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The Effectiveness of Cattle Assistance Program Policy in Bone Bolango Regency, Indonesia

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Abstract | This research aims to determine the effectiveness of the cattle assistance program and the policy factors of livestock development that influence the effectiveness of the cattle assistance program in Bone Bolango Regency. A total of 130 farmers were used for primary data collection through questionnaires. Descriptive statistics, Important Performance Analysis (IPA), and SEM-PLS were used to analyze data obtained. The results of this research indicate that the cattle assistance program in Bone Bolango Regency tends to be effective due to the benefits gains both materially and non-materially. However, there was still a need for improvements and evaluations due to the community's lack of understanding of the government's Bali cattle assistance. Resources, implementer disposition or attitude, and bureaucratic structure have a positive and significant impact on the effectiveness of the cattle assistance program policy in Bone Bolango Regency, both directly and indirectly (through communication). Communication also has a significant impact on the effectiveness of the cattle assistance program policy in Bone Bolango Regency. This indicates that public policy factors in the development of the agricultural and livestock sectors in Bone Bolango Regency will enhance the effectiveness of the cattle assistance program policy for farmers, leading to their improved welfare.

Keywords | Bone Bolango, Cattle Farming, Cattle Assistance, Livestock, Program, Policy

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INTRODUCTION

The cattle assistance program for agribusiness-based livestock farming groups is a government initiative to promote self-sufficiency in beef production. The cattle assistance program is part of agricultural development and aims to promote comprehensive livestock development. To improve this program, there is a need for innovation or new concepts that can better address the difficulties and dynamics of livestock development at the farmer level (Herrera *et al*., 2013; Tricarico *et al*., 2022). One of the operational policies adopted by the government, specifically the De-

partment of Livestock and Animal Health of Bone Bolango Regency, is to develop and empower livestock groups through cattle assistance programs and livestock business development in potential areas, with the goal to establish new livestock production centers, particularly for cattle. Cattle farming in Bone Bolango has remained small-scale, with simple management, little technological adoption, and dispersed locations among smallholder farmers (Table 1).

Table 1: Cattle Population in Bone Bolango 2017-2021.

Year	Number of Cattle	Growth (%)
2017	30,368	7.12%
2018	35,974	18.46%
2019	43,007	19.55%
2020	47,384	10.18%
2021	48,317	1.97%

Source : Dinas Peternakan dan Kesehatan Hewan Bone Bolango Regency, 2023.

Livestock development is a policy approach that promotes community economic growth. According to Edward III in Winarno (2014: 64), in order to resolve important policy concerns, Edward III proposes addressing four variables in the implementation of public policy: "communication, resources, dispositions or attitude, and bureaucratic structure." As a result, these four factors are critical in evaluating the success and efficacy of the livestock aid program in Bone Bolango Regency, with an emphasis on goal, timing, economics, and procedure. To maximize the realization of the livestock assistance program's objectives, recipient farmer groups went through a selection procedure. Cattle assistance for farmer groups will be provided following the selection of potential farmer locations (CPCL). To be eligible for cattle breeding assistance, livestock farmer groups must meet several of major requirements, including: (1) Group members have experience in livestock husbandry, (2) They have a minimum of 2 hectares of livestock feed pasture, (3) Agroecosystem conditions are suitable for beef cattle breeding, including the availability of feed sources, water, and the absence of endemic animal diseases, (4) They are local residents or domiciled in the area, (5) The location is easily accessible and does not conflict with Regional Spatial Planning (RUTRW), and (6) Facilities, infrastructure, and technical livestock and animal health personnel are easily accessible.

The cattle assistance program for livestock farmer groups began in 2009 and continues to this day through the District Revenue and Expenditure Budget (APBD II), Provincial Revenue and Expenditure Budget (APBD I), and National Revenue and Expenditure Budget (APBN), with varying quantities provided, ranging from one to three heads per household in each group. Beef cattle farming development will be optimal if the local government, private sector, and community all work together. The local government must offer commercial prospects for livestock communities through local regulations and policies, such as providing facilities and infrastructure, as well as allocating enough cash for group support and development activities. Livestock farmer groups should receive ongoing support and development, including mentorship, supervision, monitoring, evaluation, and reporting. The cattle assistance program has been working smoothly; nevertheless, a study is required to assess whether the program's success and efficacy have been reached (Tuyttens *et al*., 2022). The cattle agricultural development initiative has a number of problems, both internal and external to Bone Bolango Regency. The dynamics of the local environment are linked to the demand for livestock products, the supply of livestock breeding stock, the occurrence of various harmful livestock diseases, and the need for changes in development management in accordance with regional autonomy and farmer participation.

