeneity test will use the variance homogeneity type method.

The hypothesis in this quantitative test will be analyzed using Pearson correlation analysis. The coefficient index number (Coefficient Correlation) describes the grouping of correlation results, namely high, medium, and low. The magnitude of the correlation number ranges from 0 – 1, which means that the highest correlation number is 1 and 0 is the lowest number.

Quantitative data analysis will test the hypothesis of each of the following variables:

- a. Hypothesis 1: there is a positive relationship between the effectiveness of the LCD program and the community's environmentally responsible behavior.

$$H_0: \rho_{y_1} \leq 0$$

$$H_1: \rho_{y_1} > 0$$

- b. Hypothesis 2: there is a positive relationship between the self-efficacy of the community receiving the CD program and the community's environmentally responsible behavior.

$$H_0: \rho_{y_2} \leq 0$$

$$H_1: \rho_{y_2} > 0$$

- c. Hypothesis 3: there is a positive relationship between CD Program Effectiveness and Self-Efficacy with the community's environmentally responsible behavior.

$$H_0: \rho_{y_{1,2}} \leq 0$$

$$H_1: \rho_{y_{1,2}} > 0$$

Description

- ρ_{y_1} is correlation coefficient between CD program effectiveness (X_1) and environmental responsibility behavior.
- ρ_{y_2} is correlation coefficient between self-efficacy (X_2) and environmental responsibility behavior (Y).
- $\rho_{y_{1,2}}$ is correlation coefficient between CD program effectiveness (X_1) and self-efficacy (X_2) with environmentally responsible behavior (Y).
- H_0 is no relationship between variable X and variable Y .
- H_1 is a positive relationship between variable X and variable Y .

3. Results and Discussion

3.1. Description of Research Results

The description of the research data aims to provide an overview of the distribution of data in the form of central symptom size, location, and frequency distribution. The description of the results of this study is grouped into three sections, namely Environmentally Responsible Behavior (Y), Effectiveness of Community Development Programs (X_1), and Self-Efficacy (X_2). The processed data is the result of quantification of questionnaires to 196 respondents and in-depth interview guides to informants of 16 stakeholders.

Respondents in this study were the people of Muara Lama and Muara Baru Hamlets, Cilamayagirang Village, Blanakan District, and Subang. The communities in the two hamlets are the CSR-assisted communities of PT PHE ONWJ, especially the Kehati Greenthink Ship Forest (HKKG) program. Questionnaire data distributed to respondents was also supported by information from in-depth interviews with informants, namely the Head of Cilamaya Village, Girang (1 person), Head of the HKKG Farmer Group (1 person), Head of the Women's Business Group (1 person), members of the male farmer group men (8 people), and female business group members (5 people), so that the total number of informants interviewed was 16 people.

3.2. Environmentally Responsible Behavior (Y)

The results of the calculation of the questionnaire on the environmental responsibility behavior questionnaire obtained the lowest score of 72 and the highest score of 152 with a score range of 9 out of 35 valid questions. The total

theoretical score of the environmental responsibility behavior variable is a minimum of 35 and a maximum of 175. Score distribution is the first step taken to determine the value of: (1) average (mean) = 110.59; (2) standard deviation = 14.3082; (3) median = 110; and (4) mode = 98. The distribution of environmental responsibility behavior scores can be seen in Table 4.

Table 4. Frequency distribution of environmentally responsible behavior (Y)

No	Interval	Absolute frequency	Relative frequency (%)
1	72 - 80	1	0.51
2	81 - 89	7	3.57
3	90 - 98	43	21.94
4	99 - 107	35	17.86
5	108 - 116	40	20.41
6	117 - 125	46	23.47
7	126 - 134	16	8.16
8	135 - 143	4	2.04
9	144 - 152	4	2.04
Total		196	100

Table 4 shows that the data that has the greatest frequency is in the 117-125 interval with an absolute frequency of 46 and a relative frequency of 23.47%. The data with the smallest frequency is in the 72-80 interval with an absolute frequency of 1 and a relative frequency of 0.51%.

Quantitative data that has been obtained is supported by qualitative data through interviews, FGD, observation, and documentation stages. The results of the acquisition of this qualitative data answer the focus of the first qualitative research, namely: Does the data on environmentally responsible behavior (Y) obtained through quantitative research have the same tendency as the data on environmentally responsible behavior (Y) obtained through qualitative research, and the responsible behavior of what kind of environmental responsibility exists in the cilamayagirang village community.

The quantitative research results show that environmental responsibility behavior (Y) with the greatest frequency is in the interval 117-125 and the maximum value of the frequency distribution of this variable is 152 out of 175. This shows that as much as 23.47% of the population in Muara Lama and Muara Hamlets Just have environmental responsibility behavior, even though it has not been carried out significantly. The results of the qualitative research show that in the daily life of the population, the environmentally responsible behavior carried out by the community is as follows.

- 1) protecting the environment by recycling waste including: sorting plastic waste (plastic bottles, drinking water cups, oil bags, used kitchen items) to

be sold to middlemen, and collecting plastic waste found on the street or in the surrounding environment for sale

- 2) being involved in the environmental community, namely the Garbage Bank activity - the HKKG Program carried out by PHE ONWJ, namely with community service activities in 2018. However, the community was only involved as activity participants.

