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THE ROLE OF BOJONEGORO REGENCY GOVERNMENT IN IMPLEMENTING SOCIOECONOMIC ENGINEERING POLICY TO ENHANCE THE WELFARE OF RICE FARMERS IN BOJONEGORO REGENCY

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ABSTRACT

This study aims to examine the role of the Bojonegoro Regency Government in implementing socioeconomic engineering policies to enhance the welfare of rice farmers in the region. The research population consists of all rice farmers participating in the Independent Farmer Program (PPM) and affiliated with 1,672 Farmer Groups spread across 28 sub-districts in the area. This study was conducted by distributing questionnaires to rice farmers who participated in PPM. The questionnaires were subsequently analyzed using the SPSS program. The Sobel test was used to analyze the indirect effects of social economic engineering policies on farmer welfare. The results indicate that the implementation of the Role of Bojongoro regency government in the implementation process of socio-economic engineering policy makes a significant contribution to improving the Welfare of Rice Farmers, particularly in terms of providing capital assistance and agricultural purchase guarantees. The findings of this study are supported by empirical data and analyzed statistically, thus providing evidence of the significant role of local government in promoting inclusive and sustainable rural development in the regions, which can directly or indirectly impact the improvement of rice farmer welfare in the areas.

INTRODUCTION

Efforts to improve the welfare of rice farmers need to be implemented sustainably. This is based on the crucial role of rice farmers as the primary executors of staple food production activities essential for society. Additionally, there is a phenomenon concerning the low level of welfare among rice farmers, which leads to a lack of interest among the Indonesian population in pursuing this profession (Ani et al., 2024; Lakitan, 2019; Prasetyaningrum et al., 2022; Santoso et al., 2023). According to data from the Indonesian Central Statistics Agency (BPS), the percentage of the Indonesian population working as farmers is only around 28.68% of the total workforce, while the remaining 71.32% work in non-agricultural sectors. Furthermore, data from the Agricultural Human Resources Development and Extension Agency (BPPSDMP) of the Ministry of Agriculture states that young farmers aged between 20 to 39 years old only account for approximately 8% of all farmers, while the rest are colonial farmers or farmers aged over 39 years old (Setiawan, 2020). This implies that the sustainability of the food agriculture sector in Indonesia, especially rice, is quite concerning, thus the government needs to implement interventions to promote the increasing welfare of rice farmers.

The intervention carried out by the Bojonegoro Regency Government is by implementing socioeconomic engineering policies in the form of the Independent Farmer Program (*Program Petani Mandiri* or PPM). Social engineering is a series of efforts to create social change in a desired direction,

which is done because of important social issues that need to be addressed immediately (Eilert & Nappier Cherup, 2020; Grassegger & Nedbal, 2021; Hijji & Alam, 2021). Economic engineering can be interpreted as the application of economic science to address an economic problem. Economic engineering also involves manipulation aspects, but with a focus on changing the economic behavior of the targeted community (Suswanto et al., 2019).

The integrated implementation of socio-economic engineering policies has not been previously researched. Previous studies have examined the application of social and economic engineering separately, such as Ekasari et al. (2014), Masithoh & Yoesdiarty (2014), and Supriatna (2012), focusing on social engineering, as well as Suswanto et al. (2019), Sarinah et al. (2019), and Hidayatullah & Djaka (2011), focusing on economic engineering or empowerment. Based on this, this study will examine the integrated implementation of socio-economic engineering policies to fill the research gap regarding comprehensive government interventions to enhance the welfare of rice farmers.

According to the research by Rieznik & Beom (2018), Nurani et al. (2018), and Zuhriyah et al. (2022), the implementation of government policies, which are interventions to promote the improvement of community welfare, requires active involvement from the government at the regional level. The role of local government can determine the success of policy implementation because it involves various activities that bridge the policies set by the government and the response and involvement of target communities towards those policies.

