Analysis of the Relationship Between Characteristics and Participation in Community Forest Management Activities in Sipoholon District North Tapanuli Regency

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Abstract
Introduction: *The Community Forestry (HKm) program aims to empower forest farmer groups through sustainable management. Active participation from farmer groups is essential to ensure that land use does not damage the ecosystem, as well as paying attention to the socio-economic aspects of group members, such as income levels, education, and access to technology.* ***Purpose:*** *Analyzing the relationship between participation and the socio-economic characteristics of KTH members in HKM management activities in Sipoholon District, North Tapanuli Regency.* ***Method:*** *The approach used in this research is descriptive quantitative. This research will be conducted in 3 KTHs located in Sipoholon District, Tapanuli Regency, namely KTH Dolok Imun Lestari located in Simarpinggan, Huta Raja Hasundutan Village, Sipoholon District. KTH Dos Roha and KTH Lumban Gaol Lestari located in Simanungkalit Village, Simanungkalit Village, Sipoholon District, North Tapanuli Regency, North Sumatra.* ***Result and Discussion:*** *Only a few aspects of socio-economic characteristics have a strong relationship with involvement in HKm management activities, while most others do not have a significant effect. This finding is important to be the basis for planning empowerment programs, with a focus on factors that truly encourage active community participation.* ***Conclusion:*** *Based on socio-economic characteristics, income, number of dependents, cosmopolitanism and leadership are correlated with participation, while socio-economic characteristics such as age, education, land area and incentives are not correlated with participation.*

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Introduction

The forests in North Sumatra itself have been confirmed through the Decree of the Minister of Environment and Forestry of the Republic of Indonesia with Number: SK.150/MENLHK/SETJEN//PLA.0/2/2023 on February 21, 2023 concerning the determination of the Protected Forest Management Unit (KPHL) and Production Forest Management Unit (KPHP) areas of North Sumatra Province, based on this decision, Determination of the Protected Forest Management Unit and Production Forest Management Unit Area of North Sumatra, KPHP consists of an area with the composition of a Protected Forest Area of 10,574 Ha, a Production Forest Area of 35,285 Ha and a Limited Production Forest Area of 19,017 Ha, Convertible Production Forest of 2,905 Ha. So the forest management unit in North Sumatra has an area of 2,584,840 Ha, which consists of 18 Protected Forest Management Units (KPHL) around 1,288,788 Ha and then 15 Production Forest Management Units (KPHP) with an area of approximately 1,296,052 Ha.

There is forest utilization with a social forestry scheme in the working area of KPH unit XII KPHP, namely North Tapanuli Regency, Humbang Hasundutan with a total area of 286.16 hectares which is a community forest (HKm) and also a forestry partnership that is in the process of being upgraded to HKm. Based on the National Forestry Plan Direction Map, most of the forest area in KPH Unit XII is directed to large-scale businesses as much as 68.43%, followed by natural forests and peat 14.97% and for rehabilitation 13.85% the rest are directed to small businesses and other mountainous areas. Regulation of the Minister of Environment and Forestry Number: P.83 / Menlhk / Setjen / Kum.I / 10/2016 concerning social forestry explains that community forests (HKm) are state forests whose utilization is intended to empower local communities. Community forests (HKm) are also one of the programs created by the government which aims to empower communities around the forest. HKm is one of the programs of social forestry. The social forestry program is one of the forest management policies together with the community that is currently developing. Social forestry is a priority program from the government as a sustainable forest management system in state forest areas or customary rights / forests. This social forestry management is carried out by the Forest Farmer Group (KTH) in the form of KTH activities consisting of institutional management, area management and business management. In achieving KTH goals, active participation from KTH members and support from various stakeholders such as communities around the forest, government, Forestry Service, KPHL, community institutions, companies and markets are needed.

Participation of KTH members is the most important thing to achieve KTH goals. Community participation is important to be the main concern because it determines the success of every development activity. Community participation in development is a manifestation of awareness, concern and also the responsibility of the community to improve the quality of life of the community(Mardikanto, 2014). Participation has two types that can affect forest management, namely active participation that will invite other people or be directly involved in carrying out every activity carried out in the forest area and also related to its management, while passive participation is participation that is not directly involved in every activity that is related to forest management (Mulyanie, 2016).