For indicators of educating other people, residents have not been able to educate others because in general villagers do not want or choose not to teach others about environmental responsibility. In the questionnaire research instrument, questions about education are represented by questions about residents' motivation to invite neighbors to socialize and participate in environmental responsibility activities. The results of quantitative and qualitative research indicate that the community lacks the motivation to involve others in environmental responsibility activities. They also carry out their involvement in environmental activities if they are only invited by the program facilitator or CDO. Unfortunately, the CDOs were only active in the 2017 period, namely W and H.

3.3. Community Development Program Effectiveness (X₁)

The analysis of the questionnaire assessing the effectiveness of community development programs yielded a range of scores, with the lowest at 65 and the highest at 134, spanning 7 points across 35 questions. The theoretical scores for the community development program's effectiveness variable can range from a minimum of 35 to a maximum of 175. To explore the distribution of scores, several statistical measures were computed: (1) the average (mean) was found to be 94.04; (2) the standard deviation was calculated as 13.8445; (3) the median score was 90; and (4) the mode was determined to be 88. Table 5 provides an overview of the distribution of scores for the effectiveness of community development programs.

Table 5. Frequency distribution of CD program effectiveness (X_i)

No	Interval	Absolute frequency	Relative frequency (%)
1	65 - 71	4	2.04
2	72 - 78	10	5.10
3	79 - 85	43	21.94
4	86 - 92	51	26.02
5	93 - 99	35	17.86
6	100 - 106	15	7.65
7	107 - 113	13	6.63
8	114 - 120	13	6.63
9	121 - 127	11	5.61
10	128 - 134	1	0.51
Total		196	100

The results of the acquisition of this qualitative data answer the focus of the first qualitative research, namely: Does the data on the effectiveness of the CD program (X_1) obtained through quantitative research have the same tendency as the data on the effectiveness of the CD program (X_1) obtained through qualitative research.

The quantitative research findings reveal that within the effectiveness of the CD program (X_1), the most commonly occurring range is 86-92, with an absolute frequency of 51 and a relative frequency of 26.02%. Conversely, the least frequent data falls within the 128-134 interval, represented by an absolute frequency of 1 and a relative frequency of 0.51%. The highest frequency observed in the distribution of this variable is 134 out of a total of 175.

The results of the quantitative research showed that as many as 26.02% of the population in Muara Lama and Muara Baru Hamlets felt that the practice of community development programs through the HKKG program was quite effective, although there still needed improvements in both the dimensions of the quality of assistance and program achievements. This was reinforced by the results of qualitative research which showed that on the dimensions of the quality of assistance, there were differences in community views regarding the quality of assistance by CDOs in the 2017-2018 period with 2018-2019 assistance.

- The quality of the CDO in the 2017-2018 period is considered to be better because: (1) the companion is located and resides in the HKKG program environment, to be precise in Muara Baru Hamlet, so that information about the HKKG program can easily be obtained by the community from the CDO (the whereabouts of the companion); (2) the two CDOs carried out more intense mentoring activities even though the coverage of the population involved was not wide (facilitation frequency); (3) more and varied mentoring activities, such as forming women's business groups, developing waste bank activities, and informal discussions to discuss program development (accompanying activities); (4) the attitude of the CDO is seen as more friendly, simple, and able to enter all groups of people because the CDO goes around and meets the community every day (the attitude of a companion); (5) assistants are able to ensure or at least provide responses related to program improvements based on problems in the field, not only monitoring program implementation but can also provide feedback on problems faced by groups and communities (program follow-up).
- Unlike the CDOs for the 2017-2018 period, the CDOs for the 2018-2019 period were considered less active by the community, especially for the HKKG group itself. This happened because: (1) the facilitators did not live in the Muara Lama or Muara Baru hamlets, even though previously the CDO had been placed in the same house as the previous CDO but then moved for certain reasons and this affected the frequency of

assistance by the CDO (accompanied presence); (2) the frequency of assistance to the HKKG and KUW groups is intense per month, but the CDO is considered to be less able to encourage member participation as seen by the frequency of attendance of members at monthly meetings (facilitation frequency); (3) assistance activities are carried out by the CDO only for activities in the HKKG and KUW groups, while for activities in the community there are none (accompanying activities); (4) some group members felt that the attitude of the CDO was less active and less innovative, especially since there was a conflict of interest within the HKKG group. Meanwhile, in the eyes of the community, not a single community recognized the new CDO. This means that there are problems with the existence and frequency of assistance by the CDO in this case (attitude of companion); and (5) the facilitators were deemed unable to resolve internal problems or conflicts that occurred in the HKKG group even though this had been discussed from the group level to the village government (program follow-up).

Meanwhile, in the dimensions of achieving the CD program outcomes with indicators of program innovation, beneficiaries, 3P impacts, and program sustainability, the community agrees that the results of the CD program implemented by PHE ONWJ have been seen and felt. Outcomes that are considered to have an impact are indicators of beneficiaries, 3P impacts (economic, social and environmental), and program sustainability. On the beneficiary indicator, the community felt that the number of visitors to the HKKG location from local people and from outside had increased since 2017, especially after a visit from the Subang Regent in 2019. On the program's economic, social and environmental impact indicators, the community has felt an environmental impact in the form of a denser area of the HKKG location since there were activities from PHE ONWJ compared to when the location was only idle land around 2012. In addition, the community has also felt an economic impact, namely the existence of sellers selling in areas outside of HKKG since the bustling tourists who arrived in 2017. Meanwhile, the cohesiveness of group members and the community as a social impact of the HKKG program is felt to have not produced a significant impact, but it has even created a conflict of interest within the HKKG group which has created social jealousy in the community.

