A STUDY OF SUBSIDIZED FERTILIZER PROGRAM DISTRIBUTION EFFECTIVENESS IN GORONTALO UTARA

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ABSTRACT

This research set aims to (1) measure the need and availability of subsidized fertilizer, (2) analyze the effectiveness of the subsidized fertilizer program, and (3) examine the strategy for distributing subsidized fertilizer programs. The research data sources are secondary, from the Department of Agriculture in Gorontalo Utara, and primary, from an interview and questionnaire distribution. The research data analyses are the descriptive analysis, IPA, and SWOT. The results exhibit that (1) subsidized fertilizer available in Gorontalo Utara cannot cater to the farmers' need for subsidized fertilizer. The effectiveness is only 62.7% and the district still lacks 37.3% of the total fertilizer called for by its farmers, (2) Subsidized fertilizer program distribution in Gorontalo Utara is still considered ineffective. The local government, in collaboration with other parties, should equalize the distribution. Our GAP and IPA analyses attest to it and indicate that quantity and time efficiency is still ineffective and hence demands augmentation. Meanwhile, the aspects of place and price efficiency are also ineffective, but they are on a low priority scale. Moreover, type and quality efficiency has been effective, and (3) The determined strategy for subsidized fertilizer distribution in Gorontalo Utara, based on the SWOT analysis, is in Quadrant IV, i.e., the diversification strategy.

Keywords: *Distribution, Subsidized Fertilizer, Strategy*

INTRODUCTION

The agricultural sector is considered one of the critical sectors in the economy of Indonesia. The sector criticality for advocating the national food security program should be supported by food policies, e.g., agricultural subsidy affording, by which the government allocates subsidy budget in the form of fertilizer subsidy.

As the government strives to achieve its food self-sufficiency target, the farmers' needs of fertilizer are increasing, making the government elevate the budget allocation by the local demands and needs. By fulfilling the need for subsidized fertilizer, the government is expecting to be able to distribute subsidized fertilizer effectively.

Fertilizer is one of the strategic production factors which enhance farming production and productivity, and successful agricultural activities are apart of fertilizer provision. Hence, the government, allowing farmers to acquire fertilizer at six efficiencies, namely price, place, type, quality, time, and quantity, and escalate both production and productivity, confers subsidized

fertilizer assistance and is expecting an effective distribution of the assistance.

Effectiveness is commonly used to gauge the extent of success in carrying out an activity. Accordingly, effectiveness constitutes an approach to the extent of program or objective achievement. As regards the subsidized fertilizer program policy, it is considered successful when the community can elicit the benefit of the program and make its farming activity more efficient. That being so, the policy implementation should be in conforming with the six efficiencies.

The government, including the working cabinet government, is long concerned about the implementation of fertilizer subsidy policy. Several government institutions have conducted relevant studies. The Fiscal Policy Agency, Ministry of Finance, BAPPENAS, and Audit Board of the Republic of Indonesia report some ineffectiveness in the implementation of fertilizer subsidy policy, fertilizer scarcity and costly fertilizer prices, which are two challenges confronted by farmers at the beginning of the growing session, inefficient fertilizer production and distribution, and ineffective and dualist fertilizer distribution (Rangkuti, 2012:291). And yet, the government must escalate the budget for subsidized fertilizer as a consequence of determining a much lower subsidized fertilizer price than that at a market price. The subsidized urea fertilizer is distributed at IDR1,800/kg, the policy of which has been enacted since IDR2012. Meanwhile, the subsidized NPK fertilizer is distributed at IDR2,300/kg, the policy of which has been applied since 2010. The price of the subsidized fertilizer per kg will increase because of Rupiah inflation and depreciation which happen every year. That government policy is a derivative product of the policy to meet food needs from domestic production, or called food self-sufficiency achievement. The policy, for the establishment of the Republic, makes up the core of the national food policies (Lubis *et al*., 2017:59).

Subsidized fertilizer is distributed in several stages from some lines, i.e., subsidized fertilizer distributed from the producing manufacturers (Line I). Manufacturers, as the producers of subsidized fertilizer, focus on delivering fertilizer to farmers to improve farming and thereby increasing agricultural commodity productivity and production. Subsidized fertilizer is targeted for agricultural sectors attributed to food cultivation, horticulture, plantation, greeneries, and fodder. It is notably given to farmers, planters, and animal farmers who run an area of at most two hectares every growing session per farmer family. Despite the established mechanism of subsidized fertilizer program implementation, there are many issues found.

Fertilizer always poses a crucial farming problem. Fertilizer scarcity is mostly feared by farmers at the beginning of the growing season. That being so, the government must intensify supervision to make subsidized fertilizer distribution efficient in target and time. The Ministry of Agriculture distributed 9.55 million tons of subsidized fertilizer in 2019 and gave priority to agricultural

production centers. The farmers' need for fertilizer is ever-increasing when the government more seeks to achieve its target for food self-sufficiency (Sarwani, 2019:79).

