

Analysis of Partnership-Based Cocoa Farming Development in Gunung Maria Village

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Abstract

This research aims to analyze the strategy for developing partnership-based cocoa farming in Gunung Maria Village, North Padang Lawas Regency. Cocoa is one of the leading sectors that has a strategic role in supporting the economy of rural communities and has great potential for both domestic and export markets. The study used a qualitative description through field observations, in-depth interviews, and SWOT (Strengths, scriptive approach Weaknesses, Opportunities, Threats) analysis. The results of the analysis show that Gunung Maria Village has strengths in the form of abundant natural resources, strong partnerships, and farmer skills, as well as opportunities such as increasing market demand and government support. However, the main challenges are still found in the form of limited capital, access to technology, and road infrastructure. The results of the SWOT quadrant place the village in Quadrant I, namely an aggressive map in strategy, which recommends using internal strengths to achieve external opportunities. The proposed strategies include farmer training, product diversification, institutional strengthening, and the use of digital technology and export partnerships. These findings are expected to be a strategic reference in designing policies for developing sustainable agriculture and improving the welfare of cocoa farmers.

Keywords: *Cocoa, partnership, agricultural development, SWOT, Gunung Maria Village*

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INTRODUCTION

Cocoa is a plantation commodity that plays a significant role in the Indonesian economy. It is also one of Indonesia's leading export commodities and a major foreign exchange earner, alongside oil and gas. Cocoa is a tree-like plant native to South America. The seeds of this plant produce a processed product known as chocolate (Details, 2024). Cocoa is a leading commodity in the plantation subsector that plays a significant role in the Indonesian economy.

foreign exchange earner, source of income for farmers, job creator and encourage agribusiness and agro-industry as well as regional development (Rustidja et al., 2021)

In addition, cocoa commodities contribute foreign exchange of US\$ 1.24 billion and are the third largest foreign exchange earner in the plantation subsector after palm oil and rubber (Suryana et al., 2022). Indonesia is also the third largest producer in the world after Ghana and Ivory Coast and the 12th largest cocoa exporter in the world, namely 2 percent (Vanzza Aji et al., 2019). Cocoa is one of the export commodities from

the plantation subsector which is a national superior commodity that contributes the third largest foreign exchange after palm oil and rubber (Pratama et al., 2023).

In terms of quality, Indonesian cocoa commodities have quality advantages when compared to other countries, namely having different characteristics from countries from the African continent (Hendra et al., 2022). The advantage of Indonesian cocoa is that it produces cocoa powder with good quality and does not melt easily even though the taste is slightly sour due to the low content of free fatty acids, so that Indonesian cocoa is very much needed in the processing industry, especially for the cosmetics and pharmaceutical industries (Tumanggor, 2023).

Indonesia has long exported cocoa abroad and initially only in the form of cocoa beans. In 1961, it was recorded that only cocoa beans were exported from Indonesia worth US\$55,000 (Weihaan et al., 2023). However, between 1970-1980, cocoa exports from Indonesia began to vary, not only in the form of cocoa beans, but in the form of other processed products such as cocoa butter, cocoa paste, and cocoa powder & cake. During the period 2015-2020, the total value of Indonesian cocoa exports (in the form of cocoa beans, cocoa butter, cocoa paste, and cocoa powder & cake) reached US\$7 billion (Weihaan et al., 2023). Indonesia is one of the largest cocoa producing and exporting countries in the world. Lack of capital causes farmers to leave old or damaged cocoa plants un-rejuvenated because rejuvenating cocoa plants requires considerable capital (Ariningsih et al., 2020).

Another factor that causes farmers not to rejuvenate their cocoa is the unavailability of cocoa seedlings in the village and in surrounding villages, in addition to farmers not having sufficient technical skills to make side grafts (Ariningsih et al., 2020). To improve the condition of cocoa plants, especially for TR, in 2020, the Ministry of Agriculture through the Directorate General of Plantations will rejuvenate cocoa plants covering an area of 4,250 ha in 6 provinces (Aceh, North Sumatra, Central Sulawesi, Southeast Sulawesi, West Sulawesi, South Sulawesi) and 16 districts totaling 4,164,000 plants (Bolly et al., 2024).

The Ministry of Agriculture, through the Directorate General of Plantations, is currently accelerating the increase in production of plantation commodities, one of which is cocoa, by launching the Bun500 Program. This program provides superior quality seeds for plantation commodities (Prospek et al., 2021). The seeds consist of superior commodities such as coffee, cocoa, rubber, and coconut. The Bun-500 target is to provide 500 million seeds between 2019 and 2024 (Pokhrel, 2024). In addition to the BUN-500 program, the government also has a National Movement to Increase Cocoa Production and Quality (Gernas Kakao) program.

This program aims to improve the quality and quantity of smallholder plantation production, particularly cocoa. This partnership platform establishes a working unit to build new institutions for cocoa development by enhancing communication, coordination, and collaboration among public-private stakeholders directly involved in sustainable cocoa activities in Indonesia (Achmad Dzajuli & Syarif Imam Hidayat, 2024).

Cocoa farming is one of the sectors that has great potential in improving the community's economy, especially in rural areas such as Gunung Maria Village (Yuslem et al., 2022). Gunung Maria Village is located in North Padang Lawas Regency

(Paluta), a relatively young regency in North Sumatra Province, which was split off from South Tapanuli Regency in 2007. Its location in the interior of North Sumatra provides a unique character for the development of this village.

