Research Article

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The Kartu Tani Program's Effect on Farmers' Satisfaction

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ABSTRACT

This study raises the issue of farmer satisfaction as a farmer card (kartu tani) user as the main focus. The aim is to measure farmer satisfaction using the farmer card (FC). The research was conducted using the case study method with a deliberate selection of research locations in Karanganyar, Sukoharjo and Wonogiri Regencies. Data was obtained through interviews, surveys, and observations. The study results indicate that service quality is the main factor contributing to farmer satisfaction, placing it in the first rank with a very high level of satisfaction. Positive testimonials from other farmers also show a significant level of satisfaction, ranking second. The experience of using the FC, which ranks third, also positively impacts the satisfaction level of farmers. Meanwhile, the accessibility of FCs and the quality of their products received quite satisfactory ratings in the fourth and fifth ranks. The financial institution's marketing strategy is ranked sixth with the same assessment, indicating the potential for improvement. This finding has implications for expanding responsive and more responsive services for farmer satisfaction using FCs. Recommendations for future research involve further exploring the factors that influence satisfaction levels and the development of more effective strategies in the promotion and marketing of FCs.

KEYWORD

farmer cards, fertilizer subsidies, government programs, policy strategies, satisfaction

1. INTRODUCTION

Several parties have criticized the FC program because it contains several weaknesses that are often encountered. Negative factors that are often highlighted include the lack of efficiency in the distribution of subsidized fertilizers that have not yet reached optimal levels (Chakim, 2020), the limited number of agricultural extension workers who can guide farmers (Ramadholni & Nomita, 2022), technical difficulties in tracking the distribution of aid (Harefa, 2021), and deficiencies in the implementation of continuous evaluation and monitoring of this program (Abdurohim & Meirinawati, 2021). Several other problems that often arise include the need for an in-depth evaluation of program effectiveness, obstacles in implementation and
implementation stages, farmers' views of the program, which can shape its success and sustainability, and difficulties in distributing subsidized fertilizers evenly to farmers who need them.

FCs are a service organized by government agencies and in collaboration with banking institutions, intending to provide various benefits to farmers. The FC helps farmers get fertilizer subsidy assistance, which is important for their farming productivity (Fitriani et al., 2022). Encouraging effectiveness in distributing subsidized fertilizers and improving farmers' standard of living are the two main goals the government wants to achieve through implementing this FC program (Susanawati et al., 2019). Thus, this initiative is expected to help reduce financial barriers for farmers, advance the agricultural sector, and ultimately increase their overall welfare (Moko et al., 2018).

Measuring farmer satisfaction with the FC is important because it helps evaluate the program's effectiveness and suggests improvements to benefit farmers even more. A farmer satisfaction assessment is important for improving services, strengthening the program, and addressing issues during implementation (Irawan, 2023). Measuring farmer satisfaction helps the government make better decisions and improve the quality of the FC program, ultimately benefiting farmers and increasing their welfare.

This study aims to measure the extent to which farmers are satisfied with using the FC. By focusing on farmer satisfaction and developing innovative models, this research seeks to significantly contribute to understanding the FC program. This research not only provides solutions to the challenges faced by farmers and policymakers but also brings about updates in the related scientific literature. This research has an important meaning in advancing the quality of agricultural programs and generating new insights in the academic realm.

2. METHODOLOGY

This research method is based on a case study approach that allows an in-depth study of the phenomenon of the FC program. The research locations were deliberately chosen in three districts, namely Karanganyar, Sukoharjo, and Wonogiri because these three districts have diverse characteristics in the agricultural context and have the potential to provide a holistic picture of the implementation of the FC program in rural areas. The population in the study involved all farmers who had used farm cards. Determining the number of respondents, as many as 90 people spread evenly with each district represented by 30 people, aims to get a diversity of views and represent variations in geographical and social aspects in the three districts so that the research results have a strong representation and can provide more comprehensive insights about the use of FCs by farmers in various conditions.