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Participation or participation of the community to manage KHm is one of the social keys to managing natural resources sustainably and sustainably (Viani, Kaskoyo, Wulandari, & Safe'i, 2021) Conflicts also occur among KTH members related to inequality in the distribution of results obtained from managing farmer forests to develop the HKm. This inequality can arise due to several factors, such as differences in land area, where members with smaller land feel disadvantaged. In addition, differences in experience and skills in forest management also contribute, where more skilled members tend to get better results. This causes dissatisfaction among members, especially for those who feel their contributions are not appreciated.

Therefore, to reduce conflict and create a fair distribution of results, it is necessary to implement clear Standard Operating Procedures (SOPs). There must be a determination of criteria for sharing results based on land area, type of plant, and individual contribution. Transparency is also important, all members must be informed through periodic reports. Regular coordination meetings must be held to discuss harvest results and future plans, providing an opportunity for all members to express their opinions. So, the process of sharing results must follow the established criteria, for example by allocation based on land area. If a dispute occurs, a settlement forum with member representatives and a neutral third party can be held for mediation. Increasing the role of the community is an important aspect in forest area management. Sunoto (1997) stated that the role of the community can be seen through socio-economic conditions, the use of local wisdom, protection of traditional and environmentally friendly technology, and increasing community compliance with laws and regulations and local community values, which are environmentally aware. This shows the importance of the role of the community in managing and protecting forest areas.

Based on research conducted by (Saputri, Markum, & Lestari, 2024), the average income of the community comes from various farming activities and work outside the agricultural sector. The main income comes from peanut farming with an average of IDR 692,617.50 per month, which contributes 26.5% to the total family income. In addition, income from corn farming is IDR 70,231.18 per month (10.8%), chili farming is IDR 1,006,473 per month (20.9%), and income from outside the agricultural sector (such as laborers, traders, or services) reaches IDR 560,870.20 per month or around 41% of total income. If added up, the total average income of the community in the area is around IDR 2,330,192.88 per month per family. The implementation of HKm management still encounters various obstacles, such as minimal participation of members in the planning and maintenance stages, weak sense of ownership of HKm land, and less than optimal economic results obtained by members from these management activities. HKm management in this area should include planning activities, planting, maintenance and utilization of non-timber forest products such as pine resin.

However, the reality in the field shows that most KTH members are only involved in the utilization stage, while at other stages involvement is still low. This shows that HKm management has not been running optimally as a whole. In addition, the income aspect obtained by KTH members from HKm management does not yet reflect a significant contribution to improving household welfare. Most of the members' income still comes from the general agricultural sector and work outside forestry, while the results of HKm are only felt by a small number of members who actively tap pine resin.

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However, this condition is slightly different in KTH Lumban Gaol Lestari, where there are only 7 (seven) respondents who have cultivated and harvested pine resin on their land. This shows that only a small number of KTH members earn income from forest management activities, especially from pine resin. This low level of involvement sometimes causes KTH members to have difficulty participating optimally in sustainable forest management, which ultimately impacts production fluctuations. Based on data from the Central Statistics Agency (2023), pine production in the last five years has shown varying trends, namely 145,896 tons in 2018, 169,002 tons in 2019, 201,402 tons in 2020, 240,020 tons in 2021, and 226,391 tons in 2022. These data show that pine remains one of the household economic security factors for KTH members in Sipoholon District, so they continue to strive to increase their production through various tapping techniques and more efficient management. In its management, the Community Forestry (HKm) program aims to empower forest farmer groups through sustainable management. Forest farmer groups in this district utilize land for productive economic activities, such as agroforestry, while maintaining forest sustainability. Active participation of farmer groups is essential to ensure that land use does not damage the ecosystem, and to pay attention to the socio-economic aspects of group members, such as income levels, education, and access to technology. Collaboration between the government, KPH, and the community through the HKm program shows how forest management can generate economic benefits for the community without ignoring the ecological function of the forest.