Gunung Maria Village is one of the villages that produces cocoa. Cocoa is not only a leading commodity but also has high economic value in the global market. In recent years, demand for quality chocolate products has continued to increase, both for domestic consumption and export (Pipih, 2024). Therefore, developing sustainable and partnership-based cocoa farming is crucial to increasing farmer productivity and welfare (Christoporus & Rosmini, 2020).

Table 1 Cocoa production data in North Padang Lawas (2020-2023)

Year	Cocoa production (thousand tons)
2020	423.0
2021	436.0
2022	444.0
2023	554.0

Source: BPS North Padang Lawas

From the table above, it can be seen that cocoa production increases every year, although the increase each year is not much, but in 2023 there was a high increase compared to previous years.

Partnerships in cocoa farming development can involve various parties, including farmers, the government, non-governmental organizations, and the private sector. This partnership model is expected to create positive synergy, where all parties can support each other and contribute to improving the quality and quantity of cocoa production (Sinta Aulia Haikal et al., 2024).

Previous research has shown that effective partnerships can improve farmers' access to technology, training, and markets, thereby increasing their income (Kurdi et al., 2023). However, cocoa farming development in Gunung Maria village faces challenges. Some of the obstacles faced include a lack of technical knowledge about cocoa cultivation, limited access to capital, and price fluctuations in the market. Therefore, an in-depth analysis of current conditions, potential, and existing challenges is essential to formulate an effective development strategy (Purba et al., 2023).

This study aims to analyze the development of partnership-based cocoa farming in Gunung Maria village, with a focus on identifying factors that influence the success of the partnership and its impact on farmer welfare. In the process of developing Gunung Maria village, communication and coordination are required, as well as the role of various elements of the general public. The role in question is the participation of all elements of society in developing Gunung Maria village.

These elements of society can be mobilized through strengthening digital-based social capital. Through digital social capital, rural communities will be able to build networks and collaborate with various parties (Hadi & Paramita, 2024). One way to do this is by building networks and utilizing social media platforms to build collaborations, partnerships, and promotions (Batubara & Harahap, 2022). In fact, the

people of Gunung Maria village have utilized social media in their daily lives. However, this use of digital media is more for personal interests than for business in their village (Nurussofiah et al., 2022).

If the use of digital media can be maximized for the benefit of developing the cocoa business in Gunung Maria village, then Gunung Maria village will undoubtedly be able to develop well (Imsar et al., 2021). Thus, this research is expected to provide useful recommendations for the development of cocoa farming in Gunung Maria village, as well as being a reference for other areas that have similar potential.

Through a partnership-based approach, it is hoped that cocoa farming will not only be a source of income, but can also contribute to sustainable economic development in the region (Zahroo, 2023).

Cocoa processing in Gunung Maria village is expected to enable cocoa bean production in Gunung Maria village to be processed into cocoa derivative products that can increase the economic value of products by implementing various product innovations and creativity, resulting in increased income and encouraging farmers to continue to increase cocoa productivity.

This study aims to formulate various strategies related to the development of partnership-based cocoa farming businesses that are more targeted and focused on various internal and external aspects that will affect cocoa in the future so that they will be able to encourage the development and growth of the village economy (Agribisnis et al., 2024).

Research by Supriyadi and Rahmawati (2020) examined partnership models for developing superior commodity-based agriculture. This study found that collaboration between farmers and research institutions can improve the quality and quantity of agricultural output. In the context of Gunung Maria village, implementing this partnership model can help cocoa farmers gain access to the latest technology and more efficient cultivation practices.

Research conducted by Wulandari (2022) shows that good partnerships can strengthen social ties among farmers. Through solid collaboration, farmers can support each other and share knowledge, creating a more resilient and competitive community. In Gunung Maria village, this can increase solidarity and collaboration among cocoa farmers.

Research conducted by Santoso (2021) shows that farmers involved in partnerships have an easier time obtaining loans from financial institutions. With sufficient capital, farmers can improve agricultural infrastructure, such as irrigation and land maintenance, which in turn increases productivity. In Gunung Maria Village, access to this financing is crucial to supporting cocoa farming development. (Batubara & Harahap, 2022)

Based on research conducted by Suryana, Nugrahapsari, and Hasibuan (2022), they examined various policies implemented by the government regarding cocoa downstreaming. This study provides a comprehensive overview of the challenges and opportunities in increasing the added value of cocoa products at the national level. While focusing on macro policies and downstreaming, their findings regarding the potential and constraints within the cocoa value chain provide a foundation.

It is important for understanding the real conditions of cocoa in Indonesia, including how development at the farmer level can contribute to broader downstreaming.

The phenomenon exemplified by the title of the article is the collaboration between cocoa farmers and various stakeholders, including the government and the private sector, to improve agricultural productivity and quality. This partnership has the potential to drive local economic growth and agricultural sustainability in Gunung Maria Village (Imsar et al., 2023).

