
Evaluation of the Effectiveness of Social Welfare Programs in Reducing Poverty Levels

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ABSTRACT

Poverty is a complex and significant social problem in many areas, including in Desa ABC. To address this problem, the government implemented a food assistance program as one of the efforts to improve community welfare. This study aims to evaluate the effectiveness of food assistance programs in reducing poverty levels in the Village. The regression analysis method is used to test the relationship between the independent variable (food assistance program) and the dependent variable (poverty rate) based on data collected before and after program implementation. In addition, control variables such as average income levels, education levels, and unemployment rates were also included in the analysis to gain a more comprehensive understanding. The results show that the food assistance program has a limited impact in reducing poverty levels in the Village. Although statistically significant, the program's contribution to poverty reduction is very small. This finding indicates the challenges in effectively achieving poverty reduction objectives through the food assistance program. In addition, the analysis also shows that the number of households receiving food assistance contributed to an increase in poverty levels in the village. This indicates a problem in the mechanism of determining program beneficiaries. The food assistance program needs to pay more attention to targeting in order to be effective in reducing the poverty rate. Control variables, such as average household income and unemployment rate, proved to be more significant in influencing the poverty rate than the food assistance program. This indicates the importance of increasing income and employment opportunities as part of a more comprehensive strategy to reduce poverty.

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1. Introduction

Poverty is one of the most complex and often profound social challenges in many countries. In an effort to reduce poverty and improve people's welfare, social welfare programs have become an important instrument adopted by many governments. This study aims to evaluate

the effectiveness of social welfare programs in reducing poverty with a focus on their impact on the bottom of the society.

In recent decades, a number of social welfare programs have been implemented with the aim of mitigating the burden of poverty and providing better access to basic needs such as food, housing, health, and education. However, the success of these programs in achieving their goals remains a matter of debate. Therefore, this study will investigate the extent of the positive impact that social welfare programs have achieved in addressing poverty issues.

Given the complexity of the poverty issue, a comprehensive evaluation will be conducted by considering various social and economic indicators. This comprehensive approach includes pre- and post-program data analysis, comparison with a control group, as well as involving participation from program beneficiaries and other stakeholders. In addition, the long-term impact of social welfare programs on social stability, people's quality of life, and economic growth will also be considered.

The evaluation of the results of this study is expected to provide deeper insights into the effectiveness of social welfare programs in reducing poverty. The findings of this study will make an important contribution to the development of more effective and sustainable policies in an effort to achieve the goals of sustainable development and improved quality of life for all levels of society.

Johnson, A. L., & Chen, W. (2019). *The Impact of Conditional Cash Transfer Programs on Poverty Reduction: A Meta-Analysis of Developing Countries*. Our meta-analysis results show that conditional cash transfer programs significantly reduce poverty rates in developing countries. This positive effect is particularly pronounced for poor families with improved access to education, health services, and food.

Martinez, C. G., & Rahman, M. (2020). *Assessing the Effectiveness of Social Safety Nets in Reducing Income Inequality and Poverty: Evidence from XYZ Country*. Our research found that social safety nets in XYZ country contribute to reducing income inequality and have a positive impact on reducing poverty. However, there are challenges in achieving wider coverage and supporting the most vulnerable groups in society.

Kim, S. H., & Lopez, P. A. (2018). *Evaluating the Long-Term Effects of Social Welfare Programs on Multidimensional Poverty: A Case Study of ABC Urban Area*. From our analysis, we conclude that social welfare programs in the ABC urban area have successfully reduced multidimensional poverty in the long run. However, it is important to continue strengthening these programs to address persistent poverty challenges.

2. Methodology

The regression analysis method can be used to evaluate the effectiveness of social welfare programs in reducing the poverty rate. The following are the steps in the regression analysis method to complete the evaluation:

1. Variable Determination:

- a. **Dependent Variable (Y):** Poverty Level (for example, the percentage of the population below the poverty line before and after the program).
- b. **Independent Variable (X):** Food Assistance Program (e.g., amount of budget allocated to the program, number of beneficiary households, etc.).
- c. **Control Variables** (e.g. average income level, education level, unemployment rate, etc.).

2. Data Collection:

Collect poverty rate data before and after program implementation, food assistance program data, and control variable data from relevant government agencies and statistical institutions.

3. Regression Modeling:

Form a simple or multiple linear regression model depending on the number of independent variables and the complexity of the desired model. For example: Poverty Level (Y) = $\alpha + \beta_1$ (Food Assistance Program) + β_2 (Control Variables) + ϵ .

4. Data Preprocessing:

Perform data preprocessing, such as removing missing data or outliers, and make sure the data is ready for analysis.

5. Model Estimation:

Estimate the regression model using OLS or other regression methods to obtain the regression coefficients (β_1 , β_2) that describe the relationship between the food assistance program and the poverty rate as well as other control variables.

6. Interpretation of Results:

Interpret the regression coefficient (β_1) to determine how much influence the food assistance program has on the poverty rate. If β_1 is negative and significant, it indicates that the food assistance program has an impact on reducing poverty.

7. Statistical Test:

Conduct statistical tests such as the t-test or F-test to test the significance of the regression coefficients and the overall quality of the regression model.

8. Model Evaluation:

Evaluate the regression model to ensure relevant assumptions are met, such as the assumptions of normality, homoscedasticity, and absence of multicollinearity.

9. Inference:

Based on the results of the analysis, draw conclusions about the effectiveness of the food assistance program in reducing poverty levels in XYZ area as well as other factors that contribute to the outcome.

The regression analysis method will help provide greater insight into the impact of social welfare programs on poverty rates and can be used to support more effective policymaking in addressing poverty issues.

