Effectiveness of subsidized fertilizer distribution to rice farmer In Lemoe, Bacukiki District, Parepare, South Sulawesi

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Abstract. Subsidized fertilizer is one of the government's efforts to ensure the availability of fertilizer. However, farmers have difficulty in accessing subsidized fertilizers. This study aims to find out the effectiveness of subsidized fertilizer distribution in Lemoe Village, Bacukiki District, Parepare City. The analysis method used is descriptive quantitative by using effectiveness analysis. The results showed that the distribution process there are 4 lines of fertilizer storage up to farmers. Subsidized fertilizer distribution is carried out in a closed system based on the Definitive Plan of Group Needs (RDKK) with the Highest Retail Price (HET) as stipulated in the Regulation of the Minister of Agriculture on Allocation and HET of Subsidized Fertilizer in the Agricultural Sector. Overall the distribution of fertilizer felt by farmers runs effectively, with this it can be known that the subsidized fertilizer distribution program in Lemoe Village, Bacukiki District, Parepare City has been implemented in accordance with the guidelines for the implementation of fertilizer subsidies.

1. Introduction
In supporting the agricultural sector in Indonesia, the government conducts several programs to increase farmers' production and productivity in order to achieve national food security. One form of government intervention is to provide subsidized fertilizer assistance. This aims to ease the burden on farmers in the provision and use of fertilizer in their farming activities. Indonesia has used agricultural input subsidies, especially on fertilizer, to stimulate agricultural production, largely in pursuit of the goal of rice self-sufficiency [1].

Based on BPS 2018 data from the Agriculture Office of Parepare City, Bacukiki sub-district is the district with the largest amount of rice production in the city of Parepare, with Lemoe village being the area where farmers receive the most subsidized fertilizer assistance from the government. This is seen in table 1 [2].

Table 1. Harvested Area, Production, and Productivity of Rice Field by Subdistrict in Parepare Municipality, 2017.

| Subdistrict     | Harvested Area (Ha) | Production (ton) | Productivity (kuintal/ha) |
|-----------------|---------------------|------------------|---------------------------|
| Bacukiki        | 780.6               | 3,950            | 50.60                     |
| Bacukiki Barat  | 62.8                | 318              | 50.60                     |
This fertilizer subsidy is provided as an effort by the government to guarantee the availability of fertilizer for farmers at a price that has been set by the government, namely the highest retail price (HET). However, in reality farmers as beneficiaries of this program are still difficult to access. Farmers often find rare fertilizers, fertilizer prices above the Highest Retail Price (HET) and misuse of fertilizer distribution mechanisms. In addition, the determination of the HET that has been set, still found various problems, both in sales by retailers who are perceived to be less so affordable by farmers, there are still many farmers who complain that the price of fertilizer at the retailer level is not in accordance with the applicable HET [3].

In seeing whether the objectives of the programs implemented by the government have been achieved or not, an approach called effectiveness is carried out. Effectiveness is the achievement of agreed goals for joint efforts. The level of achievement of that goal demonstrates effectiveness”. Prasetyo Andri (2013) explained the concept of effectiveness as a condition that shows the extent to which the plan can be implemented / achieved. Effectiveness is one of the measures in determining the success of a program / plan [4].

The policy of subsidizing organic fertilizer can be said to be successful if the community receives benefits from organic subsidies to ease the burden in the provision and use of fertilizer for its farming activities. Therefore in the implementation of the program must be with the principle of work based on the right price, right amount, right type and right time [5].

Based on the description that has been stated in the background and previous explanations, researchers are interested in conducting research on the distribution of subsidized fertilizers to farmers in Lemoe Village, Bacukiki District, Parepare City; both the process of subsidized fertilizer distribution and the effectiveness of subsidized fertilizer distribution that refers to the accuracy of prices, amount, type, and time.

2. Research Method

The research was conducted in Lemoe Village, Bacukiki Subdistrict, Parepare City, South Sulawesi. The determination of the research area was done deliberately with the consideration of Lemoe Village is the recipient of the most subsidized fertilizer assistance in Bacukiki District of Parepare City. The research time was conducted in May-June 2019. The respondents were 32 people who were divided into 20 combined farmer groups located in the Village Lemoe Bacukiki District, Parepare City conducted by systematic random sampling method. The data used are primary data and secondary data. To find out the effectiveness of subsidized fertilizer distribution to rice farmers using effectiveness analysis. The formula to know the percentage of achievement is as follows.