Based on the results of interviews conducted by researchers with one of the cocoa farmers, Mr. Muhammad, Mr. Muhammad has been cultivating cocoa for 10 years in Gunung Maria village. Mr. Muhammad explained that initially the harvest results were not very satisfactory due to limited capital and knowledge of farming techniques. However, since the partnership with the company and the government, he began to receive training and access to superior seeds so that the harvest began to increase. The partnership was also very helpful, especially in terms of access to capital and technology. We were also guided to apply better agricultural techniques and get a clearer market. This really helped increase our income as farmers, said Mr. Muhammad. Mr. Muhammad also explained that their biggest challenge is limited capital, especially for rejuvenating old plants. In addition, difficult road access makes it difficult for us to sell the harvest directly to the market so we often depend on middlemen who offer less profitable prices. Middlemen often have influence in setting the selling price of agricultural products. They can determine the purchase price from farmers, which is often lower than the selling price in the market. For example, the price of cocoa per kilo is 80 thousand rupiah, if sold directly to the market the price of cocoa can reach 100 thousand rupiah per kg. Sometimes middlemen also provide capital or loans to farmers to buy seeds, fertilizer, or other necessities and will be paid after the farmer sells his goods to the middleman. Sometimes the farmer's goods are still not enough to repay the loan that the farmer has taken out earlier. Mr. Muhammad also hopes that this partnership can continue and be strengthened, so that we farmers can continue to receive training support and capital. If road access is improved, I am sure marketing will be smoother and farmer income can increase significantly.

Based on an interview with the village head of Gunung Maria, Mr. Idris, he explained that cocoa farming in Gunung Maria Village remains a primary source of livelihood for the community. However, several obstacles remain, such as limited access to technology and inadequate capital. Despite this, they see progress, particularly thanks to partnerships with various parties supporting farmers, including government, private sector, and NGOs. Through collaboration with cocoa processing companies and supporting institutions, farmers gain access to training, superior seeds, and a wider market. This strengthens the competitiveness of Gunung Maria village's cocoa products and increases farmers' incomes. However, they also face challenges such as limited capital for plant rejuvenation and technology investment. Furthermore, damaged roads make it difficult to distribute harvests, and middlemen often control selling prices, thus suboptimal farmer incomes. Mr. Idris hopes this partnership can be expanded and strengthened so that farmers can more easily access capital and modern technology. They also want village infrastructure improved to ensure smooth market access and farmers can receive fair selling prices. This will significantly improve community welfare.

This research presents novelty in the form of an integrated SWOT analysis and a strategy for developing locally-based agricultural partnerships with a digital

transformation and community empowerment approach, particularly in the context of cocoa commodity development in remote areas with unique geographic and socio-economic characteristics.

According to Mursalat et al. (2023), the study identified partnership patterns between cocoa farmers and companies such as PT. Mars Symbioscience Indonesia, as well as the level of farmer satisfaction with these partnerships. Mursalat also emphasized partnership patterns and how companies play a role in supporting cocoa farmers. He also used direct observation and interviews with cocoa farmers.

farmers and partner companies. Meanwhile, research conducted by Iqbal & Dalimi (2022) analyzed government policies supporting cocoa agribusiness in Luwu Regency, South Sulawesi, and the implementation of the Primatani program. Iqbal focused more on government policies and how the Primatani program can improve cocoa agribusiness. Iqbal also conducted policy analysis based on secondary data and case studies.

Meanwhile, research conducted by Nurlaela N (2023) examined institutional aspects in supporting cocoa farming, including the role of cooperatives in improving market access and farmer welfare. Nurlaela also emphasized institutional aspects, with research focused on farmer empowerment through local organizations. Nurlaela used a qualitative approach with observation and in-depth interviews.

Table 2 Data on limited financial resources in Gunung Maria village

Financial Aspects	General Conditions
Average monthly income	Rp. 1,000,000 - Rp. 2,500,000 (fluctuates depending on the harvest season)
Production costs (fertilizer, tools, etc.)	Around 30-50% of income
Savings	Most farmers do not have fixed savings
Access to formal financial institutions	Limited (only a small percentage have bank accounts or formal loans)
Debt to middlemen	Commonly occurs, especially during the lean season (season of scarcity of harvests)

Source: researcher data processing

The table above shows that limited financial resources in Gunung Maria Village are a structural issue that must be addressed systematically. Lack of access to capital and formal financial institutions, high production costs, and dependence on middlemen make farmers extremely vulnerable. Therefore, empowerment strategies such as establishing farmer cooperatives, providing revolving funds, financial training, and expanding access to formal financial institutions are crucial steps to strengthen the economic resilience of cocoa farmers in Gunung Maria Village.

Table 3 Data on limited market access in Gunung Maria village

Market Access Aspects	General Conditions in Gunung Maria Village
Selling price of cocoa at the farmer level	Rp. 70,000 – Rp. 80,000/kg (lower than the national market price)
Number of direct buyers	Very limited (the majority of sales are through middlemen)
Distance to the big market (sipiongot market)	± 50–80 km (road access is not optimal)
Access market price information	Minimal, only know from middlemen or fellow farmers
Storage/post-harvest facilities	Limited, causing the quality of cocoa to decrease when stored for a long time
Access to institutional buyers (cooperatives or exporters)	Almost nothing

Source: researcher data processing

The table above shows that limited market access in Gunung Maria Village is a serious obstacle to cocoa farming development. This issue concerns not only infrastructure and information, but also the market structure, which is still dominated by middlemen. Therefore, **strengthening farmer institutions, building road infrastructure, utilizing digital technology,** and establishing **direct distribution channels to institutional markets** are crucial for improving market access and enhancing farmer welfare.