Based on the overall exposition above, this study was conducted to examine the role of the Bojonegoro Regency Government in implementing socio-economic engineering policies to enhance the welfare of rice farmers in Bojonegoro Regency. The research contribution of this study lies in its exploration of the role of the Bojonegoro Regency Government in implementing socio-economic engineering policies to improve the welfare of rice farmers. This study provides valuable insights into how local government policies directly influence the socio-economic conditions of farmers, contributing to both academic understanding and practical knowledge in the fields of agricultural policy, rural development, and local governance. Additionally, it offers a specific case study that could inform future policymaking and strategies aimed at enhancing farmer welfare in similar regions.

METHODS

This research is a quantitative study. The socioeconomic engineering policy implemented in the form of the Farmer Self-Reliance Program (PPM) is delineated into five variables consisting of Capital Assistance (X_1), Training and Agricultural Business Development (X_2), Agricultural Product Purchase Guarantee (X_3), Crop Failure Insurance (X_4), and Scholarships for Farmer Families (X_5).

This study examines the influence of five independent variables, namely Capital Assistance (X1), Training and agricultural business development (X2), Agricultural produce purchase guarantee (X3), Crop failure insurance (X4), and Scholarships for farmers' families (X5), on one dependent variable, namely Farmer welfare (Y), through the variable of the Role of Bojongoro Regency Local Government as a mediating variable.

The research population consists of all rice farmers participating in PPM and affiliated with 1,672 Farmer Groups spread across 28 sub-districts in Bojonegoro Regency. Based on the observations conducted, it was noted that farmers associated with the Farmer Group in the Sekar sub-district only cultivate corn; hence, they were excluded from this research, resulting in a total of 1,540 Farmer Groups. The determined sample size for a population of 1,540, with a 1% margin of error, is 469. Accordingly, the established sample size for this study is 469 rice farmers participating in PPM.

The research data was collected by distributing questionnaires to farmers participating in the Independent Farmer Program (PPM). Questionnaire completion was supervised by field extension officers representing the Bojonegoro Regency Government and/or farmer group officials to ensure the alignment of farmers' responses with the statements in the questionnaire. Questionnaire completion took place during farmer group meetings discussing the implementation of the PPM in Bojonegoro Regency.

The research data collected through questionnaires was subsequently analyzed using the SPSS program. The analysis comprised descriptive analysis and path analysis to demonstrate the mediating role of the Bojonegoro Regency Government in the influence of the Implementation of Social Economic Engineering Policy on the Welfare of Rice Farmers in Bojonegoro Regency.

RESULTS

Descriptive analysis of respondent demographics and research variables

Table 2. Descriptive Analysis of Respondent Demographics

Demographic Characteristics		Frequency	%
Education	< 25 y. o	4	0.9
	26 - 35 y. o	47	10.0
	36 - 45 y. o	122	26.0
	46 - 55 y. o	194	41.4
	> 55 y. o	102	21.7
Education	Elementary	73	15.6
	Junior High	119	25.4
	Senior High	236	50.3
	D3, D4, S1	41	8.7
Number of Family Member	0	9	1.9
	1	23	4.9
	2	78	16.6
	3	167	35.6
	4	123	26.2
	5	54	11.5
	6	10	2.1
	7	4	.9
Number of Family Member Enrolled in School	0	104	22.2
	1	205	43.7
	2	140	29.9
	3	17	3.6
	4	3	.6
Land Area	< 1 Ha	297	63.3
	1 - 2 Ha	165	35.2
	> 2 Ha	7	1.5
Land Ownership	Private Property	417	88.9
	Rent/Profit Sharing	47	10.0
	Private Property and Rent/Profit Sharing	5	1.1

The data presented in the above table reveals that the respondents in this study are predominantly within the age range of 45 to 55 years, constituting 194 individuals or approximately 41.4% of the total sample. Regarding educational attainment, the majority of respondents have completed their highest level of education at the high school level (SMA/SMK), comprising 236 individuals or approximately 50.3% of the sample. Furthermore, a significant portion of the respondents, specifically 167 individuals (35.6%), have three dependents within their families, while 205 individuals (43.7%) have at least one family member still attending school. Additionally, the majority of respondents, totaling 297 individuals (63.3%), are engaged in farming activities with agricultural land measuring less than 1 hectare. Concerning land ownership, the majority of research participants, specifically 417 individuals (88.9%), possess ownership of their agricultural land.