Various changes in the strategic environment that occur rapidly and are difficult to predict can lead to program fluctuations and inconsistency if not responded spontaneously, resulting in a decrease in resource utilization effectiveness and efficiency in achieving livestock farmer groups' goals (Godde *et al*., 2021; Weindl *et al*., 2015). The ultimate purpose of the government assistance program is to raise the incomes of livestock farmer households. Properly managed livestock farming can create money for farmers, improving their livelihoods (Cheng *et al*., 2022). Cattle obtained through programs of government assistance may produce offspring in about 18-24 months, according to technical guidelines. As a result, the cattle can only give birth to one calf per year. This means that the Bali cattle assistance programs are able to produce 5 calves within 5 years, increasing farmer welfare.

Farmer livestock groups' households often engage in income-generating activities outside of livestock farming. As a result, the cattle assistance program can help them increase their income and improve their quality of life. Almost every year, the Bali cattle assistance program, which is sponsored by the Bone Bolango Regency Budget (APBD), is implemented with varying amounts of assistance, which tend to decrease compared to the early years of the program's implementation. Bone Bolango District was chosen as the focus of research to assess the level of effectiveness of the cattle livestock assistance program because this district has great potential in the livestock sector with the majority of its population depending on this activity as a source of livelihood. In addition, as one of the program recipient areas, Bone Bolango offers relevant data to evaluate the program's success in improving community welfare. Livestock development policy factors, are achieving goals and managing implementation at the local level. Apart from that, during the last 10 years, namely 2014-2024, Bone Bolango Regency has been included in a North-North Cooperation Agency (BKSU) program whose main program is the de

velopment of beef cattle commodities as an economic acceleration for farmers in the Regency of the cooperation area.

Various previous relevant researchs underlies the implementation of this research, such as research by Rusdiana and Praharani (2018), which found that cooperation from various parties is needed so that the beef cattle population increases, so the government needs to encourage investment in livestock businesses and empower farmers so that farmers are able to achieve business viability and increase their income. Kimko (2021) found that cattle assistance met the criteria of effectiveness, efficiency and good adequacy. And Yanti *et al*. (2023) found that the beef cattle assistance program has not been effective in improving the community's economy. These various studies were then developed with this research which examines policy aspects assessed from the Edward III aspect as per Keban (2019), namely communication, resources, implementing attitudes and bureaucratic structures on the effectiveness of aid, where the development of this research is the use of path analysis through SEM- PLS is strengthened by natural science analysis to obtain more credible analysis results in decision making. The development of this variable is based on various research, theories and considerations used by stakeholders in making decisions regarding cattle livestock assistance policies for the community. Based on that statement, this research aims to determine the effectiveness of the cattle assistance program and the policy factors of livestock development that influence the effectiveness of the cattle assistance program in Bone Bolango Regency.

MATERIALS AND METHODS

Time and Location of Research

The research was conducted from April to July 2023. This research took a quantitative approach, using both descriptive and inferential methodologies. A total of 130 farmers who got cattle assistance with Bone Bolango Regency was used as a sample. The sample size was 130 people by using a saturated sampling approach. This study's factors include the effectiveness of the livestock assistance program policy (Y), communication (Z), resources (X1), implementer disposition or attitude (X2), and bureaucratic structure (X3).

Data Collection and Variables

Data collection was done through questionnaires, observations, documentation, and interviews. A questionnaire was created for these five variables in accordance with the operational definition of variables (indicators) which were then analyzed for validity and reliability first before being used in collecting main research data. The number of variable statements: Effectiveness of cattle assistance program policy (Y) was 28 items, Communication (Z) was 16 items, Resources (X1) was 12 items, Disposition or attitude of implementers (X2) was 14 items, and Bureaucratic structure (X3) was 10 items.

Data Analysis

The research's data analysis methods included Importance-Performance Analysis (IPA), Structural Equation Model (SEM), and Partial Least Squares (PLS). Importance-Performance Analysis (IPA) is a method for assessing the performance of products, services, or features using two main dimensions: importance and performance. The next analysis used the Structural Equation Model (SEM), a statistical field capable of testing correlations that are generally difficult to evaluate concurrently. SEM uses factor analysis and regression analysis (correlation) to assess the relationships between variables in a model, including indicators and constructs, as well as construct relationships. Partial Least Squares (PLS) is a component-based Structural Equation Model that offers an alternate way for transitioning from a covariance-based to a variance-based SEM.