Table 4 Data on community participation in Gunung Maria village

Participation Indicators	General Conditions in Gunung Maria Village
Presence of residents in village deliberations	< 35% of total families invited
Number of active members in farmer groups/cooperatives	± 10% of the total of 30 farmers
Participation in community service/mutual cooperation	± 30–50%
Involvement in village development planning	The majority is only represented by certain devices or figures.
Utilization of village services (BUMDes, training, etc.)	Less than 40% of residents

Source: researcher data processing

The table above shows that the level of community participation in Gunung Maria Village in various aspects of village development remains relatively low. This situation is a major obstacle to the development of sustainable partnership-based cocoa farming. This low level of participation demonstrates the need to **strengthen social capital**, raise **collective awareness**, and **actively involve the community** in every stage of development. Strategies such as education, information transparency, local leadership training, and revitalizing farmer groups can be solutions to increase community participation across the board.

FORMULATION OF THE PROBLEM

1. How is the partnership model applied in the development of cocoa farming in Gunung Maria Village?
2. What are the factors that influence the development of cocoa farming in Gunung Maria village?
3. What are the challenges faced in developing partnership-based cocoa farming in Gunung Maria village?

THEORITICAL REVIEW

Agribusiness Theory

Agribusiness theory explains that agriculture encompasses not only production but also the entire value chain from upstream to downstream, including processing, distribution, and marketing. According to Kauffman (2019), effective agribusiness development requires integration between various actors in the supply chain. In the context of Gunung Maria Village, partnerships between cocoa farmers and other stakeholders can increase efficiency and productivity.

Partnership Theory

Partnership theory emphasizes the importance of collaboration between various parties to achieve common goals. According to Thapa & Gaiha (2021), effective partnerships can improve farmers' access to resources, technology, and markets. In developing cocoa farming in Gunung Maria Village, partnerships between farmers, the government, and the private sector can create beneficial synergies and increase the competitiveness of cocoa products .

Sustainable Development Theory

Sustainable development theory emphasizes the importance of maintaining a balance between economic growth, social justice, and environmental protection. According to Zhang & Wang (2020), cocoa farming development must consider sustainability to ensure that natural resources are not overexploited. In Gunung Maria Village, the implementation of sustainable agricultural practices, such as agroforestry and the use of organic fertilizers, can help maintain ecosystem balance.

Agricultural Innovation Theory

Agricultural innovation theory explains that the adoption of new technologies and innovative agricultural practices can increase productivity and efficiency. According to Mendez & Esteban (2022), innovations in cocoa farming, such as the use of superior varieties and modern cultivation techniques, can increase yields and product quality. In Gunung Maria Village, training and outreach to farmers on agricultural innovations are crucial to building their capacity.

Community Empowerment Theory

Community empowerment theory emphasizes the importance of active community participation in decision-making. According to Lobell & Gourджи (2019), empowering farmers through education and training can increase their capacity to manage agricultural businesses. In Gunung Maria Village, involving farmers in the planning and implementation of a cocoa farming development program can increase their sense of ownership and responsibility for the program's success.

RESEARCH METHODS

This study used a qualitative descriptive research type. Data collection methods were obtained from various sources such as books and journals. Field observations were conducted to understand the condition of cocoa farming, the cultivation techniques used, and the available infrastructure. Data were obtained from interviews with three cocoa farmers and the village government, namely the village head, and field observations. A SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis was conducted to evaluate the development position of cocoa (chocolate) farming in Gunung Maria village. This will help in identifying internal strengths and weaknesses as well as external opportunities and threats.

1. IFAS and EFAS Matrix

According to Rangkuti (2008), the IFAS and EFAS matrices consist of columns, weights, ratings, and a total score. According to Rangkuti, the IFAS matrix is used to formulate internal strategic factors, namely the company's strengths and weaknesses, identified using the IFAS table. The EFAS matrix is then used to formulate external strategic factors, namely opportunities and threats, after being identified using the EFAS table (Jamil, 2020).

2. Explanation of Ratings, Weights, and Scores in the SWOT Matrix

Weight: Indicates how important a factor is in the analysis, usually on a scale of 0.0 - 1.0 (total weight of all factors = 1.0). Rating: Assesses the impact of factors on the success of partnership-based cocoa farming, usually on a scale of 1 - 4, where

- 1 = Weak/Low influence
- 2 = Moderate/Sufficient influence
- 3 = Strong/Significant influence
- 4 = Very Strong/Large influence

Score: Calculated by multiplying the weight by the rating to determine the relative significance of each factor.

RESULTS AND DISCUSSION

Research result

SWOT Analysis of Partnership-Based Cocoa Farming Development in Gunung Maria Village

This SWOT analysis provides a framework for understanding the various internal and external factors that can influence the development of partnership-based cocoa farming in Gunung Maria Village. By identifying strengths that can be utilized,

weaknesses that need to be addressed, opportunities that can be pursued, and threats that need to be anticipated, which is conducted through interviews and distributing questionnaires to cocoa farmers. Internal factors are an evaluation process that aims to identify and understand the strengths and weaknesses in cocoa farming development in Gunung Maria Village. Strengths can include resources, capabilities, and advantages that the company has, while weaknesses include limitations or deficiencies that can hinder performance.