Below are the average scores for each variable in this research:

Table 2. Descriptive Analysis of Research Variables

Variables	Average score	Description
X1	4,41	Very good
X2	4,03	Good
X3	3,84	Good
X4	4,17	Good
X5	3,93	Good
Y	4,10	Good
Z	4,46	Very good

The data in the table above indicate that the Variable of Capital Assistance and the Role of the Bojonegoro Regency Government can be categorized as excellent, with average scores of 4.41 and 4.46, respectively. Meanwhile, the other variables can be categorized as good, with average scores of 4.03 for training and development; 3.84 for guarantee of agricultural product purchase; 4.17 for crop failure insurance; 3.93 for scholarship for farmers' families; and 4.10 for the welfare of rice farmers.

Results of validity and reliability test

Table 3. Results of Validity Test

Indikator	Nilai Korelasi (Pearson Coreclation)	Probabilitas Korelasi Sig. (2-tailed)	Hasil
X1.1	0.523**	0,000	Valid
X1.2	0.403**	0,000	Valid
X1.3	0.782**	0,000	Valid
X1.4	0.573**	0,000	Valid
X1.5	0.616**	0,000	Valid
X1.6	0.550**	0,000	Valid
X2.1	0.607**	0,000	Valid
X2.2	0.682**	0,000	Valid
X2.3	0.760**	0,000	Valid
X2.4	0.831**	0,000	Valid
X2.5	0.791**	0,000	Valid
X2.6	0.847**	0,000	Valid
X3.1	0.860**	0,000	Valid
X3.2	0.928**	0,000	Valid
X3.3	0.920**	0,000	Valid
X3.4	0.933**	0,000	Valid
X3.5	0.907**	0,000	Valid
X4.1	0.863**	0,000	Valid
X4.2	0.869**	0,000	Valid
X4.3	0.843**	0,000	Valid
X4.4	0.816**	0,000	Valid
X4.5	0.777**	0,000	Valid
X5.1	0.717**	0,000	Valid
X5.2	0.786**	0,000	Valid
X5.3	0.814**	0,000	Valid
X5.4	0.731**	0,000	Valid
X5.5	0.775**	0,000	Valid
Y1	0.835**	0,000	Valid
Y2	0.883**	0,000	Valid
Y3	0.873**	0,000	Valid
Y4	0.851**	0,000	Valid
Y5	0.867**	0,000	Valid
Z1	0.664**	0.000	Valid

Z2	0.790**	0.000	Valid
Z3	0.679**	0.000	Valid
Z4	0.581**	0.000	Valid

As can be observed in the table above, it is evident that all items used to measure the variables under investigation in this study are valid as they exhibit correlation probabilities sig. (2-tailed) of less than 0.05 or 5%. In accordance with these results, the reliability test can subsequently be conducted with the following outcomes:

Table 4. Results of Reliability Test

Variabel	*Cronbach's Alpha*	N	Results
X1	0,861	469	Reliabel
X2	0,848	469	Reliabel
X3	0,948	469	Reliabel
X4	0,894	469	Reliabel
X5	0,802	469	Reliabel
Y	0,912	469	Reliabel
Z	0,613	469	Reliabel

The data in the table above indicate that the Cronbach's alpha values for all variables tested in the study are greater than 0.6. Therefore, it can be stated that the research instrument used to measure all these variables is reliable.

Model 1: The Influence of Socioeconomic Engineering Policy on the Welfare of Rice Farmers

Table 5. The Result of Model 1 Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	*Std. Error*	*Beta*		
(Constant)	.985	.963		1.022	.307
X1	.194	.041	.179	4.762	.000
X2	.063	.037	.070	1.713	.087
X3	.168	.032	.219	5.191	.000
X4	.320	.044	.318	7.324	.000
X5	.146	.041	.152	3.573	.000
Dependent variable: Y					

The data in the table above indicates that the influence of Financial Assistance (X_1) on Farmer Welfare (Y) is positive as it has a positive unstandardized coefficient value of 0.194. This influence is significant with a significance value of 0.00, which is smaller than the significance level (α) of 5% or 0.05. This suggests that an increase in Financial Assistance (X_1) will result in an increase in Farmer Welfare (Y).