This phenomenon shows the need for a more in-depth study of the extent of KTH members' participation in HKm management and how their socio-economic characteristics, especially in relation to income, education, land area, and number of household dependents, influence their involvement. Based on this background, the main factor causing the low participation of Forest Farmer Group (KTH) members in Sipoholon District is the conflict between communities regarding land ownership claims. This conflict hinders the participation process, even though participation is closely related to productivity. The success of this HKm program depends on how KTH members as the main actors in HKm management manage it. No matter how well the activities are planned, it will be difficult to succeed when there is no interest or participation from the community or KTH. Based on the problems that have been explained, a study was conducted related to the participation and socio-economic characteristics of KTH members in HKm management activities in Sipoholon District, North Tapanuli Regency.

Method

The approach used in this research is descriptive quantitative. This research will be conducted in 3 KTHs located in Sipoholon District, Tapanuli Regency, namely KTH Dolok Imun Lestari located in Simarpinggan, Huta Raja Hasundutan Village, Sipoholon District. KTH Dos Roha and KTH Lumban Gaol Lestari located in Simanungkalit Village, Simanungkalit Village, Sipoholon District, North Tapanuli Regency, North Sumatra. The number of research samples consisted of 94 families. Members of KTH Dolok Imun Lestari, KTH Dos Roha and KTH Lumban Gaol Lestari. In this study, the sampling technique used was the census method.

Results and Discussion

Table 1

Relationship between Socio-Economic Characteristics and the Level of Participation of HKM Simpoholon Members

Variables	Constant Factor	HKM Management Activities			
		Planning	Implementation	Maintenance	Utilization
Age	R	0.060	0.216	0.121	0.102
	Sig	0.564	0.037	0.246	0.327
Education	R	0.053	0.046	-0.060	0.053
	Sig	0.615	0.658	0.564	0.615
Land area	R	0.124	-0.005	0.067	0.051
	Sig	0.235	0.962	0.524	0.623
Income	R	0.015	0.067	0.010	0.091
	Sig	0.888	0.523	0.926	0.385
Number of Dependents	R	0.373^{**}	0.107	0.180	-0.278^{**}
	Sig	0.000	0.307	0.083	0.007
Cosmopolitanism	R	-0.159	0.045	0.006	-0.078
	Sig	0.127	0.666	0.955	0.455
Leadership	r	0.022	0.045	-0.007	-0.056
	Sig	0.836	0.665	0.948	0.589
Incentive	R	-0.047	0.092	0.031	0.025
	Sig	0.655	0.378	0.768	0.811

Based on table 1 the results of the correlation analysis between the socio-economic characteristics of forest farmer group members and their involvement in Community Forest (HKm) management activities, it was found that not all variables had a significant influence. There were three significant variables. First, there was a positive and significant relationship between the number of dependents and HKm management planning activities (R = 0.373; Sig = 0.000). This shows that the more family members who are dependents, the higher the participation in the planning stage. Most likely, individuals with large dependents are more active in planning land management to ensure family needs. Second, a significant negative relationship was found between the number of dependents and utilization activities (R = -0.278; Sig = 0.007), indicating that the greater the number of dependents, the lower the involvement in forest product utilization.

This may be because individuals with high economic burdens prefer activities that provide direct results outside of HKm management. Third, the age variable shows a positive and significant relationship to implementation activities (R = 0.216; Sig = 0.037), which suggests that the older the age, the higher the participation in implementing HKm activities. This can occur because older individuals tend to have more experience and concern for the sustainability of forest management. Meanwhile, other variables show an insignificant relationship to HKm management activities, namely education, land area, income, cosmopolitanism, leadership, and incentives. All of these variables show a significance value (Sig) above 0.05, which means they do not have a statistically significant relationship. For example, education does not show a significant effect on involvement in the four stages of management (planning, implementation, maintenance, and utilization).