RESULTS AND DISCUSSION

A total of 130 respondents consisting of the following variables: Effectiveness of the cattle assistance program policy (Y) with 28 statements, Communication (Z) with 16 statements, Resources (X1) with 12 statements, Implementer disposition or attitude (X2) with 14 statements, and Bureaucratic structure (X3) with 10 statements were outlined as follows; The operational definitions of each variable can be seen in Table 2.

Descriptive Analysis Results (IPA)

The descriptive analysis in this research focused on the variable of the effectiveness of the cattle assistance program policy, focusing on the level of success from the policy's perspective, by considering various variables such as target, timing, economics, and mechanism. Figure 1 shows the descriptive results of the Importance Performance Analysis (IPA) for each indicator, categorized as follows:

Target: The targeted factor goes toward the "excessive" category, indicating that the program's objectives have not yet linked with society's expectations given that expectations for this target have not been particularly high. As a result, in the future, the Bone Bolango Regency administration, via the Department of Livestock, should be more selective in distributing Bali cattle to the community. According to the recommendations, the government should use Integrated Data to rank applicants based on specific factors, such as financial competence and dedication to Bali cattle farming. Targets have been regarded excessive considering assistance from the governmen dependent on Integrated Data (BDT). If a farmer was not included in the BDT, they were not given priority in receiving assistance.

Table 2: Operational Definitions of Variables.

Number	Variable	Definition	Indicator
1	Effectiveness of the cattle assistance program policy (Y)	Is a measure of the extent to which the program achieves the established goals in improving cattle farming productivity, enhancing the welfare of farmers, and promoting cattle population growth	Target Effectiveness Timing Effectiveness Economic Effectiveness Mechanism Effectiveness (Sirajudin, 2014; Suryana, 2009)
2	Communication (Z)	Is the process of transmitting and exchanging information, ideas, or messages between two or more parties related to the implemented policy program.	Transformation Clarity Consistency (Tachjan, 2006)
3	Resources (X1)	Are assets or elements available for use in achieving the goals or implementing government policy programs.	Human Resources Financial Resources Policy Infrastructure (Pasolong, 2007)
4	Disposition or Attitude of Implementers (X2)	Is the attitude, mental attitude, or views held by individuals or groups responsible for the implementation of tasks or policies established.	Commitment Loyalty and work ethic Honesty Democratic nature Incentives (motivation) (Sabarno, 2008)
5	Bureaucratic Structure (X3)	Is the hierarchy within an entity related to the division of tasks, authority, and responsibilities in policy implementation.	Bureaucratic structure Organizational fragmentation (Winarno, 2014)

Timing: The timing aspect was categorized as a "top priority," indicating that the timing of the Bali cattle assistance program must be clearly defined due to frequent timing issues. To accelerate the program's timing, farmers and the livestock department must work together to ensure that calves give birth more quickly under the current program. Timing is critical, particularly when it comes to mentorship and cattle maintenance activities, which must be more effective and efficient for livestock farmers in Bone Bolango Regency. Improved coordination, stricter time management, and alignment of mentoring and cattle upkeep tasks are among the recommendations. This will help to ensure that the program runs on time and delivers the intended results.

Economics: The economic factor was categorized as a "low priority," implying low expectations and unsatisfactory economic outcomes. This means that the government not only provides help, but also counseling, insurance, and other programs that make it easier for farmers to benefit from government-provided livestock. This assistance positively impacts the local economy by improving farmers' incomes. However, the income obtained does not always meet farmers' expectations, especially when considering the costs involved in terms of time and effort during cattle maintenance. Farmers that have low economic expectations may be less enthusiastic about participating in the program. To optimize economic outcomes, the government has to combine cattle assistance with mentoring, insurance, and other beneficial programs. This allows farmers to gain more economic benefits from the program. However, it is also critical to moderate farmers' expectations by assisting them in understanding their obligations in cattle maintenance, as well as the costs they need to pay.

