

Model of Improving Member Satisfaction Through Optimization of Services of The Management of The Island Prosperous Bananing Producers Cooperative and Participation of Plasma Oil Palm Members

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Abstract. *This study aims to describe, analyze, and provide empirical evidence regarding the Model for Increasing Member Satisfaction Through Optimization of Cooperative Management Services at Pulau Bananing Sejahtera Producer Cooperative and Palm Oil Plasma Member Participation. This study examines the effect of Cooperative Management Services on Member Satisfaction, the effect of Management Services on Member Participation, the effect of Member Participation on Member Satisfaction, and the mediating role of Member Participation in the relationship between Management Services and Member Satisfaction. The analytical method used is Partial Least Squares – Structural Equation Modeling (PLS-SEM) using SmartPLS version 3.0 application. The sample consisted of 109 respondents selected from a population of 150 active members of Pulau Bananing Sejahtera Producer Cooperative using the Slovin formula. The results show that: (1) Management Services has a positive and significant effect on Member Satisfaction ($\beta = 0.671$; $t = 11.523$; $p < 0.05$), H1 accepted; (2) Management Services has a positive and significant effect on Member Participation ($\beta = 0.493$; $t = 5,312$; $p < 0.05$), H2 accepted; (3) Member Participation has a positive and significant effect on Member Satisfaction ($\beta = 0.182$; $t = 2.047$; $p = 0.041$), H3 accepted; and (4) Member Participation is proven to partially mediate the relationship between Management Services and Member Satisfaction (indirect effect = 0.090; $t = 2.031$; $p = 0.043$), H4 accepted. The R^2 value of Member Satisfaction at 0.681 indicates strong model predictive power. The overall model is declared fit with SRMR = 0.062 and GoF = 0.662.*

Keywords: *Cooperative Management Services; Member Satisfaction; Members Dad Participation; PLS-SEM; Smartpls.*

1. Introduction

Cooperatives are one of the pillars of the Indonesian economy, playing a strategic role in improving the welfare of their members and the community. In the context of oil palm plantations, plasma cooperatives serve as a crucial platform for smallholder farmers to unite, manage resources, and obtain needed services. The Pulau Bananing Sejahtera Producer Cooperative is a plasma palm oil cooperative located in the Kumai Estate area of Central Kalimantan, with an active membership of 1,000,000 150 people.

Cooperative member satisfaction is a key indicator of successful cooperative management. Satisfied members are more loyal, actively participate, and support the cooperative's sustainable development. Conversely, member dissatisfaction can lead to decreased participation, diminished trust, and even a move to other institutions perceived as more profitable.

Cooperative management services are a key determinant of member satisfaction. Management that is professional, responsive, and able to provide clear and accurate information will create a positive service experience for members. Conversely, service that is slow, uninformative, and lacking empathy for members' needs will decrease member satisfaction and trust in the cooperative.

Dad Member participation is also an essential component of democratic cooperative governance. Members who actively participate in meetings, decision-making, and cooperative activities tend to have a stronger sense of belonging, which in turn contributes to member satisfaction and loyalty. However, the level of member participation in cooperatives in Indonesia remains a frequent issue, particularly in plantation cooperatives in remote areas.

The phenomena occurring at the Pulau Bananing Sejahtera Producers Cooperative indicate variations in member satisfaction influenced by perceptions of the quality of management services and the level of member activity in cooperative activities. There has been no scientific study that empirically examines the relationship model between these variables simultaneously using an appropriate approach.

To analyze the relationship between latent variables that cannot be measured directly, this study uses the Partial Least Squares – Structural Equation Modeling (PLS-SEM) method with the SmartPLS version 3.0 application. The selection of the PLS-SEM method is based on several considerations: (1) the ability to test the measurement model (outer model) and the structural model (inner model) simultaneously; (2) does not assume a normal data distribution; (3) is suitable for relatively small sample sizes ($n < 150$); (4) is able to estimate complex models with mediator variables (Ghozali & Latan, 2015; Hair et al., 2019).

Based on the description above, this study aims to compile and empirically test a model for increasing member satisfaction through optimizing management services and member

participation at the Pulau Bananing Sejahtera Producers Cooperative using PLS-SEM analysis with SmartPLS.

2. Research Methods

This research is explanatory research, a type of research that explains causal relationships between variables through hypothesis testing. Explanatory research aims to empirically discover and measure the influence of independent variables on dependent variables (Sari et al., 2023). The variables used include: Cooperative Management Services (X1) as the independent variable, Member Participation (Y1) as the mediator variable, and Member Satisfaction (Z1) as the dependent variable.

3. Results and Discussion

3.1. The Influence of Management Services on Member Satisfaction (H1)

The results of the PLS-SEM analysis with SmartPLS 3.0 prove that management services (X1) have a positive and very significant effect on member satisfaction (Z1) with a path coefficient of $\beta = 0.671$; T-statistic = 11.523; and $p = 0.000$ (<0.05). The effect size value of $f^2 = 0.512$ is relatively large (Cohen, 1988), indicating the dominant contribution of management services in determining member satisfaction.

This finding is very consistent with Kotler's (2000) satisfaction theory, which states that satisfaction is formed from a comparison between perceived performance and expectations. When cooperative management is able to provide service performance that exceeds member expectations — in terms of speed (X1.1, LF=0.812), clarity of information (X1.2, LF=0.834), problem-solving ability (X1.3, LF=0.821), responsiveness (X1.4, LF=0.798), and empathy (X1.5, LF=0.847) — then member satisfaction increases significantly. This finding also strengthens Kartasapoetra's (2003) opinion that service quality is the key to a cooperative's success in improving member welfare.