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Likewise with land area and income, which do not seem to be enough to encourage increased participation in HKm activities. Likewise with psychosocial characteristics such as cosmopolitanism and leadership, as well as the incentives provided, which do not show a significant correlation with management activities. This can be interpreted that community participation in forest management is more influenced by internal factors such as household needs and experience, rather than by formal factors such as education or external incentives. Thus, it can be concluded that only a few aspects of socio-economic characteristics have a strong relationship with involvement in HKm management activities, while most others do not have a significant effect. This finding is important to be the basis for planning empowerment programs, with a focus on factors that truly encourage active community participation. Meanwhile, the relationship between Socio-Economic Characteristics and Participation can be seen in the table below:

Table 2
Spearman's rho Correlation Test Results for the Relationship between Socioeconomic Characteristics and Participation

Variables	Constant Factor	Participation
Age	Correlation Coefficient	0.135
	Sig. (2-tailed)	0.195
Education	Correlation Coefficient	-0.050
	Sig. (2-tailed)	0.629
Land area	Correlation Coefficient	0.129
	Sig. (2-tailed)	0.216
Income	Correlation Coefficient	0.052
	Sig. (2-tailed)	0.620
Number of Dependents	Correlation Coefficient	0.303[**]
	Sig. (2-tailed)	0.003
Cosmopolitanism	Correlation Coefficient	0.288[**]
	Sig. (2-tailed)	0.003
Leadership	Correlation Coefficient	0.303[**]
	Sig. (2-tailed)	0.003
Incentive	Correlation Coefficient	0.012
	Sig. (2-tailed)	0.907

Based on the results of the Spearman's rho correlation test presented in Table 2, the relationship between socio-economic characteristics and participation levels can be explained. Several socio-economic factors have been shown to have a significant influence on participation, while others do not show a significant influence. First, the Age variable does not have a significant influence on participation, with a significance value of 0.195, which is greater than the threshold of 0.05. This shows that a person's age is not directly related to the level of participation in the activities studied. Likewise with the Education variable, which also does not show a significant influence on participation, with a significance value of 0.629. This shows that the level of education does not have a significant effect on individual participation in these activities. Furthermore, the Land Area variable does not show a significant influence on participation, with a significance value of 0.216, which is greater than 0.05. This means that the size of land owned by individuals is not directly related to their level of participation. Furthermore, the Income variable does not show a significant influence on participation, with a significance value

of 0.620, which is greater than 0.05. This means that an individual's income level is not directly related to their level of participation in the activities studied.

However, there are several variables that show a significant relationship. The Number of Dependents has a very significant effect on participation, with a significance value of 0.003 (p < 0.05). This indicates that the more dependents a person has, the higher the level of participation they show in the activities studied. Cosmopolitanism and leadership also have a very significant effect on participation, with a significance value of 0.003 (p < 0.05). Better social and economic conditions tend to encourage individuals to participate more actively in activities. Meanwhile, incentives do not show a significant effect on participation, with a very high significance value of 0.907. This shows that even though someone gets incentives, this is not related to their level of participation in the activities studied.

Overall, the variables that are proven to have a significant effect on participation are the Number of Dependents, Cosmopolitanism and leadership. On the other hand, the variables Age, Education, Land Area, and incentives do not have a significant effect on the level of participation in the activities analyzed. This result shows that the data supports a significant correlation between age and participation variables. This means that the older the farmer group members are, the more likely they are to actively participate in community forest management programs in Simpoholon. This result may reflect that a more mature age factor may be associated with increased experience, responsibility, or higher involvement in farmer group activities.

Age is a factor that can influence a person's attitude towards an activity. Those from the middle to upper age group with a more stable connection between norms and morals to values, tend to participate more than those from other ages (Uge, Purnama, & Rammang, 2024) The results of this study are in line with research conducted by (Mukhtiya, Marwoto, & Hamzah, 2023)which states that age does not correlate with participation because the Sig. value on the age indicator of 0.765 is greater than 0.05. Research by (Stephani, Hamzah, & Syarifuddin, 2023)age does not correlate with participation because the Sig. value (2-tailed) 0.831 is greater than 0.05. Meanwhile, research by (Viani et al., 2021) social characteristics that have a real influence on public perception are age. The number of dependents with participation has a positive relationship. Based on the results of the Spearman test, it is known that the correlation coefficient value of 0.303 indicates the strength of the relationship which is in the fairly strong category, in accordance with the range of interpretation of the correlation coefficient and indicates a positive relationship between the number of dependents and the level of participation of KTH Simpoholon members in community forest management activities. This positive relationship means that the more dependents a member of the farmer group has, the higher their level of participation in the program.