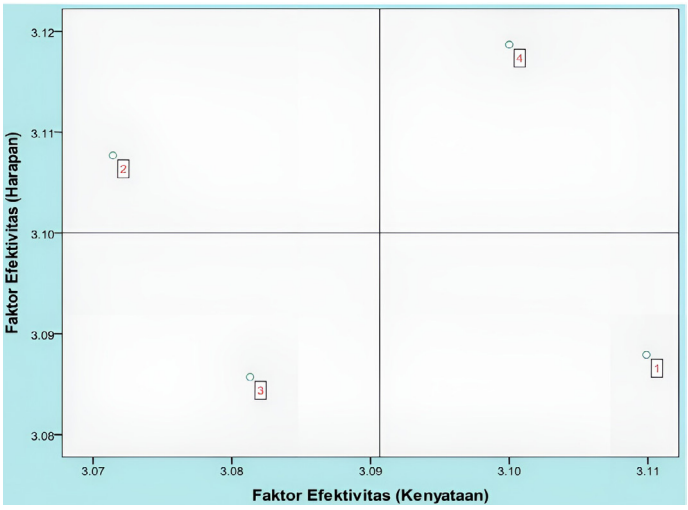

Figure 1: Importance performance analysis (IPA) results.

Mechanism: The mechanism factor in the distribution of Bali cattle assistance is more significant in the "maintain performance" aspect, which indicates that some procedures present obstacles to the community while others comply with the current regulations. To guarantee that the Bali cattle assistance mechanism functions properly, the government must provide suitable facilities and infrastructure, and distribute cattle in a systematic way. The mechanism was classified as "maintain performance" because the Bone

Bolango Regency Livestock Department actively guides and counsels farmers to enhance their livestock practices. Recommendations include improved provision of basic facilities and infrastructure, as well as organized livestock distribution. The Livestock Department must take an active role in guiding and counseling farmers to help them improve their cattle management practices. The Bali livestock assistance program might operate more efficiently and effectively if the mechanism is better implemented.

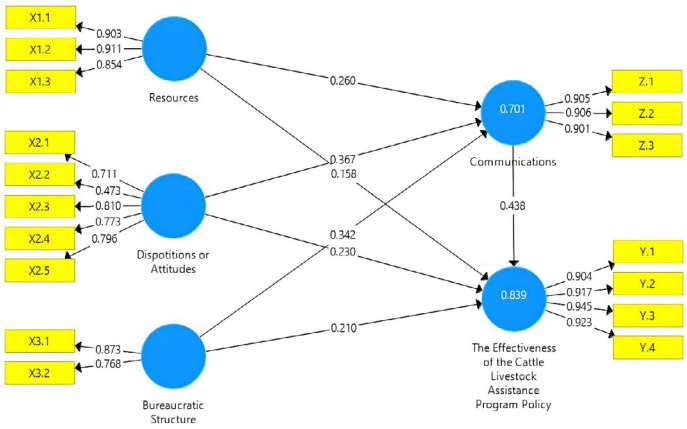

Figure 2: Confirmatory factor analysis (cfa) results.

SEM-PLS Analysis Results

Outer model: Confirmatory Factor Analysis is a technique for confirming or validating that the indicators utilized are appropriate for their respective variables. Based on the test results in Figure 2, one of the five variables, implementer disposition or attitude, had indicators with loading factor values less than 0.6. As a result, one indicator was deleted when designing the Structural Equation Modeling (SEM) model. SEM-PLS Structural Model can be seen in Figure 3.

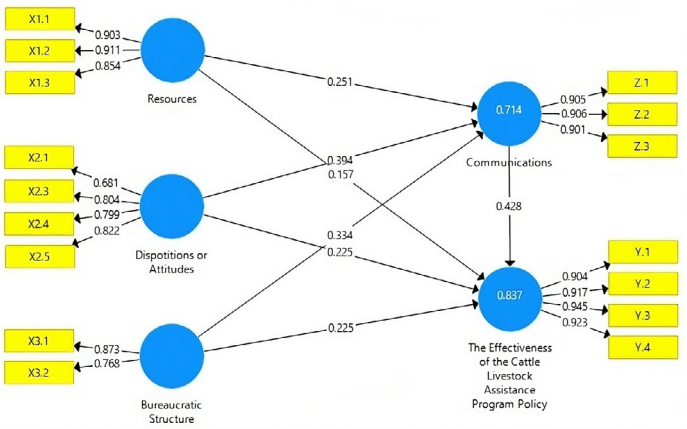

Figure 3: SEM-PLS structural model.

Table 3 shows that the AVE (Average Variance Extracted) values for the variables Effectiveness of the Cattle Assistance Program Policy (Y), Communication (Z), Resources (X1), Implementer disposition or attitude (X2), and Bureaucratic structure (X3) were in the fit category, indicating that the variables have good discriminant validity. Each research variable had a Composite Reliability value more than 0.6, suggesting that it was highly reliable. Furthermore, all of the research variables had Cronbach's Alpha values greater than 0.6, indicating strong reliability.