The data collection method in this study involved three main techniques, namely interviews, surveys, and observations, which collectively allowed researchers to dig deep insights into farmers' experiences and views of the FC program. Once the data is collected, data analysis is carried out by calculating the percentage of each aspect, which helps in describing farmers' patterns and preferences.

### Table 1. Customer Satisfaction Index (CSI) Calculation

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Interests (I)</th>
<th>Satisfaction (P)</th>
<th>Score (S)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Scale 1-5</td>
<td>Scale 1-5</td>
<td>(S) = (I) x (P)</td>
</tr>
<tr>
<td>Total Score</td>
<td>Total (I) = (Y)</td>
<td>Total (S) = (T)</td>
<td></td>
</tr>
</tbody>
</table>
In the context of farmers' satisfaction with using FCs, the Customer Satisfaction Index (CSI) is used to measure their level of satisfaction. This process involves collecting data through a survey that asks farmers' views on various aspects of the FC program. After the data is collected, the CSI calculation is carried out by calculating the average of the scores given by the farmers on various questions or indicators related to the use of the FC. The results will provide a satisfaction index value indicating the extent to which farmers are satisfied with their FC program (Debora et al., 2023). The calculation is done by looking at the average value in the importance column (I) added up to get Y, and also, the product of I and P in the score column (S) is added up, and T is obtained. CSI is obtained from the calculation \((\frac{T}{5Y}) \times 100\%\).

\[
\text{CSI} = \frac{T}{5Y} \times 100\%
\]

Information:
\(T = \text{Total value of CSI}\)
\(5 = \text{Maximum value on the measuring scale}\)
\(Y = \text{Total value of the expectation column}\)

<table>
<thead>
<tr>
<th>No</th>
<th>CSI Value (%)</th>
<th>CSI Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>81% - 100%</td>
<td>Very satisfied</td>
</tr>
<tr>
<td>2</td>
<td>66% - 80.99%</td>
<td>Satisfied</td>
</tr>
<tr>
<td>3</td>
<td>51% - 65.99%</td>
<td>Quite Satisfied</td>
</tr>
<tr>
<td>4</td>
<td>35% - 50.99%</td>
<td>Less Satisfied</td>
</tr>
<tr>
<td>5</td>
<td>0% - 34.99%</td>
<td>Not Satisfied</td>
</tr>
</tbody>
</table>

3. RESULTS AND DISCUSSION

The evaluation carried out on implementing the FC program through feedback from farmers has a fundamental significance. The aim is to get direct information from farmers about how the program is being implemented and how it will impact them. The evaluation results provide an in-depth view of the program's effectiveness, showing the extent to which the FC program has met the needs of farmers and provided the expected benefits. Thus, this evaluation provides the basic material for making the necessary improvements and adjustments so that the FC program can function more optimally in meeting the main objective of supporting the welfare and development of farmers.

3.1. Level of Farmer Satisfaction with Kartu Tani

Table 3. The level of farmer satisfaction with the FC program

<table>
<thead>
<tr>
<th>No</th>
<th>Question</th>
<th>CSI Value</th>
<th>CSI Categories</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>FC Product Quality</td>
<td>(61.00%)</td>
<td>(5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Farmers’ data security and privacy are maintained.</td>
<td>64.60%</td>
<td>Quite Satisfied</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>Card functionality for various agricultural transactions.</td>
<td>57.40%</td>
<td>Quite Satisfied</td>
<td>10</td>
</tr>
<tr>
<td>Quality of Service to Farmers Using FCs</td>
<td>(86.50%)</td>
<td>(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Responsive and solutive in dealing with farmer problems.</td>
<td>81.60%</td>
<td>Very satisfied</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>Easy access to customer service and technical assistance.</td>
<td>91.40%</td>
<td>Very satisfied</td>
<td>1</td>
</tr>
</tbody>
</table>
FC Accessibility

5   Accessibility of technology in agricultural areas    69.40%   Satisfied   7
6   Farmers' understanding of the registration process  57.80%   Quite Satisfied   9

