The Influence of Product Quality and Promotion on the Purchase Decision of NPK Retail Non Subsidy Fertilizer at PT. Pupuk Sriwidjaja Palembang in the South Sumatra Region

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Abstract---This study aims to determine the effect of product quality and promotion on purchasing decisions of retail non-subsidized NPK fertilizers at PT Pupuk Sriwidjaja Palembang in the South Sumatra region. The population in this study is the end-user, namely household food crops agricultural buyers of non-subsidized retail NPK fertilizers, both Pusri and other brands divided based on the harvest area in 2019 in South Sumatera Province many as 100 respondents using two-stage cluster random sampling technique as a sample determination. The multiple linear regression analysis results show that product quality positively and significantly affects purchasing decisions. The promotion has a positive and significant effect on purchasing decisions. Product quality is better to improve quality control of the production process and product quality, evaluate the standard of fertilizer bags used, evaluate the fertilizer distribution process, evaluate the implementation of fertilizer storage at GPP, and conduct socialization and education to kiosk. Promotions, giving direct gifts to farmers, conducting outreach activities, and meeting customers, Pusri officers in the field must be more proactive in visiting kiosk, providing scheduled soft skills training to Pusri officers.

Keywords---agricultural buyers, fertilizer, product quality, promotion, purchase decision

Introduction

The increasingly high level of business competition brings a variety of products to be offered in the market with a wide choice of prices and choices of producers, technological advances that continue to develop in digitizing the market, plus economic conditions experiencing uncertainty during the COVID-19 pandemic, encouraging every business people to be able to have a competitive advantage to survive in business competition. According to Day & Wensley (1988), competitive advantage is a strategy that can help companies maintain their survival. Generic strategies for competitive advantage consist of cost advantage, differentiation, and customer focus (Porter, 1985).

PT. Pupuk Sriwidjaja Palembang distributes and markets subsidized fertilizer to farmers or through the public service obligation (PSO) program in 1979. This government program aims to increase national food, prioritizing the
production and distribution of fertilizer for farmers throughout Indonesia. Fertilizer subsidies (PSO) are given to farmers with a maximum land area of 2 hectares and are farmers of food crops, livestock, and smallholder plantations.

The current business phenomenon is that the industry and multiple markets for NPK fertilizers are expected to continue to grow in line with the government's program through the Ministry of Agriculture to encourage a balanced fertilizer program and the single fertilizer convention to compound fertilizers which are expected to increase agricultural productivity to meet the needs of the National NPK fertilizer which is still very low. Although the PSO program has been implemented where farmers through farmer groups have prepared a Definitive Plan for Farmer Group Needs (RDKK), in reality, the allocation of available subsidized fertilizers must be adjusted based on the approved government budget for that year. Of course, this causes a shortage of fertilizer needs for farmers. The shortage of fertilizer needs for farmers’ land can be met by buying non-subsidized fertilizers where in this market, farmers can freely choose products that they feel are the most useful and appropriate for their land needs (Xiang et al., 2008; Jiang et al., 2022; Saravanadurai & Manimehalai, 2016).

In addition to implementing the PSO program, PT Pupuk Sriwidjaja Palembang also carries out non-subsidized business activities, commonly referred to as commercial. These commercial products include Urea fertilizer, NPK fertilizer, Ammonia, and innovative products such as Nutremag and Bioripah. Pusri is a long-standing producer of Urea fertilizer, but this is not the case for NPK fertilizer. Pusri built the NPK I factory with fusion technology with a capacity of 100,000 tons per year which has been fully operational since 2016, and the NPK II factory is still with fusion technology with a capacity of 200,000 tons per year fully operational since 2018. The government's plan to transfer fertilizer subsidies to farmers is also a problem. A new challenge for companies is losing the captive market for subsidized fertilizers, and consumers have the freedom to choose. As a new player in NPK fertilizer, of course, many things still need to be improved and improved by Pusri to be able to compete in the market and become the market leader for NPK fertilizers both regionally and nationally. However, consumers still have complaints regarding NPK fertilizer products and promotional activities that are still not optimal (Olbrich et al., 2017; Rose et al., 2016; Sadguna et al., 2017).