The influence of Training and Agricultural Business Development (X_2) on Farmer Welfare (Y) is positive as it has a positive unstandardized coefficient value of 0.063. However, this influence is not significant with a significance value of 0.087, which is greater than the significance level (α) of 5% or 0.05. This indicates that the implementation of Training and Agricultural Business Development (X_2) is unable to drive an increase in Farmer Welfare (Y).

The influence of Agricultural Product Purchase Guarantee (X_3) on Farmer Welfare (Y) is positive as it has a positive unstandardized coefficient value of 0.168. This influence is significant as its significance value is 0.00, which is smaller than the significance level (α) of 5% or 0.05. This indicates that an increase in Agricultural Product Purchase Guarantee (X_3) will also lead to an increase in Farmer Welfare (Y).

The influence of Crop Failure Insurance (X_4) on Farmer Welfare (Y) is positive as it has a positive unstandardized coefficient value of 0.320. This influence is significant as its significance value is 0.00, which is smaller than the significance level (α) of 5% or 0.05. This suggests that an increase in the implementation of Crop Failure Insurance (X_4) will also result in an increase in Farmer Welfare (Y).

The influence of Farmer Family Scholarship (X_5) on Farmer Welfare (Y) is positive as it has a positive unstandardized coefficient value of 0.146. This influence is significant as its significance value is 0.00, which is smaller than the significance level (α) of 5% or 0.05. This indicates that an increase in the provision of Farmer Family Scholarship (X_5) will also lead to an increase in Farmer Welfare (Y).

Model 2: The Influence of Socioeconomic Engineering Policy on the Role of the Bojonegoro Regency Government

Table 6. The Results Model 2 Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	*Std. Error*	*Beta*		
(Constant)	14.975	0.786		19.062	0.000
X1	0.113	0.033	0.185	3.392	0.001
X2	-0.073	0.030	-0.144	-2.439	0.015
X3	0.077	0.026	0.179	2.925	0.004
X4	-0.009	0.036	-0.016	-0.259	0.796
X5	0.018	0.033	0.034	0.548	0.584
Dependent variable: Z					

The test results presented in the table above indicate that the influence of Capital Assistance (X_1) on the Role of Bojonegoro Regency Government (Z) is positive, as it has a positive unstandardized coefficient value of 0.185. However, this influence is not significant, as the significance value is 0.142, which is greater than the significance level (α) of 5% or 0.05. This suggests that an increase in Capital Assistance (X_1) is unable to cause an increase in the Role of Bojonegoro Regency Government (Z).

The influence of Training and Development of Farming Businesses (X_2) on the Role of Bojonegoro Regency Government (Z) is negative, as it has a negative unstandardized coefficient value of 0.144. However, this influence is significant, as the significance value is 0.015, which is smaller than the significance level (α) of 5% or 0.05. This indicates that the implementation of Training and Development of Farming Businesses (X_2) can lead to a decrease in the Role of Bojonegoro Regency Government (Z).

The Influence of Agricultural Product Purchase Guarantee (X_3) on the Role of Bojonegoro Regency Government (Z) is positive as it has a positive unstandardized coefficient value of 0.179. This influence is significant because its significance value is 0.004, which is smaller than the significance level (α) of 5% or 0.05. This indicates that an increase in the provision of Agricultural Product Purchase Guarantee (X_3) can stimulate an increase in the Role of Bojonegoro Regency Government (Z).

The Influence of Crop Failure Insurance (X_4) on the Role of Bojonegoro Regency Government (Z) is negative as it has a negative unstandardized coefficient value of 0.016. This influence is not significant because its significance value is 0.796, which is greater than the significance level (α) of 5% or 0.05. This indicates that an increase in the implementation of Crop Failure Insurance (X_4) is unable to cause an increase in the Role of Bojonegoro Regency Government (Z).