Table 3: Discriminant Validity, Composite Reliability and Cronbach's Alpha.

No	Variable	Discriminant Validity	Composite Reliability	Cronbach's Alpha
1	Sumber daya (X1)	0.792	0.919	0.869
2	Disposisi atau sikap pelaksana (X2)	0.606	0.859	0.783
3	Struktur birokrasi (X3)	0.676	0.806	0.628
5	Efektivitas kebijakan program bantuan ternak sapi (Y)	0.851	0.958	0.941
6	Komunikasi (Z)	0.817	0.931	0.888

Source: Processed Data, 2023.

Table 4: Structural Equations.

No.	Structural Equations	Description
1	$Z= 0.251X_1+0.394X_2+0.334X_3$	$R^2 = 0.714$
2	$Y= 0.157X_1+0.225X_2+0.225X_3+0.428Z$	$R^2 = 0.837$

Source: Processed Data, 2023.

Inner model: Based on Figure 2, the Structural Equation Modeling (SEM) equations can be formulated as follows: Z = 0.251X1 + 0.394X2 + 0.334X3 and Y = 0.157X1 + 0.225X2 + 0.225X3 + 0.428Z Structural equations can be seen in Table 4. Based on these equations, the results of the structural model analysis can be described as follows:

- Influence of Resources, Implementer Disposition or Attitude, and Bureaucratic Structure on Communication: The R Square value of 0.714 indicates that resources, implementer disposition or attitude, and bureaucratic structure have a 71.40% influence on communication in Bone Bolango Regency's cattle assistance program policy. The remaining 28.60% was influenced by variables other than the parameters of this research model. The coefficient of determination of 68.90% suggests that the influence of resources, implementer disposition or attitude, and bureaucratic structure on communication is strong, implying that all three variables have a significant simultaneous influence on communication.
- Influence of Resources, Implementer Disposition or Attitude, Bureaucratic Structure, and Communication on the Effectiveness of the Cattle Assistance Program Policy: The R Square value of 0.837 indicates that resources, implementer disposition or attitude, bureaucratic structure, and communication have an 83.70% influence on the effectiveness of the cattle assistance program policy in Bone Bolango Regency. The remaining 16.30% was influenced by variables other than the

Table 5: Hypothesis testing results.

No	Influence	$t_{Stat.}$	P_{Value}
1	Resources -> Communication	3.526	0.000
2	Disposition or attitude of implementers -> Communication	5.588	0.000
3	Bureaucratic structure -> Communication	3.909	0.000
4	Resources -> Effectiveness of cattle assistance program policies	2.468	0.014
5	Resources -> Communication -> Effectiveness of cattle assistance program policies	3.137	0.002
6	Disposition or attitude of implementers -> Effectiveness of cattle assistance program policies	2.912	0.004
7	Disposition or attitude of implementers -> Communication -> Effectiveness of cattle assistance program policies	4.265	0.000
8	Bureaucratic structure -> Effectiveness of cattle assistance program policies	2.764	0.006
9	Bureaucratic structure -> Communication -> Effectiveness of cattle assistance program policies	2.681	0.008
10	Communication -> Effectiveness of cattle assistance program policies	5.059	0.000

Source: Processed Data SEM-PLS, 2023; ^{ns} not significant; ***:** Significant at the 0.1 level (2-tailed); ****:** Significant at the 0.05 level (2-tailed); *****:** Significant at the 0.01 level (2-tailed).

- parameters of this research model. The coefficient of determination of 83.70% indicates that the influence of resources, implementer disposition or attitude, bureaucratic structure, and communication on the effectiveness of the cattle assistance program policy was substantial, implying that these four variables have a significant simultaneous influence on the policy's effectiveness.

Hypothesis Results

Based on the analysis results in Table 5, the hypothesis testing can be interpreted in detail as follows:

Influence of resources on communication: The probability value (P-value) of the influence of resources on communication was 0.000. The P-value was smaller than the alpha value of 5% (0.000 < 0.05), means resources have a positive and significant effect on policy communication for the cattle livestock assistance program in Bone Bolango Regency. These results show that if human resources, budget resources and infrastructure are more adequate, communication (coordination and socialization) of cattle assistance program policies in Bone Bolango Regency will improve.