Table 1
RKAP and realization of non-subsidized NPK sales for retail sector 2017 to 2020

<table>
<thead>
<tr>
<th>South Sumatra PPD</th>
<th>Year</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>RKAP</td>
<td>-</td>
<td>-</td>
<td>4.732</td>
<td>6.927</td>
<td></td>
</tr>
<tr>
<td>Realization</td>
<td>13</td>
<td>30</td>
<td>1.763</td>
<td>4.281</td>
<td></td>
</tr>
<tr>
<td>Variant</td>
<td>13</td>
<td>30</td>
<td>2.969</td>
<td>2.646</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>37.26%</td>
<td>61.80%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Internal Data of PT. Sriwijaya fertilizer processed by the author, 2021

Retail sales of Pusri NPK fertilizer began in 2017 which are still carried out only, namely through Pusrimart outlets in the South Sumatra area. In 2018, retail NPK sales were further encouraged and outlined in the 2018 RKAP minutes, but for that year, there was no sales target for retail NPK. In 2019, retail NPK was legally targeted in the 2019 RKAP for the South Sumatra region, 4,732 tons, but only 1,763 tons or 37.26% of the target was realized. In 2020, the retail NPK sales target for the South Sumatra region was increased to 6,972 tons, with a realization of 4,281 tons or 61.80% of the target. From the table of retail NPK sales from 2017 to 2020, it can be seen that there is an increase in the tonnage of retail NPK fertilizer sales even though the realization has not yet reached 100% of the set target (Banful, 2011; Gladwin, 1992; Briat et al., 2015).

Several NPK fertilizer producers in Indonesia have different specifications of fertilizer products and their respective advantages. For example, NPK Pusri with the formula 15-15-15, which was previously distributed for Subsidized NPK (PSO) and sold commercially, has a physical appearance of granules that tend to be non-uniform and break when pressed. NPK Mutia formula 16-16-16 has a more uniform physical appearance of grains, is more solid and perfectly round. NPK Phonska Plus formula 15-15-15 + Zinc has a physical appearance with grains that tend to be uniform but with an uneven grain surface; more rigid/solid. Meanwhile, Pak Tani’s NPK with the formula 16-16-16 + Micro has a physical appearance with less uniform granules, uneven color but solid granules.
Table 2
Implementation of improvements to the quality of NPK products in PT Pupuk Sriwidjaja year 2019-2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Implementing Improvements to Product Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>1. Coating from water-based to oil-based so that fertilizers are not easily caking and to improve the quality of crushing strength</td>
</tr>
<tr>
<td></td>
<td>2020</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Internal Data of PT Pupuk Sriwidjaja

A good product is not simply well received and bought by the market. Efforts to introduce products to the market are to carry out marketing activities. Marketing activities are part of business activities that are directly related to consumers. Marketing is one of the business functions that can identify consumer needs and wants, determine the right market to be able to provide the best service from the company to consumers, create products that suit consumer needs and create programs and provide the most appropriate services for consumers (Kotler & Armstrong, 2007).

The NPK market share strategy can be divided into four: market leader, challenger, follower, and niche. Included in the market leader category is NPK Mutiara as a producer of NPK fertilizer which has already been in this market with a market share of > 30%. There are Phonska Plus, Mahkota, and Yara Mila in the challenger category with a range of 7% - 30% share. Pusri is included in the follower category along with Kebomas, Pak Tani, Tawon, Nitrophoska Blue, Entec, Nitrophoska, DGW, Laying, Petro Nitrate, Nitroku Prima with a range of < 7% share, while the niche category includes Palm Fruit, Caping Tani, Enviro, Jeranti, Mas Hitam, Fertile. The following figure shows the position of National NPK fertilizer producers in terms of market share of retail NPK product sales.

The market share position of Pusri's retail NPK compared to competitors in the 2020 regional area, namely South Sumatra, Lampung, Jambi, Bangka Belitung Islands, Central Java, DI Yogyakarta and West Kalimantan. In South Sumatra, the market share is 3%, the highest market share is in Lampung, which is 8%, while in West Kalimantan and DI Yogyakarta, NPK Pusri has the lowest market share, which is 0%.