3.4. Self-Efficacy (X_2)

The results of the self-efficacy questionnaire computation revealed a range of scores, with the lowest at 68 and the highest at 162, covering a span of 10 points across 35 questions. The minimum and maximum theoretical scores for the self-efficacy variable are 35 and 175, respectively. To analyze the distribution of scores,

several statistical measures were computed: (1) the average (mean) was determined to be 107.63; (2) the standard deviation was calculated as 18.2126; (3) the median score was found to be 110; and (4) the mode was identified as 88. The distribution of self-efficacy scores is presented in Table 6.

Table 6. Frequency distribution of self-efficacy (X_2)

No	Interval	Absolute frequency	Relative frequency (%)
1	68 - 77	6	3.06
2	78 - 87	24	12.24
3	88 - 97	32	16.33
4	98 - 107	21	10.71
5	108 - 117	61	31.12
6	118 - 127	25	12.76
7	128 - 137	13	6.63
8	138 - 147	10	5.10
9	148 - 157	3	1.53
10	158 - 167	1	0,51
Total		196	100

The results of the quantitative study showed that self-efficacy (X_2) with the greatest frequency was in the 86-92 interval with an absolute frequency of 61 and a relative frequency of 31.12%. The data with the smallest frequency is in the interval 158-167 which is equal to 1 for the absolute frequency and relative frequency of 0.51%. The results of the quantitative research indicated that as many as 31.12% of the population in Muara Lama and Muara Baru Hamlets already had self-efficacy that was able to encourage their participation in environmental groups or communities formed by PHE ONWJ.

The results of the qualitative research show that the self-efficacy that is significantly shown by the people in the two hamlets is as follows.

- 1) Self-confidence or environmental values: the community has self-confidence that the use of natural resources can be done sufficiently according to the needs of the community and planting trees is considered to improve environmental quality. However, for the waste problem, most people burn garbage in holes specially made for burning waste. The holes are placed in the backyard of the house and burned every morning or evening to reduce the pile of garbage. This happened because residents in Muara Lama and Muara Baru Hamlets did not have Temporary Garbage Disposal Sites (TPS) so they chose to burn garbage, rather than throwing it into the river. Even though most of the waste has been burned, there are still those who throw garbage in the river because they think that by throwing garbage in the

river, the waste will be carried away by the currents and lost into the ocean.

- 2) The capacity of personnel related to the environment: the knowledge of residents about the importance of protecting the environment was obtained from an environmental campaign carried out by PHE ONWJ through environmental education (PLH) held by the company at SDN Cilamayagirang. Parents of students can understand the importance of protecting the environment because they are also present in these activities. The exchange of information occurred when the parents met and discussed their children's activities while at school. Capacity building through outreach and training organized by the district government has never been received by the community. Meanwhile, only a small portion of the population has been able to complete their education up to senior high school, which has affected the capacity of personnel related to the environment.

As for indicators of the ability to handle environmental pressures, the results of the qualitative research found that the community believed they were only able to deal with environmental problems at the household level. This is evidenced by the community's unwillingness to remind or invite other parties to jointly prevent environmental damage, for example not to throw garbage into the river, turn off the water if it is used excessively, and so on. The impact of this problem has already been felt by the community itself, namely the floods which resulted in waterlogged houses and rice fields, as well as rotting garbage and stagnant waste during the dry season.

3.5. Standard Error Normality Test

a. Standard Error Normality Test for CD Program Effectiveness Data Estimation (X_1) on Environmental Responsibility Behavior (Y)

The normality test was carried out at the standard error of the regression estimate between the effectiveness of the CD program (X_1) and environmental responsibility behavior (Y). The standard error is symbolized by $Y - \hat{Y}_1$, where the regression equation is $\hat{Y}_1 = 37.242 + 0.7799x$. The calculated value (L_{0max}) is 0.0504; while the table value (L_t) is 0.0637 (See Table 7). This shows that $L_{0max} < L_t$, which means that the accepted hypothesis is H_1 . Thus, the distribution of empirical data when compared with theoretical values produces an estimated standard error distribution ($Y - \hat{Y}_1$) following the normal distribution. The conclusion is that the error in estimating environmental responsibility behavior (Y) data on the effectiveness of the CD program (X_1) comes from a normally distributed population.

Table 7. Standard error normality test of data estimate (Y) to (X₁)

Error	L _{0max}	L _t	Conclusion
Variable Y-Ŷ ₁	0.0504	0.0637	Normally distributed
Normal terms	L _{0max} < L _t		

b. Standard Error Normality Test for Environmental Responsibility Behavior (Y) Data Estimation on Self-Efficacy (X₂)

A normality test was conducted for the standard error of the regression estimate that relates self-efficacy (X₂) to environmental responsibility behavior (Y). The standard error is symbolized by Y-Ŷ₁, where the regression equation is Ŷ₁ = 55.999 + 0.5072x. The calculated value (L_{0max}) is 0.0478; while the table value (L_t) is 0.0637. This shows that L_{0max} < L_t, which means that the accepted hypothesis is H₁. Consequently, when the empirical data distribution is compared to theoretical values, it results in an estimated standard error distribution (Y-Ŷ₁) that adheres to a normal distribution. This suggests that the errors in estimating environmental responsibility behavior (Y) based on self-efficacy (X₂) originate from a population that follows a normal distribution (refer to Table 8).