3.1.1. The Influence of Management Services on Member Participation (H2)

Hypothesis H2 is proven with a path coefficient of $\beta = 0.493$; T-statistic = 5.312; $p = 0.000$ (<0.05). The effect size $f^2 = 0.320$ is classified as medium (Cohen, 1988). The R^2 value of Y1 = 0.243 indicates that 24.3% of the variability in member participation is explained by management services, indicating that there are still other factors that influence participation outside the model.

These findings support Kartasapoetra's (2003) view that high-quality service encourages more active member participation. When management provides clear information, is responsive, and demonstrates empathy, members feel valued and have greater trust in the cooperative, which in turn increases their motivation for active involvement. The concept of dual identity (Prasetyo et al., 2020) reinforces these findings: well-served members are more aware of their dual role as both owners and users of cooperative services.

3.1.2. The Influence of Member Participation on Member Satisfaction (H3)

The results of the H3 test show a path coefficient of $\beta = 0.182$; T-statistic = 2.047; $p = 0.041$ (< 0.05). This effect is significant at the $\alpha = 5\%$ level, although with an effect size $f^2 = 0.038$ which is relatively small (Cohen, 1988).

DadMember participation has been shown to have a positive and significant effect on member satisfaction, although with a lower strength than the direct influence of management services. This finding confirms the concept of dual identity of cooperative members (Prasetyo et al., 2020): members who actively participate in meetings, provide suggestions, are involved in decision-making, and Cooperative social activities have a higher sense of belonging, which contributes to their satisfaction. The smaller partial effect is likely due to structural barriers such as geographic distance, plasma farmers' time constraints, and members' perceived limited voice in cooperative decisions.

3.2. Member Participation Mediation (H4)

The indirect effect test yielded a value of 0.090 with a T-statistic of 2.031 and $p = 0.043$ (< 0.05), significant at $\alpha = 5\%$. Since the direct effect of $X1 \rightarrow Z1$ remained significant ($\beta = 0.671$; $p = 0.000$) after $Y1$ was entered as a mediator, the type of mediation that occurred was partial mediation (Baron & Kenny, 1986; Preacher & Hayes, 2008).

The total effect of $X1 \rightarrow Z1$ (via $Y1$) of 0.761 ($t = 13.107$; $p = 0.000$) indicates that good management services not only directly affect member satisfaction, but also indirectly through increased member participation. Although the contribution of the indirect effect (0.090) is relatively smaller than the direct effect (0.671), both are statistically significant. This partial mediation indicates that the satisfaction of oil palm plasma cooperative members is formed primarily through the direct path of management services, with member participation acting as an additional channel that also strengthens satisfaction. These data indicate that the model of increasing member satisfaction through optimizing management services and member participation is proven to have a significant influence.

3.2.1. Summary of Hypothesis Testing Results

Based on the test results above, all four research hypotheses were accepted at a significance level of $\alpha = 5\%$ using a two-sided bootstrapping procedure. This research model was empirically tested using PLS-SEM with SmartPLS 3.0 and is worthy of being used as a scientific reference.

4. Conclusion

Based on the results of research and discussion regarding the Model of Increasing Member Satisfaction Through Optimizing the Management Services of the Pulau Bananing Sejahtera Producers Cooperative and Participation of Palm Oil Plasma Members, which were analyzed exclusively using the PLS-SEM method with SmartPLS 3.0 on 109 active cooperative member

respondents, the following conclusions can be drawn: 1. Cooperative Management Services (X1) have a positive and very significant influence significant on Member Satisfaction (Z1), as evidenced by the path coefficient $\beta = 0.671$; T-statistic = 11.523 (far above the critical value of 1.96); $p = 0.000$ (< 0.05); and effect size $f^2 = 0.512$ (large). With $R^2 Z1 = 0.681$, management service is the dominant determinant explaining 68.1% of the variability in member satisfaction. H1 is accepted. Optimizing the quality of management service is the most effective strategy in increasing the satisfaction of members of oil palm plasma cooperatives. 2. Cooperative Management Services (X1) have a positive and very significant effect on Member Participation (Y1), with a path coefficient of $\beta = 0.493$; T-statistic = 5.312; $p = 0.000$ (< 0.05); and effect size $f^2 = 0.320$ (medium). R^2 value Y1 = 0.243 indicates that management services explain 24.3% of the variability in member participation, indicating that there are still many other factors that influence participation outside the model. H2 is accepted. 3. Member Participation (Y1) has a positive and significant effect on Member Satisfaction (Z1), with path coefficient $\beta = 0.182$; T-statistic = 2.047; $p = 0.041$ (< 0.05); and effect size $f^2 = 0.038$ (small). H3 is accepted. Active member participation in cooperative activities has been shown to contribute to increased member satisfaction, although with a more limited strength compared to the direct influence of management services. 4. Member Participation (Y1) is proven to partially mediate the relationship between Management Services (X1) and Member Satisfaction (Z1), with an indirect effect = 0.090; T-statistic = 2.031; $p = 0.043$ (< 0.05). The type of mediation is partial mediation because the direct effect of $X1 \rightarrow Z1$ remains significant after Y1 is entered. The total effect of $X1 \rightarrow Z1$ through Y1 is 0.761 ($t = 13.107$; $p = 0.000$). H4 is accepted. Secara Overall, the PLS-SEM model that was built was proven to be valid (SRMR = 0.062; Go F = 0.662) and all hypotheses are accepted. This model provides empirical evidence that optimizing management services and increasing member participation simultaneously contribute to member satisfaction at the Pulau Bananing Sejahtera Producers Cooperative.

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