Experience Using FCs

7   Ease of redeeming fertilizer                     86.20%   Very satisfied   3
8   Ease of tracking and recording transactions       72.40%   Satisfied   6

Testimonials from Other Farmers

9   Other farmers' positive experiences influence trust 89.00%   Very satisfied   2
10  Successful farmer recommendations increase trust.  83.20%   Very satisfied   4

Financial Institution Marketing Strategy

11  Marketing education about card benefits and advantages 49.20%   Less Satisfied   12
12  Diversify additional services and attractive promotions.  55.60%   Quite Satisfied   11

Source: Primary data (2023)

3.1.1. Product Quality of FCs

Based on the data in Table 3, the overall quality of the Kartu Tani product is ranked fifth, with the level of user satisfaction reaching the "quite satisfied" level. Some problems related to using this FC need to be looked into, especially related to data security and privacy of poorly protected farmers. This fact relates to the potential risk of data being exposed or misused. In addition, another obstacle is the limited functionality of the card in supporting various agricultural transactions. Research by Raharjo (2022) in line states that the card's ability to support various aspects of agriculture needs to be strengthened to better suit user needs and to ensure stronger data security to increase user satisfaction and comfort.

The farmer's response indicating a lack of maintenance of data security and farmer privacy, with a CSI value of 64.6 percent which was placed in the "quite satisfied" category, emerged as a fact that needs attention. The eighth position on the satisfaction scale indicates the problems farmers face. The problems farmers face involve a lack of understanding of data protection measures and concerns about the misuse of personal information. Research Dullah (2022) states that by detailing these challenges, steps to strengthen education on data security and closer monitoring of potential privacy breaches can help build better satisfaction levels among farmers.

Farmers' response to the card functionality for agricultural transactions that have not been fully fulfilled is reflected in the CSI score of 57.4 percent, which is placed in the "fairly satisfied" category. However, ranking tenth in the satisfaction level indicates the dissatisfaction faced by farmers regarding this issue. Potential factors triggering dissatisfaction could include limited card features that have been unable to accommodate various agricultural transactions and technical constraints that hinder efficient use. In order to increase satisfaction, research based on Ramadhon & Nomita's (2022) research said that there is a need for innovation in the development of card features that are more suitable to the needs of farmers and more careful handling of technical problems that may arise.

3.1.2. Quality of Service to Farmers Using FCs

The quality of service to farmers using the FC, which ranks first according to Table 3, produces a level of satisfaction at the "very satisfied" level. This success is influenced by the application of responsive and solutive customer service in dealing with problems faced by farmers. In addition, easy access to customer service and technical assistance also plays an important role in maintaining user satisfaction. These factors specifically encourage farmer
satisfaction in using the FC, and this positive experience is an important basis for optimizing services to maintain farmer satisfaction.

Farmers' positive responses to responsive and effective customer service factors in dealing with problems appear to be very influential, reflected in the CSI score reaching 81.6 percent, placing them in the "very satisfied" category. The fifth rank in the level of satisfaction indicates high satisfaction with this aspect. This success resulted from the ability of customer service to respond and solve farmer problems quickly and with solutions. Easy access to communication and technical support are also the main factors that support farmer satisfaction in using the FC. Based on Wijayanto & Lestari's (2022) research, this condition illustrates the importance of positive interaction between farmers and customer service in maintaining satisfaction and continuity of product use.

Farmers' positive reactions to the easy access to customer service and technical assistance had a significant impact, reflected in the CSI score, which reached 91.4 percent and was in the "very satisfied" category. The first ranking position in the level of satisfaction indicates high satisfaction with this factor. This success was possible thanks to the availability of easy access and responsiveness to farmers' demands. Another major supporting factor is the quality of technical assistance that can overcome the challenges or difficulties farmers face in using the FC. Based on Cristini et al. (2023) research, this fact reflects the importance of the availability of resources and support that facilitate users in maximizing the product's benefits, which maintains a high level of satisfaction.