As stated in Decree Number 821/SK/06/Dp-PSP/I/2020 concerning Allocation and the Highest Retail Price, subsidized fertilizer in the area of Gorontalo Utara is urea of 45.533 tons, SP36 of 5,386 tons, ZA of 8,992 tons, NPK of 50,745 tons, and organic of 25,511 tons. As such, the total subsidized fertilizer distributed in Gorontalo Province is 133,167 tons (Department of Agriculture in Gorontalo Province, 2020).

Gorontalo Utara is also facing off different issues concerning the subsidized fertilizer program. Several field activities are not operating aligned with the government instruction. Pertinent to the 2020 subsidized fertilizer allocation, 11 subdistricts in Gorontalo Utara elicited 23,325.92 tons of fertilizer, namely Urea of 9,078.60 tons, SP36 of 65.46 tons, ZA of 674.86 tons, NPK of 10,139.28 tons, and organic of 3,367.72 tons. The fertilizer is targeted to the fulfillment of agricultural food lands, *inter alia*, dry lands of 42,598 ha and field lands of 6,256 ha (DTPHP, 2020).

Here are several problems found at both subdistrict and village levels in Gorontalo Utara: unfair and inefficient subsidized fertilizer distribution, fertilizer quote reduction, unregistered subsidized fertilizer recipients in e-RDKK, market dualism, in which two subsidized fertilizer, Urea and NPK sold at IDR1,800/kg and IDR2,300/kg, respectively, whereas non-subsidized urea and NPK are sold at IDR6,000/kg and NPK IDR7,000/kg, respectively, excessive fertilizer use which does not suit the fertilizer use recommendation, i.e., Urea of 200 kg/ha, NPK of 300 kg/ha, and organic of 1,000 kg/ha, expensive subsidy price, fertilizer misuse at the retailer level, subsidized fertilizer sale or rent, the return and the interest of which are given after harvesting, lack of supervision and strict sanctions for discrimination at a fixed price, and fertilizer scarcity. The problems lead to fertilizer scarcity and cause a mass demo to one of the subsidized fertilizer retailers at the subdistrict level.

Building on the background and sustained by literature studies, we make a research on the effectiveness of subsidized fertilizer program distribution in Gorontalo Utara.

RESEARCH METHODS

This research uses surveys to collect secondary and primary data. A survey is a common method to collect empirical data through interviews and observation. It also uses a qualitative approach to gain a clear and complete description of subsidized fertilizer distribution effectiveness in Gorontalo Utara. The research population covers 2,125 farmers registered in the Group Needs Definitive Plan (RDKK) from 11 subdistricts. Two subdistricts are chosen as the research area. The research uses a purposive sampling method, which enables us to select representative samples based on the consideration of the research area. The research samples are 96 in number. Sugiyono (2015:71)

contends that the purposive sampling technique is frequently used by program researchers by virtue of its effectiveness and efficiency. This research uses some data analysis techniques as follows:

1. Triangulation Technique (Trend)

This technique is used to examine the availability and needs of subsidized fertilizer in Gorontalo Utara by comparing information or data between stakeholders.

2. GAP Analysis (Graphs Scatter/dot)

The GAP analysis is a measurement method to identify the gap between variable performance and consumer expectation for the variable. The GAP analysis is part of the IPA (Importance-performance Analysis) method. The method IPA, also a quadrant analysis, aims at gauging the relationship between consumer perception and product/service quality promotion priorities. Data from respondent assessment of the importance and performance variables in each service attribute is quantified for the conformity between the attributes and the effectiveness of subsidized fertilizer distribution in Gorontalo Utara.

3. SWOT Analysis

SWOT stands for strengths, weaknesses, opportunities, and threats. SWOT aims at investigating the organization's strategic factors which can clearly define what external opportunities and threats the organization is facing and how the organization addresses them using its strengths and weaknesses. The secondary data sources are the Department of Agriculture in Gorontalo Province, Statistics Indonesia in Gorontalo Utara, and the Department of Horticulture and Plantation Food Crops.

RESULT AND DISCUSSION

A. Subsidized Fertilizer Need and Availability in Gorontalo Utara

The needs and availability of subsidized fertilizer are two crucial issues in subsidized fertilizer distribution at the farmer level. Farmers often face off subsidized fertilizer scarcity at the beginning of the growing season.