Table 3
Promotion strategy for NPK producers in Indonesia

<table>
<thead>
<tr>
<th>No.</th>
<th>Brand</th>
<th>Benefits</th>
<th>Promotion Program</th>
</tr>
</thead>
</table>
| 1   | Pusri | - Prizes: Kiosks get direct gifts, generally still in the form of souvenirs such as t-shirts, hats, etc  
|      |       | - Discounts: Kiosks get discounted prices for purchases of a specific tonnage; obtained from Manufacturers and Distributors | - Demonstration: Manufacturers hold demonstration plots to introduce their products to end-users  
|      |       |                       | - Socialization: Manufacturers introduce products directly to consumers  
|      |       |                       | - Kiosk Visits: Manufacturers, through sales officers, make visits to Kiosks for monitoring Kiosk sales and product promotion |
| 2   | Mutiara | - Prizes: The kiosk gets an immediate gift in the form of souvenirs, and there are also other rewards based on purchases  
|      |       | - Discounts: Kiosks get | - Demonstration: Manufacturers hold demonstration plots to introduce their products to end-users  
|      |       |                       | - Socialization: Manufacturers introduce products directly to |
| 3 Phonska Plus | • Prizes: Kiosks get direct gifts, generally still in the form of souvenirs such as t-shirts, hats, etc.  
• Discounts: Kiosks get discounted prices for purchases of a specific tonnage; obtained from Manufacturers and Distributors  
• Cashback: Kiosk get *cashback* for purchases with a specific tonnage |  
| 4 Pak Tani | • Prizes: The kiosk gets an immediate gift in the form of souvenirs, and there are also other rewards based on purchases  
• Discounts: Kiosks get discounted prices for purchases of a specific tonnage; obtained from Manufacturers and Distributors  
• Cashback: Kiosk get *cashback* for purchases with a specific tonnage  
• Bonus: The kiosk gets a bonus product for purchases with a particular tonnage |  

Source: Internal Data of PT. Sriwidjaja fertilizer, 2020

**Research Methods**

The population in this study is the end-user, namely household food crops agricultural buyers of non-subsidized retail NPK fertilizers, both Pusri and other brands, which are divided based on the harvested area in 2019 in South Sumatra Province. The sampling technique used by the authors in this study is the two-stage cluster random sampling technique based on the harvested area of food crops in the districts in South Sumatra Province. The determination of the harvested area for food crops is because all food crop farmers are the target consumers for Pusri. The number of samples is determined by using the percentage between the area of harvested land in the district and the number of samples taken. The next stage is to divide the existing districts based on zoning. Districts with a small percentage of results will be combined to the nearest district with a larger percentage. Zoning areas are defined based on river flows, road networks, and regional administrative boundaries (Tsiboe et al., 2021; Takeshima & Liverpool-Tasie, 2015).
Results and Discussion

Model conformity results (Test F)

Based on the results of the model suitability test (Test F), obtained a significance value of 0.000 because the significance value is 0.000 < 0.05, it can be said that the linear regression model obtained is feasible to be used to explain the effect of product quality and promotion on purchasing decisions.

Individual parameter significance test results (t-Test)

a) The product quality variable (X1) has a beta value of 0.357 with a significant value of 0.000, more diminutive than 0.05. This shows that the product quality variable positively influences purchasing non-subsidized NPK retail fertilizers at PT Pupuk Sriwidjaja Palembang in the South Sumatra region. This proves that the first hypothesis on the product quality variable has a positive and significant effect and can be accepted.

b) The promotion variable (X2) has a beta of 0.525 with a significance value of 0.000, more diminutive than 0.05. This shows that the promotion variable positively influences purchasing non-subsidized NPK retail fertilizers at PT Pupuk Sriwidjaja Palembang in the South Sumatra region. This proves that the second hypothesis on the promotion variable has a positive and significant effect and can be accepted.

The research results show that the product quality variable (X1) has a beta value of 0.358 with a significant value of 0.000 < 0.05. This shows that the product quality variable has a positive and significant influence on consumer purchasing decisions. Based on Table 4.4, the average value for the product quality variable (X1) is 3.91 and is included in the "Good" category, but some indicators are still below the average value. The X1.1 indicator, namely Pusri's retail NPK non-subsidized fertilizer product, has met expectations with a score of 3.85 because consumers, namely farmers, prefer subsidized fertilizers to buy non-subsidized fertilizers (Day & Wensley, 1988; Kotler & Keller, 2016).

The X1.2 indicator, Pusri's retail non-subsidized NPK fertilizer product, has become a fertilizer solution with a value of 3.79 because farmers prefer to use organic fertilizer if the subsidized fertilizer allocation has been met. Besides being easy to obtain, by utilizing the results of plant waste and animal manure that are easy to process, organic fertilizer is also more efficient because it can reduce the cost of buying fertilizer. In the X1.3 indicator, namely Pusri's non-subsidized NPK retail fertilizer product, which has solid grains and good colors, it still scores below the average, which is 3.90, and the X1.9 indicator, namely the handling of complaints about Pusri's retail NPK non-subsidized fertilizer product, is following our hope is that with a score of 3.87 this is because there are still complaints by farmers regarding fertilizer granules that are not solid and the color of fertilizer is not uniform. The next indicator below the average value is X1.5. Puri's non-subsidized NPK retail fertilizer product is the main product of choice with a value of 3.82 because household business farmers still prefer subsidized than buying non-subsidized fertilizers.