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\text{Accomplishment Percentage} = \frac{\text{Respondent score}}{\text{Total Expected Score}} \times 100
\] (1)

Information:

- 70% - 100% = Effective
- 34% - 66.99% = Less Effective
- 0% - 33.99% = Uneffective

This study used descriptive quantitative analysis, then the respondents' answers on the questionnaire need to be changed in the form of figures to follow up the data obtained, the answers available are scored in stages ranging from the highest to the lowest.
1. Value 3 for alternative answer (a) which has an effective category
2. Value 2 for the alternative answer (b) which has a less effective category
3. Value 1 for alternative answer (c) which has an ineffective category
3. Results and Discussion

The effectiveness of subsidized fertilizer distribution is an analysis of the benefits obtained by farmers with the government's fertilizer subsidy program. The indicators that will be analyzed in the research related to the effectiveness of subsidized fertilizer distribution, namely price accuracy, amount accuracy, type accuracy, and time accuracy.

3.1. Right Price

Right price is a condition where the purchase price of fertilizer by farmers in cash at the level of retailers or official kiosks per saknya equal to the highest retail price (Syafa'at, et al 2007). The selling price applied refers to the highest retail price that has been set, therefore, the government sets the Highest Retail Price (HET) for subsidized fertilizers distributed by producers. The effectiveness of price can be seen in Table 2 [6].

Table 2. Suitability of Subsidized Fertilizer Distribution Price in Lemoe Village, Bacukiki District, Parepare City, 2019.

| Jenis Pupuk | Price    | Respondent | Percentage (%) | Accomplishment Percentage (%) |
|------------|----------|------------|----------------|-------------------------------|
| Urea       | Effective Rp 1,000 | 25          | 78.13          | 78.13                         |
|            | Less Effective Rp 1,500 | 7           | 21.88          | 14.58                         |
|            | Not Effective Rp 2,000 | 0           | 0.00           | 0.00                          |
| SP36       | Effective Rp 2,000 | 25          | 78.13          | 78.13                         |
|            | Less Effective Rp 1,800 | 7           | 21.88          | 14.58                         |
|            | Not Effective Rp 2,500 | 0           | 0.00           | 0.00                          |
| ZA         | Effective Rp 1,400 | 24          | 75.00          | 75.00                         |
|            | Less Effective Rp 1,200 | 8           | 25.00          | 16.67                         |
|            | Not Effective Rp 1,600 | 0           | 0.00           | 0.00                          |
| NPK        | Effective Rp 2,300 | 28          | 87.50          | 87.50                         |
|            | Less Effective Rp 2,000 | 4           | 12.50          | 8.33                          |
|            | Not Effective Rp 2,500 | 0           | 0.00           | 0.00                          |
| Organic    | Effective Rp 500 | 23          | 71.88          | 71.88                         |
|            | Less Effective Rp 400 | 9           | 28.13          | 18.75                         |
|            | Not Effective Rp 1,000 | 0           | 0.00           | 0.00                          |
| Total      | 463.54              |             |                |                               |
| Average    | 92.71               |             |                |                               |

All 32 respondents with a percentage of achievement of 92.71% stated that the price of subsidized fertilizer in accordance with the Highest Retail Price (HET) Is Effective. That is, the government in this case as the party that sets the price of fertilizer is considered to have been effective in setting the Highest Retail Price (HET).

3.2. Right Amount

In the government’s efforts to create food security, farmers who take precedence in the RDKK submission process are farmers who work on rice crops, and rice farmers who have joined the farmer group can apply for RDKK in accordance with the needs of farmers in developing their farming businesses. The calculation of the exact effectiveness of the amount of subsidized fertilizer distribution can be seen in Table 3.
Table 3. Amount Suitability of Subsidized Fertilizer Distribution in Lemoe Village, Bacukiki District, Parepare City, 2019.

| Jenis Pupuk | Amount | Respondent | Percentage (%) | Accomplishment Percentage (%) |
|-------------|--------|------------|----------------|-----------------------------|
| Urea        | • Effective | 300 | 31 | 96.9 | 96.8 |
|             | • Less Effective | < 300 | 1 | 3.1 | 2.08 |
|             | • Not Effective | > 300 | 0 | 0.0 | 0.00 |
| SP36        | • Effective | 100 | 19 | 59.4 | 59.30 |
|             | • Less Effective | < 100 | 13 | 40.6 | 27.10 |
|             | • Not Effective | > 100 | 0 | 0.0 | 0.00 |
| ZA          | • Effective | 50 | 21 | 65.6 | 65.60 |
|             | • Less Effective | < 50 | 11 | 34.4 | 22.90 |
|             | • Not Effective | > 50 | 0 | 0.0 | 0.00 |
| NPK         | • Effective | 250 | 31 | 96.9 | 96.80 |
|             | • Less Effective | < 250 | 1 | 3.1 | 2.10 |
|             | • Not Effective | > 250 | 0 | 0.0 | 0.00 |
| Organic     | • Effective | 1000 | 25 | 78.1 | 78.10 |
|             | • Less Effective | < 1000 | 7 | 21.9 | 14.50 |
|             | • Not Effective | > 1000 | 0 | 0.0 | 0.00 |
| Total       | - | - | - | - | 465.28 |
| Average     | - | - | - | - | 93.06 |