Table 1. The Gap between Needs and Availability of Subsidized Fertilizer in Gorontalo Utara Building on 2020 e-RDKK

Land Area (Ha)	**Need for Subsidized Fertilizer (Tons)**				
	Urea	**SP-36**	**ZA**	**NPK**	**Organic**
Field 5,637.30 Dry 76,705.50	34,544.16	1,285.60	6,530.38	50,626	75,659.97
82,342.80	**168,643.11**				
Land Area (Ha)	**Availability (Realization) Subsidized Fertilizer (Tons)**				
	Urea	**sP-36**	**ZA**	**NPK**	**Organic**
Field 3,637.50 Dry 48,004.50	15,015.50	20	380	12,502.80	320
51,642	**28,238.30**				

Land Area (Ha)	Gap Between Needs and Availability				
	Urea	SP-36	ZA	NPK	Organic
Field 1,998.80 Dry 28,700.80	19,528.66	1,256.60	6,150.38	38,123.20	75,339.97
30,700.80	**140,407.81**				

As manifested in Table 1, Gorontalo Province, commensurate with the 2020 e-RDKK proposal, was in need of 168,646.11 tons but the fertilizer availability or realization was only 28,238.30 tons or 62.7%, and the lack of subsidized fertilizer, namely 140,407.81 tons or 4 37.3%, was remained unfulfilled. This is indicative of subsidized fertilizer lack or scarcity in Gorontalo Utara.

Furthermore, subsidized fertilizer needed at the farmer level, based on 96 respondents with a total land area of 12 ha is urea fertilizer of 240 tons, SP36 of 180 tons, ZA of 120 tons, Phonska of 360 tons, and organic of 1,200 tons.

Meanwhile, the field evidence posits that fertilizer scarcity is bred by subsidized fertilizer constrain by the government. Most farmers with higher capital can access subsidized fertilizer easily. The wider the land area, the higher the need for inorganic fertilizer. Farmers prefer inorganic fertilizer due to habits.

The results point out that subsidized fertilizer is ineffective as the accuracy level of the five indicators is 36.25%, which is lower than 80%.

B. Effectiveness of Subsidized Fertilizer Program Distribution in Gorontalo Utara

Distribution is distributing (giving, delivering) things to several people or places. Distribution is measured based on six efficiencies. The gap analysis result is delineated referring to the effectiveness criteria standard. In the concept of effectiveness, the real-life condition ≥ 90% is considered effective. The criteria of effectiveness refer to Hasanah and Anitasari (2019:6): (1) > 100% = very effective, (2) 90-100% = effective, (3) 80-90% = acceptable, (4) 60-80% = less effective, (5) < 60% = ineffective.

The analysis results of subsidized fertilizer program distribution effectiveness in Gorontalo Utara are:

1. Quantity Efficiency

The effectiveness level in light of quantity efficiency is 62.57%, which is considered less effective. One question item is ineffective at a score of 59.91%. It shows that subsidized fertilizer scarcity in Gorontalo Utara happens as the quantity of fertilizer distributed cannot cater to farmers' needs.

2. Type Efficiency

The effectiveness level in light of type efficiency is 82.99%, which is considered acceptable. It shows that subsidized fertilizer types used by farmers in Gorontalo Utara are congruent with farmers' needs and expectations.

3. Time Efficiency

The effectiveness level in light of quantity efficiency is 67.35%, which is considered less effective. It shows some delays in subsidized fertilizer distribution in Gorontalo

Utara in regard to the beginning of the growing season, leading to fertilization delay and cost increase because farmers should buy non-subsidized fertilizer in either cash or credit.

4. Quality Efficiency

The effectiveness level in light of quality efficiency is 87.33%, which is considered acceptable. It shows good quality subsidized fertilizer distributed in Gorontalo Utara. Good quality subsidized fertilizer can augment farming production and productivity. Subsidized fertilizer will impart economic add value to farmers because elevating production output and cutting costs, providing more income for them.

5. Place Efficiency

The effectiveness level in light of place efficiency is 74.91%, which is considered less effective. It shows poor quality subsidized fertilizer warehouses at the retailer level on the ground of limited capital resources, bringing on delayed fertilizer distribution. Place, as one of the distribution parts, is imperative for a strategic place will make distribution activities more effective.

6. Price Efficiency

The effectiveness level in light of price efficiency is 87.33%, which is considered less effective. It shows that a lack of good responses from farmers to the distribution process. Most of the farmers perceive price manipulation, especially during the severe subsidized fertilizer scarcity in Gorontalo Utara. Abnormal prices will adversely affect farmers who want to cater to their need for fertilizer, delaying their plant fertilization process.

Based on the description of the six efficiencies, the distribution of subsidized fertilizer program in Gorontalo Utara is (1) based on quantity efficiency, in the main priority criteria, (2) based on type efficiency, in the excessive priority criteria, (3) based on time efficiency, in the main priority criteria, (4) based on quality efficiency, in the slightly excessive priority criteria, (5) based on place efficiency, in the low priority criteria, and (6) based on price efficiency, in the low priority criteria.