Influence of implementer disposition or attitude on communication: The probability value (P-value) of the influence of the implementer's disposition or attitude towards communication was 0.000. The P-value was smaller than the alpha value of 5% (0.000 < 0.05), means the disposition or attitude of the implementer has a positive and significant effect on communication of policies for the cattle livestock assistance program in Bone Bolango Regency. These results show that if policy implementers get better and show an ideal attitude in implementing policies, communication, both coordination and policy integration will be better in optimizing the cattle livestock assistance program in Bone Bolango Regency.

Influence of bureaucratic structure on communication: The probability value (P-value) of the influence of bureaucratic structure on communication was 0.000. The P-value was smaller than the alpha value of 5% (0.000 < 0.05), means the bureaucratic structure has a positive and significant effect on policy communication for the cattle livestock assistance program in Bone Bolango Regency. These results show that the existence of an ideal bureaucratic structure with various standard operating procedures (SOP) that have been established will facilitate the coordination and communication process of the entire series of policies for the cattle livestock assistance program in Bone Bolango Regency.

Influence of resources on the effectiveness of the cattle assistance program policy: The probability value (P-value) of the influence of resources on communication was 0.014. The P-value was smaller than the alpha value of 5% (0.014 < 0.05), means resources have a positive and significant effect on the effectiveness of the cattle livestock assistance program policy in Bone Bolango Regency. These results show that the more adequate the resources related to the cattle assistance program, the more benefits it will provide in creating effective cattle assistance program policies in Bone Bolango Regency. The probability value (P-value) of Indirect influence (via Communication) was 0.002. The P-value was smaller than the alpha value of 5% (0.002 < 0.05), means resources through communication have a significant effect on the effectiveness of the cattle livestock assistance program policy in Bone Bolango Regency. This shows that communication can be a good intervention for the influence of resources on the effectiveness of cattle livestock assistance program policies. This means that communication is able to increase the role of resources in optimizing cattle livestock assistance program policies to be more effective or the policy achievements are in line with the targets (expectations) set by the Bone Bolango Regency Government.

Influence of implementer disposition or attitude on the effectiveness of the cattle assistance program policy: The probability value (P-value) of the influence of the implementer's disposition or attitude towards communication was 0.004. The P-value was smaller than the alpha value of 5% (0.004 < 0.05), means the disposition or attitude of the implementer has a positive and significant effect on the effectiveness of the cattle livestock assistance program policy in Bone Bolango Regency. These results show that policy implementers who are increasingly loyal and committed to implementing the program will have an impact on the effectiveness of the cattle livestock assistance program policy in Bone Bolango Regency. The probability value (P-value) of the indirect influence of the disposition variable or implementer's attitude was 0.000. The P-value was smaller than the alpha value of 5% (0.000 < 0.05), means the disposition or attitude of the implementer through communication has a significant effect on the effectiveness of the cattle livestock assistance program policy in Bone Bolango Regency. This shows that communication can be a good intervention to influence the disposition or attitude of implementers on the effectiveness of cattle assistance program policies. This means that good communication will be able to make the attitude of implementers in a policy more optimal in increasing the achievements of the cattle assistance program in Bone Bolango Regency or in this case the cattle assistance program will be able to achieve the target, time, economic and ideal mechanism aspects. and is beneficial for farmer breeders in Bone Bolango Regency.

Influence of bureaucratic structure on the effectiveness of the cattle assistance program policy: The probability value (P-value) of the influence of bureaucratic structure on communication was 0.006. The P-value was smaller than the alpha value of 5% (0.006 < 0.05), means the bureaucratic structure has a positive and significant effect on the effectiveness of the cattle livestock assistance program policy in Bone Bolango Regency. These results show that appropriate bureaucracy with various good operational procedures will make cattle assistance program policies more effective. The probability value (P-value) of the indirect influence of the bureaucratic structure variable was 0.008. The P-value was smaller than the alpha value of 5% (0.008 < 0.05), means the bureaucratic structure through communication has a significant effect on the effectiveness of the cattle assistance program policy in Bone Bolango Regency. This shows that communication can be a good intervention for the influence of bureaucratic structure on the effectiveness of cattle livestock assistance program policies. This means that good communication and coordination will enable the bureaucratic structure to work well to achieve cattle livestock assistance program policies in Bone Bolango Regency that are increasingly effective and encourage added economic value for farmers.

Influence of communication on the effectiveness of the cattle assistance program policy: The probability value (P-value) of the influence of communication on communication was 0.000. The P-value was smaller than the alpha value of 5% (0.000 < 0.05), means communication has a significant effect on the effectiveness of the cattle assistance program policy in Bone Bolango Regency. These results show that the better the communication between all parties, the better the collaboration between stakeholders will be, which ultimately makes the cattle livestock assistance program policy in Bone Bolango Regency more effective.