Internal factor analysis

To determine the Internal Factor Analysis Summary (IFAS) matrix in a SWOT analysis, factors are identified by assigning weights to each factor. Each identified factor must be weighted based on its importance to the organization's success. Weights typically range from 0 to 1, with 1 representing very important. A rating is then assigned to each factor. Ratings typically range from 1 to 5, with 1 representing very poor and 5 representing very good. The weights are then multiplied by the ratings for each factor to obtain a score.

Once the IFAS matrix is completed, the results are analyzed to understand the organization's strengths and weaknesses and how these factors can influence the strategies to be adopted.

Table 5. IFAS Matrix

Internal factors	Rating	Weight	Score
Strength			
Natural resources that abundant	4	0.25	1.00
Strong partnership	3	0.20	0.60
Farmers' knowledge and skills	3	0.15	0.45
Total			2.05
Weakness			
Limited access to technology	4	0.20	0.80
Lack of capital	3	0.10	0.30
Weather dependence	3	0.10	0.30
Total		1.00	1.40

Source: researcher data processing

The IFAS matrix describes the internal conditions of a company, consisting of its strengths and weaknesses, which are then summarized using weights, ratings, and scores. Based on the analysis results presented in the table, the strengths factor has a total value of 2.05 and the weaknesses factor has a total value of 1.40. From this, it can be concluded that the strengths of cocoa development in Gunung Maria village are

greater than its weaknesses. This indicates that this cocoa is capable of utilizing its strengths and overcoming its weaknesses. The greatest strength of cocoa in Gunung Maria village is its abundant natural resources, which received a score of 1.00. The greatest weakness of cocoa in Gunung Maria village is limited access to technology, which received a score of 0.80.

External factor analysis

External factor analysis is a method or process used to identify and evaluate various factors originating from outside an organization that can influence performance, strategy, and business decisions. The purpose of this analysis is to understand the external environment that can provide opportunities or threats to cocoa development in Gunung Maria Village. External factors are a method or process used to identify and evaluate various factors originating from outside an organization.

organizations that can influence performance, strategy, and business decisions. The purpose of this analysis is to understand the external environment that can provide opportunities or threats to cocoa development in Gunung Maria village.

Table 6 Efes Matrix

External factors	Rating	Weight	Score
Opportunity			
Increasing market demand	4	0.25	1.00
Government support	3	0.15	0.45
Export farmers	3	0.15	0.45
Total			1.90
Threat			
Competition from other regions	4	0.20	0.80
Climate change	3	0.15	0.45
Price fluctuations	3	0.10	0.30
Total		1.00	1.55

Source: researcher data processing

The EFAS matrix is useful in determining the extent to which external factors of the cocoa business in Gunung Maria village are influenced by opportunities or threats, which are then processed based on weight, rating, and score. Based on the results of the table analysis, the opportunity factor has a total score of 1.90 and the threat factor has a total score of 1.55. So, it can be said that the opportunities in Gunung Maria village are greater than the threats. This indicates that cocoa development in Gunung Maria village has a great opportunity to develop the business and face external threats. The greatest opportunity that Gunung Maria village has is increasing market demand, which received a score of 1.00. Meanwhile, the greatest threat that Gunung Maria village has is competition from other regions, which received a score of 0.80.

Table 7 Strategies Based on Analysis

Opportunity (opportunities)	Threats	
Strength	So: Leveraging partnerships to increase chocolate production and quality, and reach a wider market.	St: Using local knowledge to adapt to climate change and increase competitiveness.
Weaknesses	Wo: Seeking funding sources for new technologies and training for farmers.	Wt: Develop risk mitigation strategies to deal with price fluctuations and weather impacts.

Source: researcher data processing

1. SO Strategy (Strengths and Opportunities):

- a. Establish training programs for farmers in better cocoa cultivation techniques
- b. Develop partnerships with cocoa companies to improve market access and distribution.

2. ST Strategy (Strengths and Threats)

- a. Implementing sustainable agricultural practices to increase resilience to climate change.
- b. Improving product quality through organic certification to attract premium markets.

3. WO Strategy (Weaknesses and Opportunities):

- a. Looking for investors or grant programs to fund modern agricultural technology.
- b. Holding workshops and seminars to increase farmers' knowledge about business management

4. WT (Weaknesses and Threats) Strategy:

- a. Develop agricultural insurance to protect farmers from losses due to extreme weather.
- b. Create a product diversification plan to reduce dependence on one type of product.