Table 8. Normality test of standard error of data estimation (Y) on self-efficacy (X₂)

Error	L _{0max}	L _t	Conclusion
Variable Y-Ŷ ₂	0.0478	0.0637	Normally distributed
Normal terms	L _{0max} < L _t		

The two results of the standard error normality test show that in terms of the normality of the standard error estimates, the conditions needed to use Pearson's Product Moment correlation are met.

3.6. Homogeneity Test

Homogeneity testing was carried out to determine if the sample variant was homogeneous or not. Homogeneity calculations were carried out using the Bartlet test as shown in the appendix. For the homogeneity test for the dependent variable (Y) data grouped based on the independent variable X₁, the calculation results show that the calculated value (χ²_{count}) for the first test (values grouped based on the X₁ value) is 111.76. While the value of χ²_{table} at the level of confidence α = 0.05 and dk = 195 is 374.43. Because χ²_{count} < χ²_{table}, the accepted hypothesis is H₀. Thus, it can be concluded that the distribution of the dependent variable (Y) data which is grouped based on the value of the independent variable X₁ comes from a homogeneous population.

The second homogeneity test, namely the homogeneity test of the distribution of the dependent variable (Y) data grouped based on the independent variable X₂ also shows the same results. Based on the results of the analysis, it was

obtained that the calculated X₂ value was 64.63 and the χ²_{table} value at the confidence level α = 0.05 and dk = 335 was 374.43. Because χ²_{count} < χ²_{table}, the accepted hypothesis is H₀. Thus, it can be concluded that the distribution of data on the dependent variable (Y) which is grouped based on the value of the independent variable X₂ comes from a homogeneous population. The Homogeneity test (Y) against (X₁) and (X₂) can be seen in Table 9.

The results of the normality and homogeneity tests show that the requirements for carrying out the Product Moment Pearson correlation test analysis are fulfilled.

Table 9. Homogeneity test (Y) against (X₁) and (X₂)

Error	χ ² _{count}	χ ² _{table}	Conclusion
Variable Y over X ₁	111.76	374.42	Homogeneous
Variable Y over X ₂	64.63	374.42	Homogeneous
Homogeneity Terms	χ ² _{count} < χ ² _{table}		

3.7. Hypothesis Test

a. Relationship between CD Program Effectiveness (X₁) and Environmentally Responsible Behavior (Y)

Based on the results of statistical analysis using SPSS, for the regression between the CD program effectiveness variable (X₁) and environmental responsibility behavior (Y), a regression equation is obtained that satisfies the equation Ŷ₁ = 37.242 + 0.780X₁. For statistical decision making, if the correlation coefficient > r_{table}, this indicates that there is a significant relationship between X₁ and Y so that H₁ can be accepted. Conversely, if the correlation coefficient < r_{table}, this indicates that there is no significant relationship between the two variables so that H₀ is accepted. Table 10 shows the coefficient value for the regression equation X₁ to Y.

The basis for decision making in the decision in the linearity test can be done in two ways, namely:

- a) If the calculated F_{count} < F_{table}, this shows that there is a significant linear relationship between the independent variable and the dependent variable. Conversely, if F_{count} > F_{table}, then there is no significant linear relationship between the independent variables and the dependent variable.
- b) If the value of deviation from linearity sig. > 0.05, then there is a significant linear relationship between the independent variable and the dependent variable. Conversely, if the deviation from linearity sig. < 0.05, then there is no significant linear relationship between the independent variable and the dependent variable.

Based on Table 11, the deviation from linearity sig value was obtained, which is 0.344, greater than 0.05. So, it can be concluded that there is a significant linear relationship between the CD Program Effectiveness variable (X₁) and the environmental responsibility behavior variable (Y). By determining the significant level of 0.05 (5%) and the

degree of freedom (df) for $df_1 = 1$ and $df_2 = 194$, the F table value is 3.89. Because the calculated $F_{count} = 1.090 < F_{table}$ (0.05) = 3.89, then H_0 is rejected and H_1 is accepted. Thus, the CD program effectiveness variable (X_1) with significance contributes to the environmental responsibility behavior variable.

Figure 2 is a scatter diagram showing the relationship between the effectiveness of the CD program (X_1) and environmental responsibility behavior. The data plot points form a straight line from the bottom left to the top right. This shows that there is a linear and positive relationship between the CD program effectiveness variable (X_1) and

the environmental responsibility behavior variable (Y). This means that with every increase in the CD program effectiveness variable (X_1), there will be an increase in environmental responsibility behavior.

A simple correlation test with the product moment correlation test produces a r_{y1} value of 0.755 with a r_{table} of 0.1409 and a coefficient of determination (r^2) of 0.569. The coefficient of determination shows that the effect of the independent variable (X_1) on the dependent variable (Y) is 56.9%. The test significance and linearity of the variable regression (X_1) with the variable (Y) can be seen in Table 12.