Furthermore, the results of the significance test show that the Sig. (2-tailed) value is 0.003, which is smaller than the significance level used, namely alpha (α) of 0.05. This shows that the relationship between the number of dependents and the level of participation is statistically significant. Thus, the null hypothesis (H0) can be rejected, while the alternative hypothesis (H1) is accepted. This means that there is a significant relationship between the variable number of dependents and the level of participation of KTH Simpoholon members in community forest management activities.

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This decision shows that the number of dependents has a positive and significant correlation with the level of participation of farmer group members. The greater the number of dependents owned by members, the more likely they are to actively participate in community forest management programs in Simpoholon. This may be due to greater responsibility in meeting family needs, which encourages them to be more actively involved in programs that can increase economic benefits or productivity. The number of dependents refers to the number of family members or individuals who are economically dependent on someone, usually a head of the family. The results of the study by (Dewi, Awang, Andayani, & Suryanto, 2020)stated that there was no relationship between the number of family dependents and participation. Meanwhile, in line with the study by (Stephani et al., 2023)the number of family dependents and participation had a positive relationship direction, but had a very weak relationship strength with a correlation coefficient value of 0.001.

Cosmopolitanism and participation have a positive relationship direction. Based on the results of the Spearman test, it is known that the correlation coefficient value of 0.303 indicates the strength of the relationship which is in the fairly strong category, in accordance with the range of interpretation of the correlation coefficient and shows a positive relationship between cosmopolitanism and the level of participation of KTH Simpoholon members in community forest management activities. This positive relationship means that the better the level of cosmopolitanism of the farmer group members, the higher their level of participation in the program. Furthermore, the results of the significance test show that the Sig. (2-tailed) value is 0.003, which is smaller than the level of significance used, namely alpha (α) of 0.05. This shows that the relationship between cosmopolitanism and the level of participation is statistically significant. Thus, the null hypothesis (H0) can be rejected, while the alternative hypothesis (H1) is accepted. This means that there is a significant relationship between the cosmopolitan variable and the level of participation of KTH Simpoholon members in community forest management activities.

This result shows that cosmopolitanism has a positive and significant correlation with the level of participation of farmer group members. The more open the members are, the more likely they are to actively participate in the community forest management program in Simpoholon. This result can reflect that better member openness allows farmer group members to be more focused and involved in program activities, because their basic needs have been met. Leadership with participation has a positive relationship direction. Based on the results of the Spearman test, it is known that the correlation coefficient value of 0.288 indicates the strength of the relationship which is in the fairly strong category, in accordance with the range of interpretation of the correlation coefficient and indicates a positive relationship between leadership and the level of participation of KTH Simpoholon members in community forest management activities. This positive relationship means that the better the leadership possessed by farmer group members, the higher their level of participation.

Furthermore, the results of the significance test show that the Sig. (2-tailed) value is 0.003, which is greater than the significance level used, namely alpha (α) of 0.05. This shows that the relationship between leadership and participation levels is statistically significant. Thus, the null hypothesis (H0) can be rejected, while the alternative hypothesis (H1) is accepted. This means that there is a significant relationship between the social environment variables and the level of participation of KTH Simpoholon

members in community forest management activities. This decision shows that leadership has a positive and significant relationship with the level of participation of farmer groups in community forest management activity programs. This indicates that the leadership factor is an important variable that influences participation, where social interaction, leader support can encourage farmer groups to be more actively involved in these activities. Therefore, leadership plays a significant role in increasing the participation of farmer groups in community forest management.