The development of livestock farming in Bone Bolango Regency is part of an agriculture-oriented strategy aimed at comprehensively developing livestock farming to improve rural people' livelihoods and wellbeing. Livestock-based economic activities provide promising opportunities. When compared to other sub-sectors within the Bone Bolango Regency agriculture sector, Bali cattle farming productivity has not yet reached its peak. This was believed to be due to traditional farming practices, low-quality and quantity feed, a scarcity of breeding bulls, poor reproductive performance, insufficient farmer knowledge of reproduction and animal health management, and a lack of infrastructure to support livestock production. The Bali cattle farming business faces challenges in providing effective direction and control due to its small-scale, basic management, limited technology use, and decentralized locations (Džermeikaite *et al*., 2023).

In order to develop Bali cattle, the government has implemented two policies: extensification and intensification. The expansion of Bali cattle development focuses on increasing the livestock population, which is aided by the acquisition and enhancement of breeding quality, disease control, guidance and business development, credit assistance, feed procurement and marketing. According to Isbandi (2004), farmers are guided and mentored to transition traditional farming practices into commercial livestock production through the use of appropriate zootechnical procedures. These zootechnical methods cover the seven stages of Bali cattle farming: excellent breeding stock, healthy animal housing, proper nutrition provision, disease control, reproductive management, post-harvest management, and effective marketing.

Resources include budget, personnel, equipment, and infrastructure, all of which can be used to accomplish the cattle assistance program. This finding implies that proper resources have a favorable and significant effect on the transmission of cattle assistance program policies. This means that when the Bone Bolango Regency government has adequate access to these tools, it may communicate more effectively with the community about the livestock

assistance program, including its benefits and conditions. Furthermore, proper resources can directly improve program efficacy since the program has the financial backing and infrastructure that need to operate efficiently.

The disposition or attitude of implementers relates to the attitudes, motivations, and commitment of individuals in charge of implementing the cattle assistance program. This research suggests that a positive attitude among program implementers has a favorable and significant impact on policy communication for cattle assistance programs. Positive attitude among implementers leads to greater enthusiasm in interacting with the community about the initiative. The mindset of implementers has been closely related to program effectiveness. Implementers who were extremely devoted and driven to carry out the program are more likely to meet its objectives.

The Bone Bolango Regency government's bureaucratic structure relates to its organization and governance. This research demonstrates that a good and efficient bureaucratic structure can facilitate the communication of livestock assistance program policies. An efficient bureaucratic framework ensures that information and instructions for the cattle assistance program flow smoothly from upper levels to field implementers. Furthermore, a good bureaucratic structure can have a direct positive impact on program success by improving program implementation and supervision efficiency.

Communication plays an important role to the overall success of the cattle assistance program. Effective communication with the community on the program's objectives, advantages, and requirements can boost participation and understanding of the program. Furthermore, efficient communication has a direct influence on program effectiveness. Information on program adjustments or improvements can be properly communicated to implementers and the community, making program implementation more efficient and effective.

The findings indicates that resources, implementer attitudes, bureaucratic structure, and communication all play a role in the success of the cattle assistance program in Bone Bolango Regency. Proper handling of these aspects can improve communication and overall program performance. Program efficacy was critical to improve farmer income and welfare, as well as developing high-quality, competitive livestock populations. The cattle assistance program should encourage the use of high-quality breeding stock, adequate health care, and effective livestock management. High-quality cattle will have an advantage in the market (Herlin *et al*., 2021; Tuyttens *et al*., 2022).

The cattle assistance program's policy need improvement in terms of economics and regulations governing livestock distribution schedules. In terms of economics, there is a need to improve the budget to control the cattle trade so that prices refer to the weight of the cattle, rather than relying exclusively on community estimations, as has been the norm in the past (Manuelian *et al*., 2020). Furthermore, technology should be used to enable access to information regarding cattle pricing and livestock for sale by farmers. Furthermore, the government should establish clear laws for the timing of livestock changeover. Evaluations need to be performed on the cattle assistance program's targets and distribution systems. This is because government-provided cattle assistance frequently causes issues in the community. Some members of communities believe that the implementation does not reach the intended recipients since it is given to people with poor facilities, low competence, and a weak commitment. As a result, the cattle provided are frequently sold before the specified turnover time, and other inconsistencies emerge within the farming community. These activities in accordance with Rahman's (2016), which highlight the Gorontalo Provincial Government's efforts to support the livestock assistance program. These efforts include infrastructure development or improvement in livestock farming, strengthening farmer institutions through the formation and empowerment of farmer groups and cooperative associations, improved extension services through the strengthening of extension agencies and extension workers, increased livestock financing through improved farmer access to financing systems, creating favorable livestock markets, and enhancing farmer capacity through technical guidance.