The Influence of Farmer Family Scholarship (X_5) on the Role of Bojonegoro Regency Government (Z) is positive as it has a positive unstandardized coefficient value of 0.034. This influence is not significant because its significance value is 0.584, which is greater than the significance level (α) of 5% or 0.05. This indicates that an increase in the provision of Farmer Family Scholarship (X_5) is unable to cause an increase in the Role of Bojonegoro Regency Government (Z).

Model 3: The Influence of Socioeconomic Engineering Policy and the Role of Bojonegoro Regency Government on the Welfare of Rice Farmers

Table 7. The Results of Model 3 Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	*Std. Error*	*Beta*		
(Constant)	-0.763	1.283		-0.595	0.552
X1	0.181	0.041	0.167	4.401	0.000
X2	0.072	0.037	0.080	1.940	0.053
X3	0.159	0.033	0.208	4.885	0.000
X4	0.321	0.044	0.319	7.374	0.000
X5	0.144	0.041	0.150	3.532	0.000
Z	0.117	0.057	0.066	2.055	0.040
Dependent variable: Y					

The data in the table above indicate that the test results for Model 3 regarding the influence of the five socioeconomic engineering policy variables on farmer welfare have values that are almost identical to the test results for Model 1. Among these five variables, the Training and Agricultural Business Development (X_2) variable is found to be not significant in influencing the welfare of rice farmers. However, the other four variables, as well as the role of the Bojonegoro Regency Local Government variable, exhibit positive and significant effects. This implies that in the model where socioeconomic engineering policy variables and the role of the Bojonegoro Regency Local Government variable are considered as independent variables, only the implementation of Training and Agricultural Business Development (X_2) that fails to promote the improvement of farmer welfare in Bojonegoro Regency.

The Mediating Role of Bojonegoro Regency Local Government in the Influence of Socioeconomic Engineering Policy on the Welfare of Rice Farmers

Analysis of the mediating role of the Bojonegoro Regency Government's role variable in the influence of socioeconomic engineering policies on the welfare of rice farmers was conducted by referring to the test results of the three research models and elaborated according to the five socioeconomic engineering policy variables. This analysis was carried out in two stages: 1) analyzing the indirect effects of socioeconomic engineering policies on the welfare of rice farmers using the Sobel test; and 2) determining the mediation role categories of the Bojonegoro Regency Government variable.

In the first stage, the analysis utilized the Sobel test, referring to data from Models 2 and 3, following the test procedures outlined on the Sobel test website (quantpsy.org, 2024). The data required for the Sobel test can be summarized as follows:

Table 8. Data needed for Sobel Test

Path		Unstandzd.	Std. Error
$X_1 \rightarrow Z \rightarrow Y$	$X_1 \rightarrow Z$	0.113	0.033
	$Z \rightarrow Y$	0.117	0.057
$X_2 \rightarrow Z \rightarrow Y$	$X_2 \rightarrow Z$	-0.073	0.030
	$Z \rightarrow Y$	0.117	0.057
$X_3 \rightarrow Z \rightarrow Y$	$X_3 \rightarrow Z$	0.077	0.026
	$Z \rightarrow Y$	0.117	0.057
$X_4 \rightarrow Z \rightarrow Y$	$X_4 \rightarrow Z$	-0.009	0.036
	$Z \rightarrow Y$	0.117	0.057
$X_5 \rightarrow Z \rightarrow Y$	$X_5 \rightarrow Z$	0.018	0.033
	$Z \rightarrow Y$	0.117	0.057

Based on the data in the table above, subsequently an online Sobel test was conducted with the following results:

Table 9. Results of Sobel Test

	T-Statistic	Std. Error	P-Value
$X_1 \rightarrow Z \rightarrow Y$	1.76055103	0.00750958	0.07831442
$X_2 \rightarrow Z \rightarrow Y$	-1.56896563	0.00544371	0.11665595
$X_3 \rightarrow Z \rightarrow Y$	1.68703472	0.00534014	0.09159668
$X_4 \rightarrow Z \rightarrow Y$	-0.24816613	0.00424313	0.80400587
$X_5 \rightarrow Z \rightarrow Y$	0.52715941	0.003995	0.59808289

The results of the Sobel test in the table above indicate that the indirect effect of all the variables of Socioeconomic Engineering Policy on the Welfare of Rice Farmers through the Role of Bojonegoro Regency Local Government is not significant. Consistent with these results, the categorization of the mediating role of the Bojonegoro Regency Local Government variable can be determined as follows: 1) Examining the effect of the independent variable on the dependent variable in the model involving the mediating variable (Effect A); 2) Examining the effect of the independent variable on the dependent variable in the model without involving the mediating variable (Effect B); 3) Examining the effect of the independent variable on the mediating variable in the model (Effect C); 4) Examining the effect of the mediating variable on the dependent variable in the model (Effect D). Based on the results of the examination of these four effects (Effects A, B, C, and D), the mediation role category can be further determined by referring to several criteria as follows: 1) If effects C and D are significant, but effect A is not significant, then full mediation is confirmed; 2) If effects C, D, and A are significant, then partial mediation is confirmed; 3) If effects C, D, and A are significant, but the standardized path coefficient of effect A is almost the same as the path coefficient in effect B, then mediation is not confirmed in the model; and 4) If one of the effects, either C or D, is not significant, then mediation is not confirmed in the model.

In accordance with these provisions, the following is a summary analysis of the mediation role categories of the Bojonegoro Regency Local Government's role in the influence of Socioeconomic Engineering Policy on the Welfare of Rice Farmers:

Table 10. Mediation categoritation of the Bojonegoro Regency Government

Path		Categories
Mediation role in the influence of X_1 on Y.	($X_1 \rightarrow Z \rightarrow Y$)	Partially mediated
Mediation role in the influence of X_2 on Y.	($X_2 \rightarrow Z \rightarrow Y$)	Fully mediated
Mediation role in the influence of X_3 on Y.	($X_3 \rightarrow Z \rightarrow Y$)	Partially mediated
Mediation role in the influence of X_4 on Y.	($X_4 \rightarrow Z \rightarrow Y$)	Unmediated
Mediation role in the influence of X_5 on Y.	($X_5 \rightarrow Z \rightarrow Y$)	Unmediated

Based on the categorization results in the table above, it can be observed that the variable of the Role of Bojonegoro Regency Local Government does not mediate the influence of the Crop Failure Insurance (X4) and Farmer Family Scholarships (X5) variables on Farmer Welfare (Y). This indicates that the direct effects of the Crop Failure Insurance (X4) and Farmer Family Scholarships (X5) variables on Farmer Welfare (Y) remain significant without the mediation of a mediating variable. In other words, the mediating variable does not play a role in explaining the relationship between the independent and dependent variables (Suliyanto, 2011). This suggests that the Role of Bojonegoro Regency Local Government does not have a sufficiently large impact to this relationship.

The categorization results also indicate that the Role of Bojonegoro Regency Local Government has been found to partially mediate the influence of Capital Assistance (X1) and Agricultural Purchase Guarantee (X3) on Farmer Welfare (Y). This implies that the independent variables can affect the dependent variable with or without involving a mediator variable (Suliyanto, 2011). Thus, the implementation of the Role of Bojonegoro Regency Local Government in the socioeconomic engineering policy application process makes a significant contribution to improving the welfare of rice farmers in Bojonegoro Regency, particularly in terms of providing capital assistance and agricultural purchase guarantees.

Finally, the categorization results indicate that the role of Bojonegoro Regency Government fully mediates the influence of Training and Agricultural Business Development (X2) on Farmer Welfare (Y). This implies that the presence of the mediator variable significantly contributes to the influence of the

independent variable on the dependent variable (Suliyanto, 2011). Thus, the Training and Agricultural Business Development variable (X2) is unable to exert a significant influence on Farmer Welfare (Y) without the involvement of Bojonegoro Regency Government in the socioeconomic engineering process.