Education and participation have a negative relationship. Based on the results of the Spearman test, it is known that the correlation coefficient value of -0.050 indicates the strength of the relationship which is below the correlation strength criteria so that it is categorized as very weak and shows a negative relationship between the education variable and the level of participation of KTH Simpoholon members in community forest management activities. This negative relationship means that the higher the level of education of the farmer group members, there is a tendency for their level of participation in the program to decrease. However, the strength of this relationship is very weak. Furthermore, the results of the significance test show that the Sig. (2-tailed) value is 0.629, which is much greater than the significance level used, namely alpha (α) of 0.05. This shows that the relationship between education and participation levels is not statistically significant. Thus, the null hypothesis (H0) can be accepted, while the alternative hypothesis (H1) is rejected. This means that there is no significant relationship between the education variable and the level of participation of KTH Simpoholon members in community forest management activities. This decision shows that education does not have a significant relationship with the level of participation of farmer groups. Although there is an indication of a negative relationship, this relationship is very weak and not statistically significant. These results indicate that education may not be the main factor influencing the participation of farmer group members in the community forest management program in Simpoholon. Other factors, such as economic conditions or number of dependents, may have a greater influence than education level.

Education according to (Jahira, Muhlis Madani, 2023)said that the level of education greatly influences a person's participation. There are three ways to achieve education levels, namely formal, non-formal and informal education. In general, someone who has a higher level of education has the insight and understanding to think more critically and has the ability to control, supervise and assess the suitability of the development process being carried out. The results of (Malvry I, Hengki D, & Maria Y.M.A, 2021)stated that formal education does not affect a person's level of participation. Because formal education only contains general knowledge theory, it cannot describe the high or low level of a person's participation. Meanwhile, research by (Malvry I et al., 2021)found a significant influence between the education variable and the level of participation of the Rin Pamu farmer group in the pine resin utilization program.

Land area and participation have a positive relationship. Based on the Spearman test results, the correlation coefficient value of 0.129 indicates that the strength of the relationship is in the weak category, in accordance with the range of interpretation of the correlation coefficient and indicates a positive relationship between the land area variable and the level of participation of KTH Simpoholon members in community forest management activities. This positive relationship means that the wider the land owned by members of the farmer group, the higher their level of participation in the program.

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Furthermore, the results of the significance test show that the Sig. (2-tailed) value is 0.216, which is much greater than the significance level used, namely alpha (α) of 0.05. This indicates that the relationship between land area and participation level is not statistically significant. Thus, the null hypothesis (H0) can be accepted, while the alternative hypothesis (H1) is rejected. This means that there is no significant relationship between the land area variable and the level of participation of KTH Simpoholon members in community forest management activities.

This decision shows that land area has a positive relationship with the participation of farmer group members, but is not statistically significant. Although the wider the land owned, there is an indication that farmer group members tend to be more involved in community forest management programs in Simpoholon, the effect of land area on participation is not strong enough to show clear significance. This may be due to other factors that are more dominant in influencing the level of participation, although larger land ownership can encourage greater motivation and responsibility.

Land area refers to the total area of forest or land managed by a farmer group. The results of this study are not in line with the research of (Arga, Setyawati, & Anantayu, 2021)which states that land area is correlated with participation, this is because the wider the land owned by farmers, the higher the production results will be, so that it can increase the income of the farmers. Research by (Stephani et al., 2023) Land area is related or correlated significantly with participation because the Sig. (2-tailed) value of 0.007 is smaller than 0.05. Income with participation has a positive relationship direction. Based on the results of the correlation test, the correlation coefficient value of 0.052 indicates that the strength of the relationship between income and participation is in the very weak category, according to the range of interpretation of the correlation coefficient. This positive relationship shows that the higher a person's income, there is a tendency for an increase in the level of participation in the activities studied, although this relationship is not strong. Furthermore, the results of the significance test show that the Sig. (2-tailed) value is 0.620, which is much greater than the significance level used, namely α = 0.05. This indicates that the relationship between income and participation levels is not statistically significant. Thus, the null hypothesis (H₀) can be accepted, while the alternative hypothesis (H₁) is rejected. This means that there is no significant relationship between the income variable and the level of participation in the activities studied.

Incentives with participation have a positive relationship direction. Based on the results of the Spearman test, the correlation coefficient value of 0.012 indicates the strength of the relationship in the very weak category, in accordance with the range of interpretation of the correlation coefficient and indicates a positive relationship between the incentive variable and the level of participation of KTH Simpoholon members in community forest management activities. This positive relationship means that the greater the role played by members of the farmer group, there is a tendency for their level of participation to increase. However, the strength of this relationship is very weak and almost insignificant. Furthermore, the results of the significance test show that the Sig. (2-tailed) value is 0.907, which is much greater than the level of significance used, namely alpha (α) of 0.05. This shows that the relationship between role and level of participation is not statistically significant.