Table 3 shows that the accuracy of the amount of subsidized fertilizer distribution is in the Effective category, with an effectiveness value of 93.06%. This is based on the amount of fertilizer distributed by the government has been in accordance with existing provisions, namely as many as 5 types of fertilizers namely Urea, SP36, NPK, ZA, and Organic.

3.3. Right Type
The effectiveness of this type of accuracy is very important for the sustainability of agricultural activities of farmers. The calculation of the effectiveness of the right type of subsidized fertilizer distribution can be seen in Table 4.

Table 4. Suitability of Subsidized Fertilizer Distribution Type in Lemoe Village, Bacukiki District, Parepare City, 2019.

| Category | MT 1 | MT 2 | Average |
|----------|------|------|---------|
|          | Respondent | Percentage | Accomplishment Percentage | Respondent | Percentage | Accomplishment Percentage |  |
| Effective (5 fertilizer) | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Less Effective (3 fertilizer) | 15 | 46.875 | 31.25 | 15 | 46.875 | 31.25 | 48.96 |
| Not Effective (2 fertilizer) | 17 | 53.125 | 17.71 | 17 | 53.125 | 17.71 |  |

Table 4 shows that the effectiveness of type accuracy is in the category of less effective with an effectiveness achievement value of only 48.96%. This is because farmers who do not all use the five types of fertilizer provided by the government. Most farmers only choose to use 2-3 types of fertilizer only.
3.4. Right Time
Distribution with the effectiveness of time accuracy is a principle that ensures that farmers can buy subsidized fertilizer before the planting period begins. The timeliness of subsidized fertilizer distribution can be seen in Table 5

| Fertilizer Distribution | Respondent | Percentage (%) | Accomplishment Percentage (%) |
|-------------------------|------------|----------------|-------------------------------|
| Fertilization 1         |            |                |                               |
| • Effective             | 32         | 100.0          | 100.0                         |
| • Less Effective        | 0          | 0.0            | 0.0                           |
| • Not Effective         | 0          | 0.0            | 0.0                           |
| Fertilization 2         |            |                |                               |
| • Effective             | 32         | 100.0          | 100.0                         |
| • Less Effective        | 0          | 0.0            | 0.0                           |
| • Not Effective         | 0          | 0.0            | 0.0                           |
| Total                   |            |                | 200.0                         |
| Average                 |            |                | 100.0                         |

3.5 Fertilizer Distribution Effectiveness
Based on the analysis of the effectiveness of 4 aspects of price accuracy, timeliness, type accuracy and accuracy of the amount on the distribution of subsidized fertilizer rice farmers in Lemoe Village, Bacukiki District, Parepare City. The overall results of the analysis of the effectiveness of subsidized fertilizer distribution in Table 6.

| Variable | Accomplishment Percentage (%) | Category     |
|----------|-------------------------------|--------------|
| Price    | 92.71                         | Effective    |
| Amount   | 93.10                         | Effective    |
| Type     | 48.96                         | Less Effective |
| Time     | 100.00                        | Effective    |
| Average  | 83.70                         | Effective    |

4. Conclusion
Subsidized fertilizer distribution program based on four accuracy that is appropriate price is classified as effective because it is in accordance with the HET determined by the government, precisely the amount is classified as effective because the amount of fertilizer provided in accordance with the needs of agricultural land as farmers have proposed in the proposal RDKK, exactly the type is classified as less effective because farmers who do not all use the five types of fertilizer provided by the government, while on time is classified as effective where the distribution of subsidized fertilizer from the Government has been available before the planting period begins at least one month. Overall the distribution of fertilizer felt by farmers runs effectively, with this it can be known that the subsidized fertilizer distribution program in Lemoe Village, Bacukiki District, Parepare City has been implemented in accordance with the guidelines for the implementation of fertilizer subsidies.

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