Overall, the role of Bojonegoro Regency Government holds a crucial position in the implementation of socioeconomic engineering policies to enhance the welfare of rice farmers in Bojonegoro Regency. This is based on the significant contribution of the Regency Government's role, particularly in enhancing the success of Training and Agricultural Business Development implementation, as well as providing capital assistance and implementing agricultural product purchase guarantees. These research findings align with the conclusions of several previous studies examining the role of local government in the implementation of public policies across various sectors, such as studies by Rieznik & Beom (2018), Nurani et al. (2018), and Zuhriyah et al. (2022).

The findings of this research are supported by empirical data and analyzed statistically, thus providing evidence of the significant role of local government in the implementation process of a policy aimed at improving the welfare of rice farmers. This differs from previous research which utilized qualitative methods with secondary data obtained from literature studies such as the research by Rieznik & Beom (2018), or the research by Nurani et al. (2018), and Zuhriyah et al. (2022) which utilized qualitative methods with primary data obtained from interviews. The use of quantitative methods allows for analysis based on a larger dataset and results in statistical analysis that emphasizes the validity and reliability of data to produce stronger and more reliable findings.

From the perspective of Bottom-up theories, active participation and involvement of the community are crucial in the decision-making process and the implementation of government policies (Pülzl & Treib, 2007). In the context of implementing socio-economic engineering policies in the form of the Independent Farmer program in Bojonegoro Regency, the local government plays a role in facilitating active participation and involvement of the community in the implementation of such policies, whether by providing education to the community, addressing obstacles faced by the community during the program, actively disseminating information related to the program, and using appropriate methods for information delivery.

One important aspect in the implementation of socioeconomic engineering policy is training and agricultural business development. From a bottom-up perspective, the Bojonegoro regency government is expected to listen to and respond to the direct needs and aspirations of rice farmers themselves. This includes designing training programs tailored to the needs of farmers, providing easy access and effective services for training, and engaging in open and ongoing dialogue with farmers to ensure that the training provided is relevant and beneficial to them. Local governments can also facilitate knowledge exchange among farmers locally, enabling them to learn from each other.

In addition to training, financial assistance is also a crucial factor in supporting the success of socioeconomic engineering policy implementation. From a bottom-up perspective, it is important for the local government to ensure that financial assistance is distributed fairly and evenly to all eligible farmers, without any discrimination. Furthermore, in the implementation of agricultural produce purchase guarantee, the Bojonegoro regency government is expected to play an active role in bridging rice farmers with markets and potential buyers. This can be achieved through establishing local agricultural markets or trade centers, facilitating farmers' access to national or international markets, or entering into long-term purchase agreements with large companies or retailers. From a bottom-up perspective, it is crucial for the local government to ensure that the mechanisms of agricultural produce purchase guarantee provide sufficient protection for farmers from market price fluctuations and other economic risks.

Overall, the findings of this research indicate that the role of the Bojonegoro regency government is crucial in successfully implementing socioeconomic engineering policies in the form of the Independent Farmer program to improve the welfare of rice farmers. The regency government is expected to be an active and responsive partner for farmers in designing, implementing, and monitoring the implementation of these policies. Thus, the Bojonegoro regency government can be the main driver in promoting inclusive and sustainable rural development in the region, which can directly or indirectly impact the improvement of rice farmer welfare in the area.

CONCLUSION

The study reveals that the Bojonegoro Regency local government does not mediate the influence of Crop Failure Insurance and Farmer Family Scholarships on farmer welfare. However, it partially mediates the influence of Capital Assistance and Agricultural Product Purchase Guarantee on farmer welfare, and fully mediates the influence of Training and Agricultural Business Development. The research has limitations, as it was limited to the Bojonegoro Regency area and focused on five socioeconomic engineering policy variables related to the Independent Farmer Program. Further research could expand the scope of variables by referencing relevant theories and previous research findings.

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