This study indicates that product quality is described through the dimensions of performance, appearance, reliability, conformance to specifications, service, and perceived quality, indicating that Pusri's retail non-subsidized NPK fertilizers have good product quality can adapt to consumer wants and needs. This makes consumers more interested in using fertilizers produced by Pusri when compared to fertilizers produced by other companies.

Product quality has a positive and significant effect on purchasing decisions. The results of this study are in line with the results of research from Saputra et al. (2020); Islam (2020); Novita et al. (2019); Sinaga & Evi (2019); Hakim & Saragih (2019); Rafidina & Amalia (2019); Fernando & Aksari (2017); Igit et al. (2018); Gusrina & Rahmidiana (2018); Sumiati & Mujannah (2018); Wicaksmono & Mudiantono (2017); Herlina & Elpanso (2017); Fasha et al. (2017); Nizma & Siregar (2017); Tito & Budiatmo (2017); Pardede & Haryadi (2017); Amelia et al. (2018); Hermawan et al. (2016); Kole (2014); Fadlan (2013), shows the results that product quality has a positive and significant effect on purchasing decisions.

The research results show that the promotion variable (X2) has a beta value of 0.525 and a significant value of 0.000 < 0.05. This shows that the promotion variable has a positive and significant influence on purchasing decisions by consumers. Based on Table 4.5, the average value for the promotion variable (X2) is 4.11 and is included in the "Good" category, but some indicators are still below the average value. The X2.1 indicator, namely Pusri, provides direct gifts for purchases with a specific tonnage value of 3.78; this is due to the uneven distribution of direct gift-
giving programs by Pusri so that farmers in different sub-districts do not feel the promotional programs carried out in other areas (Perdana & Nanang, 2018; Weisstein et al., 2017).

Indicator X2.2, namely Pusri routinely conducts product socialization with a value of 3.89 and X2.4, namely Pusri routinely conducts customer gathering activities with a value of 4.03, which is still below the average value due to socialization of fertilizer products for farmers and customer gathering activities carried out by Pusri has not yet reached all areas of the village. The next indicator that is below the average value is X2.9. Namely, Pusri salespeople can present products clearly and easily with a value of 4.08 and X2.10; Pusri salespeople are friendly when responding to consumer objections with a value of 4.06 below the value on average because there are still farmers who have never met directly with Pusri salespeople, so that information and complaints submitted are through kiosks.

The results of this study indicate that the promotion described through the dimensions of sales promotion, events, and experiences, and personnel sales have been carried out by Pusri, especially on the X2.6 indicator, namely "Pusri salespeople are polite," which shows the highest score. This shows that Puri's sales force is very good at selling directly to consumers by being friendly and polite. The promotion has a positive and significant effect on purchasing decisions. These results are in line with research results from Saputra et al. (2020); Rafdinal & Amalia (2019); Mishra (2019); Fernando & Aksari (2017); Wangarry et al. (2018); Sumiati & Mujanah (2018); Wicaksono & Mudiantono (2017); Fasha et al. (2017); Nizma & Siregar (2017); Tito & Budiatmo (2017); Marnisah et al. (2016); Hermawan et al. (2016); Fadlan (2013), shows the results that promotion has a positive and significant effect on purchasing decisions.

**Conclusion**

a) Simultaneous test results (F-test) show that product quality and promotion variables positively and significantly affect purchasing decisions for retail NPK non-subsidized fertilizers at PT. Pupuk Sriwidjaja Palembang in the South Sumatra region.

b) The partial test results (t-test) show that product quality and promotion positively affect purchasing decisions for retail non-subsidized NPK fertilizers at PT. Pupuk Sriwidjaja Palembang in the South Sumatra region.

c) The result of the coefficient of determination (R²) shows the value of R Square of 0.614, which means that the variable purchase decision can be explained by the variable quality of the products and promotions by 61.4%, and the remaining 38.6% is explained by other variables that are not described in the study this.

The description to purchase non-subsidized NPK fertilizer retail at PT Pupuk Sriwidjaja Palembang in the South Sumatra region is in the "Good" category with an average of 4.16%, product quality variable of 3.91%, and promotion variable of 4.11% was essential.

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**References**