IFAS and EFAS matrix analysis

1. Total IFAS score

Total strength: 2.05

Total weaknesses: 1.40

IFAS score (strengths-weaknesses): $2.05-1.40 = 0.65$

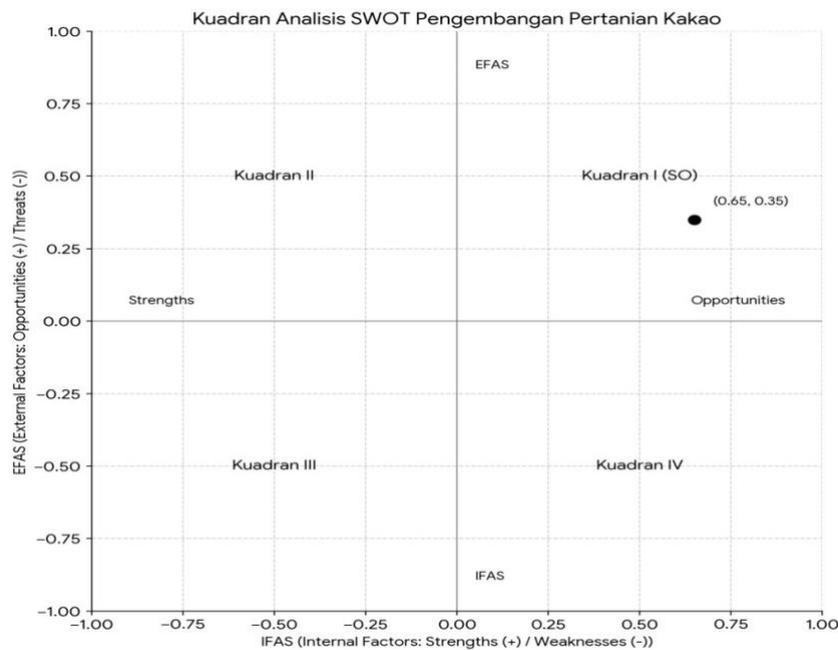
2. Total EFAS score

Total odds: 1.90

Total threats: 1.55

EFAS score (opportunity-threat): $1.90-1.55 = 0.35$

SWOT Analysis Quadrant of Cocoa Farming Development in Gunung Maria Village



Source: researcher data processing

In this diagram:

The horizontal axis represents IFAS (Internal Factors: Positive Strengths, Negative Weaknesses).

The vertical axis represents EFAS (External Factors: Positive opportunities, Negative threats).

The black dot at coordinates (0.65, 0.35) shows the position of cocoa farming development in Gunung Maria Village, which is in Quadrant I (SO - Strengths and Opportunities).

Implications of Quadrant I (Strengths - Opportunities) for Cocoa Farming Development in Gunung Maria Village: Being in Quadrant I indicates that Gunung Maria Village has a very strong position in cocoa farming development. They have internal advantages that can be utilized to take advantage of available external opportunities. This is an ideal situation for growth and expansion.

Recommended Strategy Based on Quadrant I (SO Strategy - **StrengthsOpportunities**): Because it is in Quadrant I, the most appropriate strategy is an aggressive strategy, also called an SO strategy. This strategy focuses on utilizing internal strengths to maximize external opportunities.

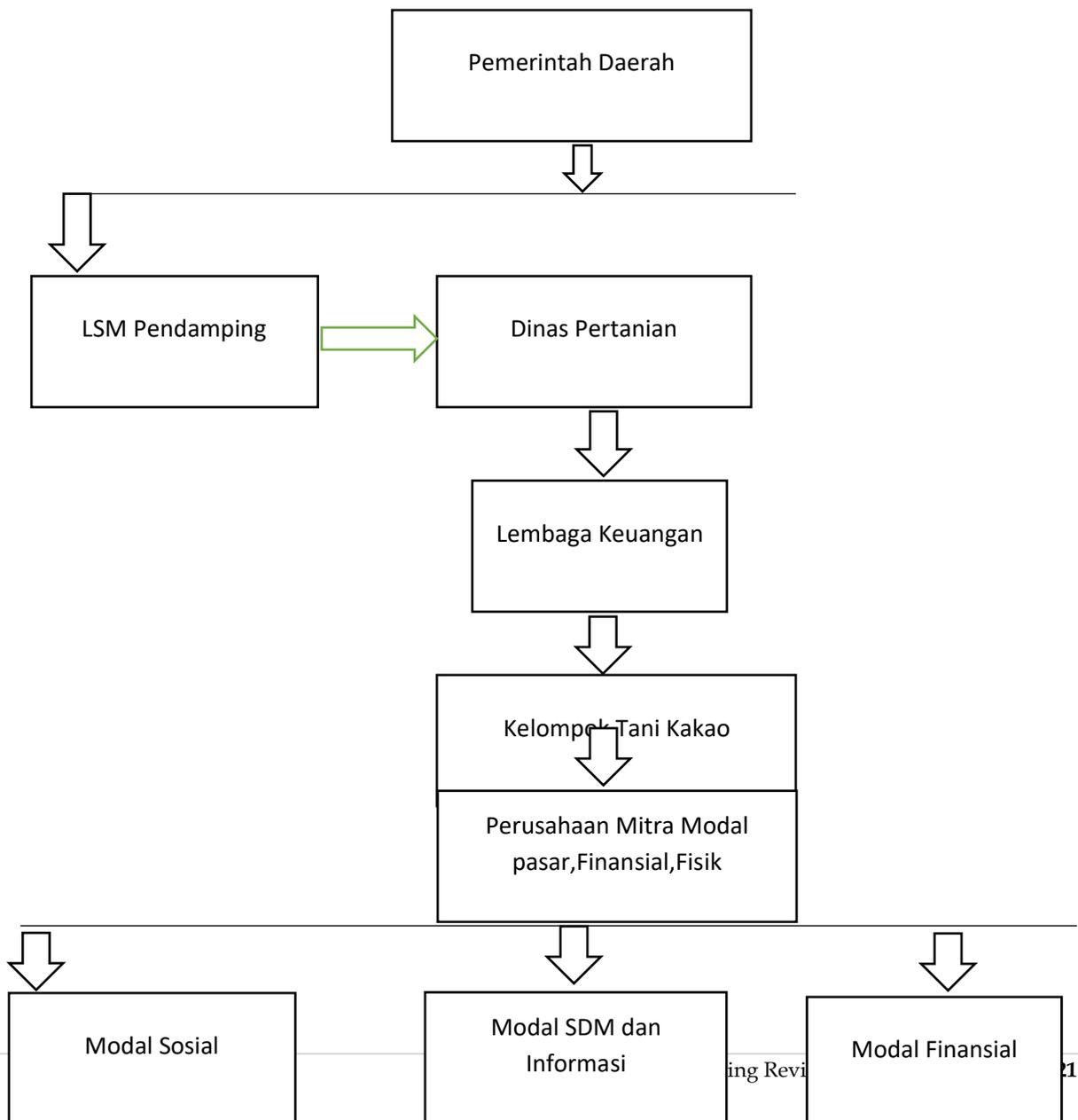
With an aggressive and well-planned SO strategy, Gunung Maria Village can maximize the potential of partnership-based cocoa farming, increase productivity, and ultimately, the welfare of farmers in a sustainable manner.