3.1.3. **FC Accessibility**

The accessibility capability of the FC in general, as reflected in Table 3 and is ranked fourth, results in a level of satisfaction that reaches the level of "quite satisfied". However, the problems that arise are related to the limited accessibility of technology in agricultural areas. This challenge is caused by the uneven technological infrastructure, affecting farmers' access to card services. In addition, farmers' understanding of the registration process also affects their satisfaction. Based on Fahmi & Maria's (2020) research, efforts to increase satisfaction levels must focus on providing more equitable access to technology and more effective education regarding the registration and benefits of using FCs.

Feedback from farmers regarding the accessibility of technology in agricultural areas is still not optimal, which is reflected in the CSI value of 69.4 percent and is included in the "satisfied" category. Despite their high satisfaction ranking (#7), farmers may have problems getting the necessary technologies. This challenge occurs due to limited infrastructure and connectivity in agricultural areas, hindering smooth access. According to Charjin et al. (2023) research, drivers of satisfaction in this regard involve improving technology infrastructure and developing initiatives enabling farmers to access services through more efficient and reliable technological solutions.

Farmers' general response to their understanding of the registration process is still limited, reflected in the CSI score of 57.8 percent, which falls into the "fairly satisfied" category. Farmers find it hard to understand and follow the registration process, so it ranks ninth in satisfaction. Barriers involve the complexity of registration procedures, the lack of easily accessible information, or even the language barrier in the guides provided. Based on Anisa & Adnan's (2021) research, it is important to simplify and better explain the registration process and provide easy-to-understand guidelines for farmers to increase satisfaction levels.

3.1.4. **Experience Using FCs**

The experience of using the FC as a whole, according to the information in Table 3 and in third place, obtains a level of satisfaction at the "satisfied" level. However, there is room for a more
optimal increase in satisfaction with using this FC. Some of the problems that still arise are related to the ease of redeeming fertilizer, which is related to procedures where it is felt that there are delays in the exchange process. In addition, the constraints faced by farmers are tracking and recording transactions efficiently. Based on Rahmayanti et al. (2023) research, simplifying the fertilizer redemption process and upgrading the transaction tracking system would help farmers maximize FC benefits.

Farmers' positive response to the ease of buying fertilizer is reflected in the CSI score of 86.2 percent, which is included in the "very satisfied" category, with the third rank in the level of satisfaction. Farmers experience this convenience thanks to the simplified procedure for exchanging fertilizers and the existence of a responsive system. An important factor supporting this level of satisfaction is the smooth and fast experience in buying fertilizer, thanks to the availability of clear information and easy access from farmer groups and extension workers. Based on Gunawan & Pasaribu's (2020) research, all this shows how vital the positive experience of using the FC is in maintaining high satisfaction levels among farmers.

The farmer's response regarding the ease of tracking and recording transactions, which is reflected in the CSI score of 72.4 percent and is included in the "satisfied" category, ranks sixth in the satisfaction level. Farmers experience several benefits from tracking and recording transactions, such as monitoring inventories or recording expenses. The main supporting factor, in this case, is the existence of a system that facilitates the process and provides added value for farmers. One obstacle is the lack of clarity regarding other benefits of using the FC. Based on Sholihah & Djamaludin's (2018) research, some farmers do not fully understand how an FC can add value to agricultural activities besides redeeming their fertilizer, which can reduce their satisfaction level.

3.1.5. Testimonials from Other Farmers

Testimonials given by other farmers, which are generally placed in second place based on the data listed in Table 3, reflect the level of satisfaction at the "very satisfied" level. Positive experiences expressed by other farmers may influence the built trust. Recommendations given by farmers who have successfully used the FC also play an important role in increasing the trust and confidence of other farmers in the benefits and effectiveness of the FC. This positive influence shows how important support and testimony from fellow farmers are in creating a sense of trust and motivation to adopt and utilize the FC service (Sumner et al., 2020).