Table 10. Coefficient value for the regression equation X_1 to Y

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	37.242	4.627		8.048	.000
X_1	.780	.049	.755	16.020	.000
a. Dependent Variable: Y					

Table 11. Test the significance and linearity of the variable regression (X_1) with the variable (Y)

			Sum of Squares	df	Mean Square	F	Sig.
$Y * X_1$	Between Groups	(Combined)	26990.188	46	586.743	6.761	.000
		Linearity	22735.118	1	22735.118	261.963	.000
		Deviation from Linearity	4255.070	45	94.557	1.090	.344
	Within Groups		12931.338	149	86.788		
	Total		39921.526	195			

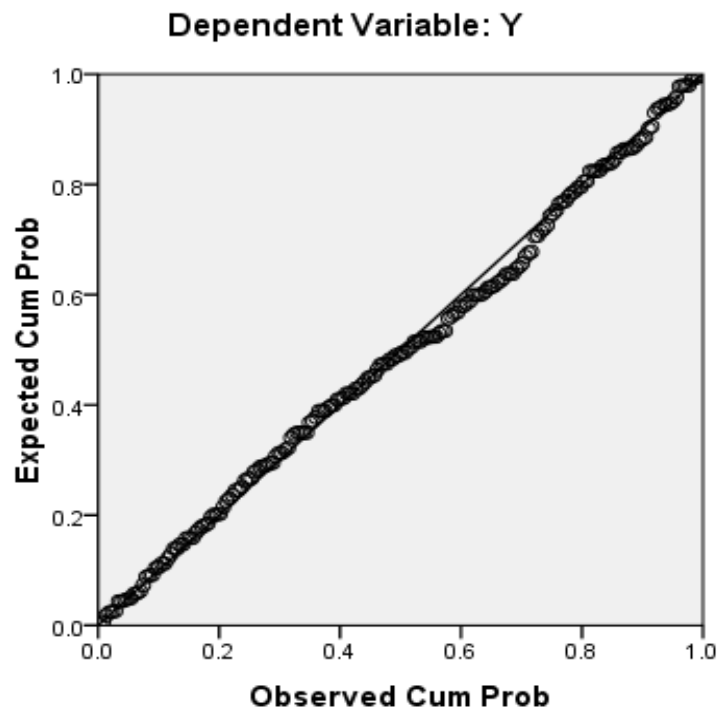


Figure 2. Scatter diagram of the relationship between X_1 and Y

Table 12. Test the significance and linearity of the variable regression (X_1) with the variable (Y)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.755 ^a	.569	.567	9.412

In this case the value of r_{y1} is greater than r table so that it is stated that there is a relationship between the two variables and has a positive strength. Thus, it can be concluded that H_0 is rejected and H_1 is accepted, so there is a positive relationship between the CD program effectiveness variable (X_1) and environmental responsibility behavior (Y) with a moderate level of relationship. The regression equation $\hat{Y}_1 = 37.242 + 0.780X_1$ shows the regression equation between the effectiveness of the CD program (X_1) and environmental responsibility behavior (Y) which is linear and very significant, namely it is predicted that for each increase in the effectiveness of the CD program (X_1) one unit will be followed by an increase in environmental responsibility behavior of 0.780 units at a constant price.

b. Relationship between Self-Efficacy (X_2) and Environmentally Responsible Behavior (Y)

Based on the results of statistical analysis using SPSS, for the regression between self-efficacy variables (X_2) and environmental responsibility behavior (Y), a regression equation is obtained that satisfies the equation $\hat{Y}_2 = 55.999 + 0.507X_2$. For statistical decision making, if the correlation coefficient $> r_{table}$, this indicates that there is a significant relationship between X_1 and Y so that H_1 can be accepted. Conversely, if the correlation coefficient is $< r_{table}$, this indicates that there is no significant relationship between the two variables so that H_0 is accepted. The coefficient value for the regression equation X_2 to Y can be seen in Table 13.

The basis for decision making in the linearity test can be done in two ways, namely:

- a) If the calculated $F_{count} < F_{table}$, this shows that there is a significant linear relationship between the independent variable and the dependent variable. Conversely, if $F_{count} > F_{table}$, then there is no significant linear relationship between the independent variables and the dependent variable.
- b) If the value of deviation from linearity sig. > 0.05 , then there is a significant linear relationship between the independent variable and the dependent variable. Otherwise, if the deviation from linearity sig. < 0.05 , then there is no significant linear relationship between the independent variable and the dependent variable.

Based on Table 14, the deviation from linearity sig value was obtained, which is 0.39 greater than 0.05. So, it can be concluded that there is a significant linear relationship between self-efficacy variable (X_2) and environmental responsibility behavior variable (Y). By determining the significant level of 0.05 (5%) and the degree of freedom (df)

for $df_1 = 1$ and $df_2 = 134$, the F_{table} value is 3.91. The calculated F_{count} is 1.454. Because the calculated $F_{count} = 1.454 < F_{table} (0.05) = 3.91$, then H_0 is rejected and H_1 is accepted. Thus, the self-efficacy variable (X_2) with significance contributes to the environmental responsibility behavior variable.