Thus, the null hypothesis (H0) can be accepted, while the alternative hypothesis (H1) is rejected. This means that there is no significant relationship between the incentive variable and the level of participation of KTH Simpoholon members in community forest

management activities. This decision shows that the incentive variable does not have a significant relationship with the level of participation of farmer groups. Although there is a slight indication of a positive relationship, this relationship is very weak and not statistically significant. This indicates that incentives in farmer groups are not the main factor influencing their level of participation in community forest management program activities. Factors from other variables may have a greater influence on the level of participation.

The following is an interpretation of each indicator: Age: There is a positive and significant relationship between age and the performance of activities (R = 0,216; Sig = 0,037), which means that the older the respondents are, the more active they are in implementing HKm management. However, the relationship between age and other stages is not significant. Education: There is no significant relationship between education level and all stages of HKm management. This shows that education level does not affect the level of member participation. Land Area: There is no significant relationship between the area of land owned and the four stages of activities. This means that land area does not guarantee higher involvement in HKm management. Income: The income variable does not show a significant relationship with participation at all stages, which means that income level does not affect farmer involvement in HKm activities. Number of Dependents: There is a significant positive relationship with the planning stage (R = 0.373; Sig = 0.000), indicating that the more dependents, the higher the participation in planning. Conversely, there is a significant negative relationship with the utilization stage (R = -0.278; Sig = 0.007), indicating that the more dependents, the lower the participation in utilization. Cosmopolitanism, No significant relationship was found with all stages of activities. This means that individual openness to the outside world does not directly affect participation. Leadership: There is no significant relationship with participation in HKm activities. This shows that leadership positions or abilities do not always encourage active involvement. Incentives, There is no significant relationship between incentives and all stages of management. This means that the presence or absence of incentives does not affect member participation.

In practice, there are a number of problems that hinder the success of HKm management. One of the main problems is the low participation of members in various stages of activities, especially in the maintenance and utilization of forest products. This low participation is influenced by several factors, such as low levels of education, limited technical skills, and minimal understanding of the importance of sustainable forest management. Another problem is internal conflict between KTH members, especially related to inequality in the distribution of results. This conflict is triggered by differences in land area, differences in skill levels, and minimal transparency in the profit-sharing system. Members who have smaller land or do not have technical skills feel that they are not getting a fair share of the results compared to other members. This creates tension within the group and has an impact on solidarity and the spirit of cooperation.

In addition, there are also issues related to the lack of support for facilities and infrastructure and other supporting facilities from external parties, both the government and supporting institutions. Limited access to training, technology, and information are the main obstacles in increasing the capacity of KTH members. Many members do not yet have basic knowledge about efficient pine tapping techniques, so that pine resin production is not optimal. Overall, the problems in KTH management in Sipoholon District do not only come from within the group, but also from external factors that affect

the effectiveness of the HKm program. Therefore, there needs to be an increase in capacity through training, ongoing assistance, and the establishment of a fair and transparent profit-sharing mechanism to encourage active participation and sustainability of sustainable forest management activities.

Conclusion

Based on the results of the research and discussion, the conclusion obtained in this study, namely the level of participation of KTH Simpoholon members in all stages of HKm activities is relatively low with a percentage of 74 respondents (78.7%). KTH Simpoholon members are on average productive age between 25-59 years and the most respondents are 35-39 years old as much as 28.7%. Most respondents received formal education up to College 34.0% Then the average area of land managed by respondents is between 8.71-11.00 ha as much as 56.4%. In Income with a total of 26 respondents or around 27.7% who have income> Rp3.5 million, the number of dependents of most respondents is more than> 7 respondents as much as 42.6%. The cosmopolitanity of respondents is smaller as much as 19.1%. Leadership disagrees as much as 68.1%. And incentives in farmer groups l members agree as much as 54.3%. Based on socio-economic characteristics, income, number of dependents, cosmopolitanism and leadership are correlated with participation, while socio-economic characteristics such as age, education, land area and incentives are not correlated with participation.

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