Positive feedback from farmers regarding the positive experiences of other farmers has a major impact on increasing their confidence. This condition is reflected in the CSI score of 89 percent, which is included in the "very satisfied" category, and ranks second in satisfaction. This effect appears due to a domino effect from the successful testimonials from farmers who have adopted an FC. The farmer's trust can influence their view of the farmer's card's benefits and give them confidence that the card is useful. Research by Kassem et al. (2021) said that the recommendations and successes shared by other farmers are the main factors that support farmer satisfaction in using the FC.

The reactions given by farmers regarding recommendations originating from farmers who have successfully used the FC have greatly increased their trust in the service. This condition is reflected in the CSI score of 83.2 percent, which is in the "very satisfied" category, as well as the fourth rank position in the level of satisfaction. This effect arises from beliefs formed based on successful farmers' real experiences, motivating other farmers to try and take advantage of the FC. These direct recommendations and success stories in Cristini et al. (2023) research are the key factors that support the satisfaction level of farmers in using the FC.
3.1.6. **Financial Institution Marketing Strategy**

The overall marketing strategy of financial institutions, as reflected in Table 3, places this aspect in the sixth rank, with a level of satisfaction at the level of "quite satisfied". Several problems reduced farmer satisfaction due to a lack of marketing education regarding the benefits and advantages of using FCs. This lack causes a low understanding of farmers about the value of FCs, so it becomes an obstacle. In addition, the lack of diversification of additional services and attractive promotions limits the wider use of the FC and makes farmers feel less tempted to adopt it. Research by Cloete et al. (2019) concludes that improving effective marketing education, presenting attractive additional services, and attractive promotions can help overcome these obstacles while increasing farmer satisfaction in using the FC.

Feedback from farmers regarding marketing education about the benefits and advantages of using FCs shows a relatively low level of satisfaction, reflected in a CSI value of 49.2 percent, which is included in the "less satisfied" category. The twelfth rank in the level of satisfaction indicates farmers' dissatisfaction with this aspect. A possible inhibiting factor for satisfaction is the lack of clear, detailed information on how the FC can provide significant advantages and benefits in agricultural activities. Research by Malimi (2023) said that efforts to improve marketing education that is more comprehensive and easy to understand can help overcome these obstacles and increase farmer satisfaction in recognizing and maximizing the potential of FCs.

Farmers' responses regarding diversification of additional services and attractive promotions resulted in a CSI score of 55.6 percent, which is in the "quite satisfied" category, with the eleventh rank in the satisfaction level. Farmers want additional service features that can expand the benefits of FCs, and more attractive promotions that can increase the attractiveness of usage. Satisfaction-inhibiting factors may involve a lack of variety of services relevant to farmers' needs or a lack of effective communication regarding the benefits of additional services and promotions. Research by Permataningrum et al. (2022) conclude that efforts to identify farmer needs and provide relevant additional services and attractive promotions can help increase farmer satisfaction and interest in the FC.

**4. CONCLUSION**

This study describes results that reflect the level of satisfaction of farmers who use FCs, with service quality being ranked first and receiving a very satisfied rating. Meanwhile, testimonies from other farmers also show high satisfaction, with the second rank being very satisfied. The experience of using the FC, which holds the third rank with satisfaction ratings, indicates a positive impact on using the card. Even though the accessibility of the tani card was in the fourth rank and was rated as quite satisfactory, the quality of the tani card product was in the fifth rank with the same assessment. The financial institution's marketing strategy was ranked sixth with a fairly satisfied rating, illustrating room for improvement. The policy implications of these findings involve improving service quality, promoting positive testimonials from other farmers, and improving marketing strategies. For farmers, this research provides a view of the positive experience of using the FC. As for financial institutions, the implications focus on improvements in marketing strategy. Recommendations for future research include a more in-depth analysis of the factors influencing satisfaction levels in various aspects of the FC and further exploration of how the FC can more optimally support farmers and the farming system.
REFERENCES