C. Strategy for Distributing the Subsidized Fertilizer Program in Gorontalo Utara

The SWOT analysis acts as an evaluation of strengths, weaknesses, opportunities, and threats found in subsidized fertilizer program distribution in Gorontalo Utara. This analysis builds on the assumption that an effective strategy will likely minimize weaknesses and threats. The results of the SWOT analysis are as follows:

1. Internal Factors

The internal factors impact both strengths and weaknesses (S and W). Internal factors get a strength score of 2.065 and a weakness score of 1.283. The difference between the two scores is therefore 0.782, which showcases a higher score of strengths than that of weaknesses. It shows off the existence of positive internal aspects in enhancing strategies for

distributing subsidized fertilizer in Gorontalo Utara.

a. Strengths

Organization resources constitute resources and abilities used as capital to develop competitive advantages. Factors which influence the strengths are:

1) Lack of subsidized fertilizer supervision so the fertilizer distribution cannot be ensured for its quantity, types, time, place, quality, and prices.
2) Allocated needs of fertilizer predicated on e-RDKK which are inconsistent with RDKK-based distribution.
3) Low socialization intensity in regard to subsidized fertilizer at the subdistrict level.

b. Weaknesses

Weaknesses cause an organization to lose in a competition with another. In several cases, an organization's weaknesses mean the other organizations' strengths. Factors affecting weaknesses are:

1) Limited government expenditure budget in relation to subsidized fertilizer procurement.
2) RDKK proposal which does not correspond with accurate and actual data.
3) Poor close distribution system.

2. External Factors

External factors impact both opportunities and threats (O and T). External factors also optimize strategies for distributing subsidized fertilizer. External factors are made up of:

a. Opportunities

Opportunities are catalyzing factors from outside which escalate the organization's abilities. Here, the opportunities are:

1) The Gorontalo Utara local government can implement fertilizer subsidies through the Regional Budget.
2) Cross-sectional coordination can be established to ensure the effectiveness of subsidized fertilizer distribution and fertilization implementation.
3) The transaction system development using a control card (farmer card) will be realized in 2021.

In relation to the quadrant position visualization, the subsidized fertilizer distribution strategies in Gorontalo Utara are in Quadrant IV, which is the diversification strategy. This strategy emphasizes improvement factors that need to be focused on using strengths to combat threats.

CONCLUSION

Based on the results and discussion, we can draw conclusions as follows.

1. Subsidized fertilizer availability in Gorontalo Utara cannot fulfill the f farmers' needs, i.e., building on the 2020 e-RDKK proposal, 168,646.11tons. Moreover, subsidized fertilizer available or realized is only 28,238.30 tons, the effectiveness score of which is 62.7%, and the lack of subsidized

fertilizer is 28,238.00, or 37.3% of the total subsidized fertilizer needed by farmers in Gorontalo Utara.

2. Generally, subsidized fertilizer distribution in Gorontalo Utara is still considered ineffective. Thus, the government, in cooperation with other parties, should optimize it. Our GAP and IPA analyses attest to it and indicate that quantity and time efficiency is still ineffective and hence demands augmentation. Meanwhile, the aspects of place and price efficiency are also ineffective but they are on a low priority scale. Moreover, the aspects of type and quality efficiency are considered acceptable.
3. The determined strategy for subsidized fertilizer distribution in Gorontalo Utara, based on the SWOT analysis, is in Quadrant IV, i.e., the diversification strategies, including (1) implementing the fertilizer subsidy program through the local government budget, (2) increasing the distribution system through the e-RDKK mechanism integrated with the 2021 farm card implementation, (3) tightening supervision and sanctions at the field, and (4) implementing organic agriculture, especially the use of organic fertilizer as one of the efforts to avert inorganic fertilizer scarcity.

SUGGESTION

Building on the conclusions, we propose the following suggestions.

1. The Gorontalo Utara local government should advocate the fertilizer subsidy policy to provide subsidized fertilizer in accordance with the farmers' needs or proposal, achieving the expected productivity.
2. To make subsidized fertilizer distribution in Gorontalo Utara effective, the Gorontalo Utara local government should optimize or improve supervision at the distributor, retailer, or farmer level and impose sanctions if any subsidized fertilizer misuses occur.
3. As an alternative strategy, the Gorontalo Utara local government should broaden farmers' knowledge of subsidized fertilizer and the regulations concerned, implement organic agriculture, render socialization of how to make eco-friendly organic fertilizer, or establish a partnership with organic fertilizer manufacturers, and implement organic fertilizer development using available natural resources.

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