Government farmer-level programs are often aimed at increasing domestic livestock population and meat production, as well as improving the economic conditions of smallholder farmers. Unfortunately, the aforementioned procedures were implemented while the meat importation program was still active. One could argue that the government's meat sufficiency policies are in some ways contradictory and so inefficient. Smallholder farmers are the most vulnerable stakeholders in the beef cattle production system. Smallholder farmers frequently have limited access to the resources, information, and services they need to build a better future. They must be consistently empowered in terms of input technology, financial assistance, information, and markets (Agus and Widi, 2018; Basyar, 2021). In practice, relatively few policy decisions offer a clear solution. Effective communication of potential consequences is critical, particularly for policies with diverse impacts, many outcomes, extended durations, and high uncertainty. This intricacy, if not handled appropriately, has the potential to paralyze the discourse on livestock and sustainable development, making it impossible to achieve the easy wins that do exist. Handling this complexity appropriately entails engaging stakeholders

in forms that they can understand, ensuring that all parties have an opportunity to state their case. Policymakers should identify potential trade-offs, document the evidence base for decision-making, and perform continuous evaluation of policies that are implemented to ensure that they are reaping their intended advantages in the most effective way. It means acknowledging and accepting that livestock policy is a decision-making challenge in complex systems that necessitates a complex systems lens, as well as exercising prudence when enacting policies with unpredictable implications (Brick *et al*., 2018; Nyström *et al*., 2019; Mehrabi *et al*., 2020).

To improve the cattle assistance program policy, Bone Bolango Regency government should consider the following (1) Enhance the cattle trade regulatory framework to ensure that cattle prices correspond to their weight rather than relying on community estimations. Utilize technology to provide accessible information about cattle prices and the sale of cattle by farmers. Monitor and enforce clear timelines for cattle distribution. (2) Conduct regular evaluations of the target beneficiaries and the distribution mechanisms of the cattle assistance program. Ensure that the assistance reaches those with adequate facilities, competence, and strong commitment to the program's objectives. (3) Encourage farmers to make livestock sales decisions that align with the program's goals. For instance, farmers who have male cattle could consider selling them when they reach maturity with the intent to purchase two female cattle. This approach will increase the cattle population and community welfare. Therefore, financial literacy and management of assistance to farmers should be promoted.

CONCLUSIONS AND RECOMMENDATIONS

The cattle assistance program in Bone Bolango Regency tends to be effective, both materially and non-materially. However, there is still a need for improvements and evaluations due to the community's lack of understanding about the Bali cattle assistance provided by the government. Resources, disposition or the attitude of implementers, and bureaucratic structure and communication have a positive and significant impact on the effectiveness of the cattle assistance program policy in Bone Bolango Regency, both directly and indirectly. This demonstrates that public policy factors in the development of the agriculture and livestock sectors in Bone Bolango Regency will enhance the effectiveness of the cattle assistance program for the prosperous livelihood of farmers and livestock breeders. To improve the assistance program, policymakers should (1) strengthening the cattle trade regulatory structure. (2) Evaluate the cattle assistance program's target beneficiaries and distribution systems on a regular basis. (3) Encourage the farmers to make animal sales decisions that are consistent with the program's goals.

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NOVELTY STATEMENT

The novelty in this research lies in the modeling of factors in the cattle assistance program policy using SEM-PLS and the use of Importance Performance Analysis (IPA) to assess policy effectiveness. Furthermore, the novelty in the findings is that the communication factor serves as a valuable intervening variable in enhancing the influence of resources, the disposition or attitude of implementers, and bureaucratic structure on the effectiveness of the cattle assistance program policy.

AUTHOR'S CONTRIBUTIONS

Suparmin Fathan and Nibras K. Laya: Idea and design.
Siti R. Machieu and Mohammad Z. Hippy: Data collection.
Safriyanto Dako, Nibras K. Laya and Sayekti Handayani: Data analysis.
Suparmin Fathan, Safriyanto Dako and Sayekti Handayani: Write the manuscript.
Suparmin Fathan: Revision

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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