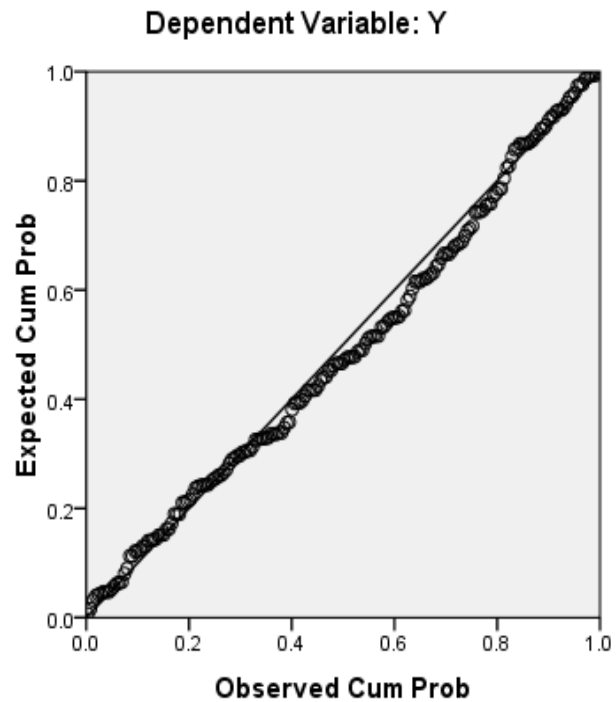


Figure 3. Scatter diagram of the relationship of X_2 to Y

Figure 3 is a scatter diagram showing the relationship between self-efficacy (X_2) and environmental responsibility behavior (Y). In addition, the data plot points form a straight line from the bottom left to the top right. This shows that there is a linear and positive relationship between the self-efficacy variable (X_2) and the environmental responsibility behavior variable (Y). This means that with every increase in the CD program effectiveness variable (X_1), there will be an increase in environmental responsibility behavior.

Table 13. Coefficient value for the regression equation X_2 to Y

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	55.999	4.702		11.910	.000
	X_2	.507	.043	.646	11.774	.000

Table 14. Test the significance and linearity of the variable regression (X_2) with the variable (Y)

			Sum of Squares	df	Mean Square	F	Sig.
$Y * X_2$	Between Groups	(Combined)	25819.429	61	423.269	4.022	.000
		Linearity	16637.178	1	16637.178	158.089	.000
		Deviation from Linearity	9182.251	60	153.038	1.454	.039
	Within Groups		14102.097	134	105.240		
	Total		39921.526	195			

Table 15. Testing the correlation of data (X_2) to (Y)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.646 ^a	.417	.414	10.955	1.573

Based on Table 15, a simple correlation test with the product moment correlation test produces a r_{y2} value of 0.646 with a r_{table} of 0.1409 and a coefficient of determination (r_2) of 0.417. The coefficient of determination shows that the effect of the independent variable (X_2) on the dependent variable (Y) is 41.7%, while the rest is influenced by other variables. In this case the value of r_{y2} is greater than r_{table} so that it is stated that there is a relationship between the two variables and has a positive strength. Thus, it can be concluded that H_0 is rejected and H_1 is accepted, so there is a positive relationship between the variable self-efficacy (X_2) and environmental responsibility behavior (Y) with a moderate level of relationship. The regression equation is $\hat{Y}_2 = 55.999 + 0.507X_2$. The regression equation between self-efficacy (X_2) and environmental responsibility behavior (Y) is linear and very significant, namely it is predicted that for each increase in self-efficacy (X_2) one unit will be followed by an increase in environmental responsibility behavior of 0.780 units at a price of a constant.

c. Relationship between CD Program Effectiveness (X_1) and Self-Efficacy (X_2) together with Environmentally Responsible Behavior (Y)

Based on Table 16, the results of statistical analysis using SPSS, for the regression between the variables CD program effectiveness (X_1) and self-efficacy (X_2) with environmental responsibility behavior (Y), a regression equation is obtained that satisfies the equation $\hat{Y}_{1,2} =$

$26.948 + 0.592X_1 + 0.260X_2$. For statistical decision making, if the correlation coefficient is greater than r_{table} , this indicates that there is a significant relationship between X_1 and X_2 to Y so that H_1 can be accepted. Conversely, if the correlation coefficient $< r_{table}$, this indicates that there is no significant relationship between the two variables so that H_0 is accepted. The coefficient values for the regression equations X_1 and X_2 on Y can be seen in Table 16.

The basis for decision making in the linearity test can be done in two ways, namely:

- a) If the calculated $F_{count} < F_{table}$, this shows that there is a significant linear relationship between the independent variable and the dependent variable. Conversely, if $F_{count} > F_{table}$, then there is no significant linear relationship between the independent variables and the dependent variable.
- b) If the value of deviation from linearity sig. > 0.05 , then there is a significant linear relationship between the independent variable and the dependent variable. Conversely, if the deviation from linearity sig. < 0.05 , then there is no significant linear relationship between the independent variable and the dependent variable.

Based on Table 17, the deviation from linearity sig value obtained is 0.344 greater than 0.05. So, it can be concluded that there is a significant linear relationship between the CD program effectiveness variable (X_1) and self-efficacy variable (X_2) together with the environmental responsibility behavior variable (Y).

Table 16. Coefficient values for the regression equations X_1 and X_2 on Y

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	26.948	4.501		5.987	.000
	X_1	.592	.053	.573	11.171	.000
	X_2	.260	.040	.331	6.447	.000

Table 17. Test the significance and linearity of the variable regression (X_1 and X_2) with variable (Y)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25780.591	2	12890.296	175.931	.000 ^a
	Residual	14140.934	193	73.269		
	Total	39921.526	195			

By determining the significant level of 0.05 (5%) and the degree of freedom (df) for $df_1 = 2$ and $df_2 = 193$, the F_{table} value is 3.04. Because the calculated $F_{count} = 1.090 < F_{table}$ (0.05) = 3.04, then H_0 is rejected and H_1 is accepted. Thus, the CD program effectiveness variable (X_1) and self-efficacy variable (X_2) together with significance contribute to the environmental responsibility behavior variable.