DISCUSSION

A. Partnership Model Applied in Cocoa Farming Development in Gunung Maria Village .

In general, partnership is a cooperative relationship between two or more parties who need each other, then the ongoing cooperation is based on a partnership pattern (Atmodjo et al., 2023). An effective partnership model is a form of cooperation between various parties, such as farmers, government, non-governmental organizations (NGOs), and the private sector, which aims to increase the productivity and sustainability of agricultural businesses, in this case, cocoa farming. An effective partnership model in developing cocoa farming in Gunung Maria Village can increase the productivity, quality, and competitiveness of cocoa products (Jamil, 2020) by utilizing existing resources, providing training and creating good market access. This partnership can provide long-term benefits for farmers and the community as a whole.

Partnership model for cocoa development in Gunung Maria village



Caption

1. The government, NGOs and the agricultural service act as liaisons and mentors.
2. Financial institutions provide support in terms of capital access
3. Partner companies become a bridge between production and the market.
4. Farmer groups are the main implementers of production with the support of various capital, namely: Social capital, human resources and information capital, financial capital.

The roles of local governments, agricultural agencies, supporting NGOs, and financial institutions serve as catalysts in establishing an inclusive and sustainable partnership system. The synergy between these various elements creates an ecosystem that supports increased productivity, market access, and the overall well-being of cocoa farmers.

Partnership-based cocoa development strategies require close collaboration between all stakeholders to achieve optimal results. Suitable partnership strategies for cocoa farming include nucleus-plasma partnerships, where entrepreneurs mentor farmers, cooperative partnerships that connect farmers with markets, and research partnerships for the development of superior varieties. The implementation of training programs, market access, and financing are also crucial for the success of the partnership (Mursalat et al., 2023). The success of these partnerships depends heavily on the commitment of all parties involved and the ability to adapt to changes in the market and the environment (Zakaria et al., 2022). A strong partnership is an effective collaboration between various parties with a common goal, where each party supports and contributes to achieving optimal results. (Imsar et al., 2023)

Research by **Ayuning Tiyas (2020)** in Tabanan Regency shows that partnerships between cocoa farmers and companies can increase productivity through the provision of production facilities and technical training. In this study, the partnership level was categorized as "Intermediate," and its development strategy was formulated using Importance Performance Analysis (IPA), focusing on increasing trust and transparency between partners.

Furthermore, research by **Fitriani et al. (2021)** analyzed the role of cooperatives as strategic partners in cocoa development in Madiun Regency. The study results showed that cooperatives help farmers guarantee selling prices, access markets, and increase the added value of cocoa products through fermentation and processing. However, a major weakness is the continued dominance of verbal contracts, which pose a risk of uncertainty.

Meanwhile, research by **Rahmawati & Susanto (2022)** underscores the importance of integration between local governments and the private sector in building efficient supply chains. In South Sulawesi, they found that a multi-stakeholder partnership pattern (farmers, government, NGOs, and companies) successfully increased productivity and crop quality, as well as strengthened farmers' resilience to price fluctuations.

Factors Influencing the Development of Cocoa Farming in Gunung Maria Village

Various elements or variables influence the success of efforts to increase productivity, efficiency, and sustainability in the agricultural sector. (Thifany et al., 2020)

According to Firdaus Mulyadi (2011), cocoa farming development is seen as part of farming, namely the organization of nature (land), labor, and capital aimed at agricultural production. In the context of cocoa, development includes increasing productivity, farming efficiency, and farmer welfare through a systematic and sustainable approach.

According to **Rustidja et al. (2021)**, soil quality, climate, and geographic conditions significantly determine cocoa productivity. Fertile soil and a stable tropical climate support optimal cocoa plant growth.

Land conditions

Soil fertility and good soil quality are crucial for cocoa growth. Fertile soil supports root growth and nutrient absorption.

Topography: Land slope and drainage affect plant growth. Flat land with good drainage is more ideal for cocoa cultivation.