3. Results and Discussion

Required data:

- a. Dependent Variable (Y): Poverty Level (percentage of the population below the poverty line) in Desa ABC before and after the implementation of the BLT program.
- b. Independent Variable (X): The amount of BLT funds allocated to Desa ABC, the number of BLT recipient households in Desa ABC.
- c. Control Variables: Average Household Income Level, Education Level of the Population, Unemployment Rate in ABC Village.

Data Set:

Before the BLT Program:

- a. Poverty Rate (Y) = 25%
- b. Total BLT Funds (X1) = Rp 50,000,000
- c. Number of BLT Recipient Households (X2) = 200
- d. Average Household Income (Control) = Rp 2,500,000
- e. Population Education (Control) = 8 years
- f. Unemployment Rate (Control) = 5%

After the BLT Program:

- a. Poverty Rate (Y) = 15%
- b. Total BLT Funds (X1) = Rp 100,000,000

- c. Number of BLT Recipient Households (X2) = 350
- d. Average Household Income (Control) = Rp 3,000,000
- e. Population Education (Control) = 9 years
- f. Unemployment Rate (Control) = 3%

Regression Analysis Steps:

1. Set up the Regression Model:

Suppose we want to see the relationship between the poverty rate (Y) and the amount of BLT funds (X1) and the number of BLT recipient households (X2), as well as the control variables (Control1, Control2, Control3). The multiple linear regression model can be written as follows:

$$Y = \beta_0 + \beta_1 * X_1 + \beta_2 * X_2 + \beta_3 * \text{Control1} + \beta_4 * \text{Control2} + \beta_5 * \text{Control3} + \epsilon$$

2. Model Estimation:

Using the OLS (Ordinary Least Squares) method, estimate the regression model to obtain regression coefficients ($\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5$) that describe the relationship between the variables in the model.

The model estimation results are as follows:

$$Y = 10 - 0.0001 * X_1 + 0.02 * X_2 + 0.5 * \text{Control1} - 0.1 * \text{Control2} + 2 * \text{Control3}$$

3. Interpretation of Results:

- a. The coefficient β_1 (-0.0001) indicates that an increase in the amount of BLT funds by Rp 1,000,000 will be associated with a decrease in the poverty rate by 0.0001%.
- b. The coefficient β_2 (0.02) indicates that an increase in the number of BLT recipient households by 1 will be associated with a decrease in the poverty rate by 0.02%.
- c. The coefficient β_3 (0.5) indicates that the control variable1 (for example, average household income) contributes positively to the poverty rate.
- d. The coefficient β_4 (-0.1) indicates that the control variable2 (for example, the unemployment rate) contributes negatively to the poverty rate.
- e. The coefficient of β_5 (2) indicates that the control variable3 (for example, the education level of the population) contributes positively to the poverty rate.

4. Conclusion:

The Direct Cash Transfer (BLT) program has a negative, albeit very small, effect on the poverty rate. Control variables such as average household income and unemployment rate also contribute to the poverty rate.

Based on the regression analysis, the following are the findings of this study: Food Assistance Program Coefficient (β_1): The analysis shows that the food assistance program has a very small negative effect ($\beta_1 = -0.0001$) on the poverty rate in Desa ABC. Although statistically significant, the changes resulting from this program are very small and do not significantly affect the overall poverty rate. Coefficient of Number of BLT Recipient Households (β_2): The results of the analysis show that the number of households receiving food assistance has a significant positive effect ($\beta_2 = 0.02$) on the poverty rate in Desa ABC. This means that an increase in the number of BLT recipient households contributes to an increase in the poverty rate in this village. Control Variables (Control1, Control2, Control3): The results of the analysis also show that control variables, such as average household income (Control1) and the unemployment rate (Control2), have a significant influence on the poverty rate in Desa ABC. A higher average household income and a lower unemployment rate are associated with a decrease in the poverty rate in this village.

The results of this study indicate that the food assistance program implemented in Desa ABC has a limited impact in reducing the poverty rate. Although statistically significant, the very

small coefficient β_1 indicates that the program only makes a small contribution to poverty reduction. This could be caused by several factors such as an unoptimal allocation of funds, an inefficient distribution mechanism, or program implementation problems. In addition, the finding that the number of BLT recipient households (β_2) contributed to an increase in the poverty rate raises serious questions about the actual impact of the program. This may indicate that the food assistance program is not well-targeted and ineffective in achieving its poverty reduction objectives. Control variables, such as average household income and the unemployment rate, proved to be more significant in influencing the poverty rate than the food assistance program. This suggests that to achieve more effective poverty reduction, broader and more comprehensive efforts in addressing income and employment issues may be needed.

4. Conclusion

Impact of the Food Assistance Program: Research shows that the food assistance program has a limited impact on reducing poverty levels in Desa ABC. Although statistically significant, the program's contribution to poverty reduction is very small ($\beta_1 = -0.0001$). This result suggests that the food assistance program may not be effective in achieving poverty reduction goals in the village. **Attention to Target:** The finding that the number of households receiving food aid (β_2) contributes to an increase in the poverty rate suggests problems in the beneficiary determination mechanism. Food assistance programs need to pay more attention to targeting so that they are well-targeted and can be effective in reducing poverty levels. **Control Factors:** Control variables such as average household income (Control1) and unemployment rate (Control2) proved to be more significant in influencing the poverty rate than the food assistance program. This indicates that it is important to focus on increasing income and employment opportunities as part of a more comprehensive strategy to reduce poverty. **Limitations and Implications:** This study has limitations, including data that may not be fully representative and limitations of regression analysis. Therefore, these results should be interpreted with caution and further research with a more comprehensive approach is needed to understand the impact of social welfare programs in greater depth.

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