(X_1) and self-efficacy (X_2) with the variable environmental responsibility behavior (Y). This means that with every increase in the effectiveness of the CD program (X_1) and self-efficacy (X_2), there will be an increase in environmentally responsible behavior.

A simple correlation test with the product moment correlation test produces a $r_{y1,2}$ value of 0.804 with an r table of 0.1409 and a coefficient of determination (r^2) of 0.646 (See Table 18). The coefficient of determination shows that the effect of the independent variable (X_1) and (X_2) on the dependent variable (Y) is 64.6%, while the rest is influenced by other variables. In this case the value of r_{y1} is greater than r table so that it is stated that there is a relationship between the two variables and has a positive strength. Thus, it can be concluded that H_0 is rejected and H_1 is accepted, so there is a positive relationship between the effectiveness of the CD program (X_1) and self-efficacy (X_2) together with environmental responsibility behavior (Y) with a moderate level of relationship. The regression equation $\hat{Y}_{1,2} = 26.948 + 0.592X_1 + 0.260X_2$ shows the regression equation between CD program effectiveness (X_1) and self-efficacy (X_2) together with environmental responsibility behavior (Y) which is linear and very significant, i.e., it is predicted that for each increase in CD program effectiveness (X_1) and self-efficacy (X_2) one unit will be followed by an increase in environmental responsibility behavior of 0.804 units at a constant price.

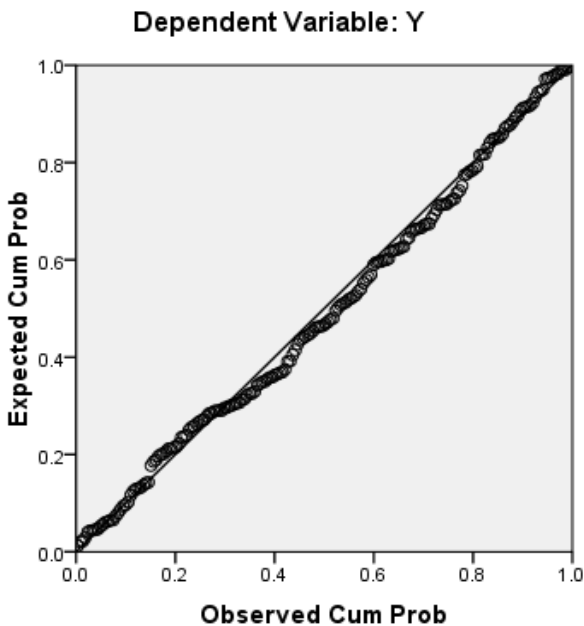


Figure 4. Scatter diagram of the relationship between X_1 and X_2 to Y

Figure 4 is a scatter diagram showing the relationship between CD program effectiveness (X_1) and self-efficacy (X_2) with environmentally responsible behavior. The data plot points form a straight line from the bottom left to the top right. This shows that there is a linear and positive relationship between the effectiveness of the CD program

3.8. Partial Correlation Analysis

The partial correlation test in this study serves to determine the relationship between the variables of CD program effectiveness (X_1) and self-efficacy (X_2) with environmentally responsible behavior (Y). Table 19 shows summary information on the value of descriptive statistics for the three variables, namely environmental responsibility behavior (Y), effectiveness of the CD

program (X_1), and self-efficacy (X_2). Table 19 shows the descriptive statistics of research variables.

The first partial correlation test that will be seen is looking at the significance of the relationship between the effectiveness of the CD program and environmentally responsible behavior with self-efficacy as the control variable. The formulation of the research hypothesis in the partial correlation test is as follows:

a. H_0 = the relationship between the effectiveness of the CD program and Environmentally Responsible behavior with self-efficacy as a control variable is not significant.

b. H_a = the relationship between CD program effectiveness and environmentally responsible behavior with self-efficacy as a significant control variable is significant.

With the basis of decision making in the partial correlation test sig. (2 tailed):

a. If the significance value (2-tailed) > 0.05, then H_0 is accepted and H_a is rejected.

b. If the significance value is < 0.05, then H_0 is rejected and H_a is accepted.

Table 18. Testing the correlation of data (X_1) and (X_2) to (Y)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.804 ^a	.646	.642	8.560	1.536

Table 19. Descriptive statistics of research variables

Variable	Mean	Std. Deviation	N
Environmentally Responsible Behavior (Y)	110.59	14.308	196
CD Program Effectiveness (X_1)	94.04	13.844	196
Self-Efficacy (X_2)	107.63	18.213	196

Table 20. The correlation between the effectiveness of the CD program and environmentally responsible behavior is controlled by self-efficacy variables

Control Variables			Environmentally Responsible Behavior	CD Program Effectiveness	Self-Efficacy
-none- ^a	Environmentally Responsible Behavior	Correlation	1.000	.755	.646
		Significance (2-tailed)	.	.000	.000
		df	0	194	194
	CD Program Effectiveness	Correlation	.755	1.000	.550
		Significance (2-tailed)	.000	.	.000
		df	194	0	194
	Self-Efficacy	Correlation	.646	.550	1.000
		Significance (2-tailed)	.000	.000	.
		df	194	194	0
Self-Efficacy	Environmentally Responsible Behavior	Correlation	1.000	.627	
		Significance (2-tailed)	.	.000	
		df	0	193	
	CD Program Effectiveness	Correlation	.627	1.000	
		Significance (2-tailed)	.000	.	
		df	193	0	