Climate

Temperature Cocoa grows optimally at temperatures between 20 and 30 degrees Celsius. Temperatures that are too high or too low can affect growth and yield.

Rainfall: Adequate water is crucial. Ideal rainfall ranges from 1,500 to 2,000 mm per year to support cocoa growth.

Cultivation Techniques

The use of superior varieties, selecting cocoa varieties that are resistant to pests and diseases, can increase harvest yields.

Effective pest and disease management of plant-use organisms (OPT) is very important to maintain plant health and increase productivity.

Support from Government and Related Institutions

Agricultural extension programs conducted by the government and private institutions can provide new knowledge to farmers about better cocoa cultivation techniques.

Access to and financing of financial support from the government or financial institutions can help farmers in purchasing the necessary agricultural inputs.

Socioeconomic Factors

Farmer education Farmers' education levels influence their ability to adopt new technologies and better agricultural practices.

The availability of good market access to sell cocoa products can increase farmers' income and encourage the development of cocoa farming.

According to **Rustidja et al. (2021)**, soil quality, climate, and geographic conditions significantly determine cocoa productivity. Fertile soil and a stable tropical climate support optimal cocoa plant growth.

Factors such as natural conditions, access to capital, technology, institutional support, and market access significantly influence cocoa farming development. Research in Gunung Maria Village shows that a strong and aggressive partnership-based strategy can leverage strengths and opportunities to address internal and external challenges. This finding aligns with previous research, which emphasizes that a collaborative and structured approach can sustainably strengthen the cocoa sector.

CHALLENGES FACED IN PARTNERSHIP-BASED COCOA FARMING DEVELOPMENT IN GUNUNG MARIA VILLAGE

Cocoa agricultural development is a series of planned and sustainable efforts to improve the productivity, quality, and competitiveness of cocoa commodities, both at the farmer and industry levels. The goal is to create an efficient, sustainable agricultural system that provides added economic value to the community. Cocoa agricultural development faces several challenges, including the following.

A challenge is a condition, situation or obstacle that requires a person or group to use their abilities, courage and strategy to overcome it and achieve a certain goal.

Research by Aksal Mursalat (2023) examined the identification of partnership patterns in cocoa agribusiness development in East Luwu Regency, South Sulawesi. The main finding was that the partnership pattern implemented was a nucleus-plasma partnership with PT Mars Symbioscience Indonesia. Challenges faced included farmer dependence on the core company, limited access to information and training, and a mismatch between farmer expectations and transparency between parties.

Limited Access to Financial Capital

Farmers often have difficulty accessing formal financial institutions due to limited collateral or information and dependence on middlemen or high-interest informal loans.

Low Quality of Human Resources and Access to Information

Farmers' knowledge of modern cocoa cultivation techniques is still limited and there is also minimal training from assistants. Sustainable from external parties and Difficulty in accessing market information, prices and agricultural technology.

Weak Social Capital and Farmer Institutions

Farmer groups are not yet fully solid in management and decision-making and there is a lack of trust and transparency in cooperation between members and with external partners.

Limited Market Access

Distribution channels for harvested produce still depend on third parties as well. The absence of price guarantees or profitable contracts for farmers from partner companies and the long geographical distance from distribution centers also affect costs and profits.

Inequality in Partnership Relations

Farmers are often in a weak bargaining position compared to partner companies and the Partnerships they run can become unbalanced if they are not monitored or regulated by the government and supporting institutions.

The Government's Role is Not Optimal

Coordination between supporting agencies or institutions are not yet synergistic and there is a lack of special programs or long-term support for the development of cocoa commodities in the village.

Limited Production Facilities and Infrastructure

Agricultural tools, road access, and post-harvest processing facilities are still limited and this condition can hinder the improvement of the quality and quantity of cocoa production.

The challenges above demonstrate that partnership-based cocoa farming development in Gunung Maria Village requires not only capital support but also synergy between stakeholders, strengthening farmer institutions, and equitable policy interventions. Addressing these challenges requires a comprehensive and participatory approach to ensure partnerships truly benefit local farmers.

CONCLUSION

This study identified that Gunung Maria Village has enormous potential in partnership-based cocoa farming development. Through a SWOT analysis, it was revealed that this village is in **Quadrant I (Strengths - Opportunities)**, which indicates a very strategic and profitable position. Overall, the development of cocoa farming in Gunung Maria Village has very bright prospects if the recommended strategies can be implemented well, so as to improve the welfare of the village community in a sustainable manner. This study analyzed the partnership-based cocoa farming development strategy in Gunung Maria Village, North Padang Lawas Regency, using a qualitative descriptive approach, field observations, in-depth interviews, and SWOT analysis. The results of the analysis show that Gunung Maria Village has strengths such as abundant natural resources, strong partnerships, and farmer skills. In addition, there are opportunities in the form of increasing market demand and government support. However, the main challenges faced include limited capital, access to technology, and the condition of road infrastructure. The mapping in the SWOT quadrant places Gunung Maria Village in Quadrant I, which indicates an aggressive strategy. This recommends utilizing internal strengths to seize external opportunities. The proposed strategies include farmer training, product diversification, institutional strengthening, as well as the use of digital technology and export partnerships. These findings are expected to be a strategic reference for designing sustainable agricultural development policies and improving the welfare of cocoa farmers in Gunung Maria Village.

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