Table 21. The partial correlation of self-efficacy variables with environmentally responsible behavior is controlled by the CD program effectiveness variable

Variables			Environmentally Responsible Behavior	Self-Efficacy	CD Program Effectiveness
-none ^a	Environmentally Responsible Behavior	Correlation	1.000	.646	.755
		Significance (2-tailed)	.	.000	.000
		df	0	194	194
	Self-Efficacy	Correlation	.646	1.000	.550
		Significance (2-tailed)	.000	.	.000
		df	194	0	194
	CD Program Effectiveness	Correlation	.755	.550	1.000
		Significance (2-tailed)	.000	.000	.
		df	194	194	0
CD Program Effectiveness	Environmentally Responsible Behavior	Correlation	1.000	.421	
		Significance (2-tailed)	.	.000	
		df	0	193	
	Self-Efficacy	Correlation	.421	1.000	
		Significance (2-tailed)	.000	.	
		df	193	0	

Table 20 in the first output "none a" shows the correlation value between the effectiveness of the CD program and environmentally responsible behavior before including the control variable (self-efficacy) in the analysis. The correlation coefficient value is 0.755 (positive) and the significance value (2-tailed) is $0.000 < 0.05$. Thus, it can be concluded that there is a positive and significant relationship between the effectiveness of the CD program and environmentally responsible behavior in the absence of a self-efficacy control variable. While the correlation value of 0.755 is included in the very strong relationship category.

Furthermore, the second output shows the correlation value between the effectiveness of the CD program and environmentally responsible behavior after including self-efficacy as a control variable. Based on the output it is known that there is a decrease in the value of the correlation coefficient to 0.627 (positive value and strong relationship category) with a significance value (2-tailed) of $0.000 < 0.05$. Thus, it can be concluded that there is a relationship between the effectiveness of the CD program and environmentally responsible behavior after including the self-efficacy variable as the control variable which is significant (real).

The second partial correlation test is to see the significance between self-efficacy and TJL behavior with

the effectiveness of the CD program as a control variable. The formulation of the research hypothesis in the partial correlation test is as follows:

- a. H_0 = the relationship between self-efficacy and environmentally responsible behavior with the effectiveness of the CD program as a control variable is not significant.
- b. H_a = relationship between self-efficacy and environmentally responsible behavior with CD program effectiveness as a significant control variable is significant.

With the basis of decision making in the partial correlation test sig. (2 tailed):

- a. If the significance value (2-tailed) > 0.05 , then H_0 is accepted and H_a is rejected.
- b. If the significance value is < 0.05 , then H_0 is rejected and H_a is accepted.

Table 21 in the first output "none a" shows the correlation value between self-efficacy variables and environmentally responsible behavior before including the control variable (effectiveness of the CD program) in the analysis. The correlation coefficient is 0.646 (positive) and the significance value (2-tailed) is $0.000 < 0.05$. Thus, it can be concluded that there is a positive and significant relationship between self-efficacy and environmentally

responsible behavior without any control variable for the effectiveness of the CD program, while the correlation value of 0.644 is included in the strong relationship category.

Furthermore, the second output shows the correlation value between self-efficacy and environmentally responsible behavior after including the CD program effectiveness variable as a control variable. Based on the output, it is known that there is a decrease in the value of the correlation coefficient to 0.421 (positive value and strong relationship category) with a significance value (2-tailed) of $0.000 < 0.05$. Thus, it can be concluded that there is a relationship between self-efficacy and environmentally responsible behavior after including the CD program effectiveness variable as the control variable which is significant (real).

4. Conclusions

In this paper, we have determined the effectiveness of corporate social responsibility business program to increase community empowerment in environmental management. The main conclusion of this study is as follows. **Firstly**, there is a solid and significant positive relationship between the effectiveness of the CD program with environmental responsibility behavior ($r_{y1} = 0.755$) as evidenced by the positive correlation between the effectiveness of the CD program and the environmental responsibility behavior qualitatively demonstrated by the adequate performance of the CDO mentoring period 2017-2018 and the achievement of indicators / targets for the result of CD programs that have been felt by the community. **Secondly**, there is a reliable and significant positive relationship between self-efficacy and environmental responsibility behavior ($r_{y2} = 0.646$) as evidenced by the existence of a self-efficacy relationship with environmental responsibility behavior that is qualitatively demonstrated by the development of environmental values in society, increasing community capacity from HKKG activities for HKKG members and the general public, and the community's ability to deal with technical and non-technical obstacles. **Thirdly**, there is a reliable and significant positive relationship between the effectiveness of CD programs and self-efficacy together with environmental responsibility behavior ($r_{y1.20.804} =$) as evidenced by the success of the effectiveness of CD programs supported by community self-efficacy so as to produce indicators of protecting the environment and involvement in the background as a form of community environmental responsibility behavior. Other factors influence the behavior of environmental responsibility, which is an indicator to educate others because there are poor road infrastructure factor and the reluctance of the community to share information about preventing environmentally damaging behaviour.

Data Availability Statement

All datasets are publicly available.

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