

Economic Value Added of Kebun Nanas Nusantara (Sibunata) In Pedawang Village

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Abstract

The development of Kebun Nanas Nusantara (SIBUNATA) in Pedawang Village, Kudus Regency represents an effort to optimize pineapple commodities by shifting the focus from merely selling fresh fruit to developing processed products and utilizing pineapple waste to increase economic value added. This study aims to analyze the creation of economic value added in the development of the SIBUNATA business through processed pineapple product innovation and waste utilization using the Economic Value Added (EVA) approach. This research employed a descriptive method with a qualitative approach. Data were collected through observation, interviews, and documentation, and were analyzed to identify the process of economic value creation within the business activities. The results show that innovation in processed pineapple products and the utilization of pineapple waste contribute to increasing the economic value added of the SIBUNATA business. Based on the EVA analysis, the business generated a positive value of Rp55,512, indicating that the enterprise is capable of creating economic value for its managers. In addition, the Student Organization Capacity Strengthening Program (PPK Ormawa) plays a role in supporting improvements in production capacity, marketing, and business management. These findings suggest that the development of local commodity-based enterprises through product innovation and resource optimization has the potential to enhance economic value added and strengthen sustainable village economic development.

Keywords: *economic value added, PPK Ormawa, rural enterprise, Sibunata, village development*

INTRODUCTION

Rural economic development plays an important role in improving community welfare and

strengthening local economic independence (Azzahra & Irawansyah, 2025). Rural economies are generally dependent on agricultural commodities that are sold in raw or unprocessed forms, resulting in low profit margins and high vulnerability to market fluctuations. Therefore, product processing and value-added activities are considered important strategies to support sustainable rural economic transformation (Benita et al., 2023). In Indonesia, these efforts are supported through Village-Owned Enterprises (BUMDes) and collaborative programs such as the Student Organization Capacity Strengthening Program (PPK Ormawa), which connect academic innovation with community-based resources.

Pedawang Village, located in Kudus Regency, Central Java, has agricultural potential through Kebun Nanas Nusantara (SIBUNATA). The plantation cultivates 16 varieties of pineapples, including local and imported types such as honey pineapple and red pineapple. Despite producing approximately 3 tons of pineapples per harvest cycle, the economic benefits for BUMDes Sido Makmur Sejahtera (SIMASE) and Pokdarwis Singobarong were still limited. Prior to the program, most pineapples were sold directly as fresh fruit, resulting in unstable and relatively low income. In addition, nearly 47% of pineapple waste, mainly peels and cores, had not been utilized optimally and were discarded as agricultural waste. Therefore, this study examines the development of SIBUNATA through product innovation, waste utilization, and capacity building under the PPK Ormawa program using the Economic Value Added (EVA) approach to assess business profitability and sustainability.

LITERATURE REVIEW

Economic Value Added (EVA) is a financial performance measurement used to determine whether a business generates returns that exceed its cost of capital. According to Gurung (2025), EVA provides a more comprehensive evaluation than conventional accounting profit because it considers opportunity costs and investment risks. A positive EVA indicates that a business successfully creates economic value beyond its invested capital.

According to Diharjo et al. (2025), one of the main challenges in rural commodity development lies in the gap between resource abundance and value capture capabilities. For SIBUNATA, the continuous availability of multiple varieties of pineapples did not automatically translate into institutional financial sustainability. Raw agricultural products face high perishability risks and limited price-setting power in conventional supply chains. In addition, the limited utilization of pineapple waste resulted in economic losses, post-harvest spoilage, and inefficient resource management. Nearly 47% of pineapple waste had not been utilized for value-added business opportunities.

Ideally, the abundant pineapple resources in Pedawang Village should generate sustainable economic benefits for the local community through diversified products and efficient resource utilization. However, most pineapples were still sold as fresh products with limited processing innovation, resulting in low economic value added and inefficient waste management. Therefore, strengthening local business capacity and optimizing pineapple waste utilization become important strategies to support sustainable rural economic development.

To address these limitations, a circular economy and value-added approach was applied.

Sari & Anggraini (2023) explained that pineapple peel waste can be transformed into products with economic value and lower production inefficiencies. Therefore, this study applies the EVA framework to evaluate whether processed pineapple products and waste utilization activities are able to create economic value for the SIBUNATA business (Manurung, 2023).

RESEARCH METHODOLOGY

This study adopted a descriptive research design with a qualitative approach to examine the economic value creation process in the development of SIBUNATA. The research was conducted throughout 2024 in Pedawang Village, Kudus Regency. Purposive sampling was used to select key informants, including the management of BUMDes SIMASE, SIBUNATA field operators, representatives of Pokdarwis Singobarong, and local community members involved in production and marketing activities.

Data collection was operationalized through three integrated channels: continuous direct observation of the manufacturing and marketing workflows; semi structured interviews exploring financial allocations, production costs, and institutional bottlenecks; and comprehensive secondary documentation including sales ledgers, project balances, and legal registries. Financial data was modeled explicitly using the Economic Value Added (EVA) methodology, structured via the following sequential steps:

1. Net Operating Profit After Tax (NOPAT): Computed by deducting adjusted operational costs and localized micro enterprise taxes from gross revenues.

2. Invested Capital (IC): Determined from the cumulative asset base mobilized for the processing unit, assuming zero short term non interest liabilities.
3. Weighted Average Cost of Capital (WACC): Calculated based on an entirely equity financed structure utilizing the national risk free rate (government bank deposit yields at 5.0%) as the baseline opportunity cost of capital.
4. Capital Charges: Derived as the product of WACC and Invested Capital.
5. EVA Determination: Formulated as $EVA = NOPAT - \text{Capital Charges}$. A positive value ($EVA > 0$) denotes real economic wealth creation.

RESULTS AND DISCUSSION

The program transformed SIBUNATA from a pineapple plantation into a business that processes pineapple products and utilizes waste efficiently. Through product development activities, seven derivative products were successfully created. Crucially, the 47% waste stream was monetized through the development of “Sakulnas” (Sari Kulit Nanas), a functional health beverage derived from the controlled fermentation of nutrient dense pineapple peels. Concurrently, the core flesh was diverted into “Ananas” (packaged candied fruit), “Sinan” (premium concentrated syrup), and specialized pastry line extensions (pineapple pies and ice creams). To anchor these products in formal retail channels, complete regulatory compliance was achieved, obtaining National Business Identification Numbers (NIB) and Pangan Industri Rumah Tangga (P-IRT) food safety licenses across all lines (e.g., Peels Beverage P-IRT: 2043319020609-29;

Syrup P-IRT: 2073319030609-29).

Financial performance was evaluated using the Economic Value Added (EVA) framework. The first structural step required tracking the total capital invested into the product processing operations. The absolute Invested Capital mobilized by the processing unit reached Rp16,476,260, comprising raw materials, operational production assets, and logistics infrastructure, as systematically structured in Table 1.

Table 1. Capital Components of SIBUNATA Processing Unit

No.	Capital Component Type	Value (IDR)
1.	Raw Production Materials & Packaging Inventory	7,959,760
2.	Operational Equipment & Logistics Infrastructure	8,516,500
Total	Invested Capital (IC)	16,476,260

The second phase involved computing the Net Operating Profit After Tax (NOPAT) during the pilot evaluation timeline. Total gross revenue from consolidated product distributions across retail lines (including Expo and Car Free Day) reached Rp2,215,000. Total Cost of Goods Sold (COGS) and active production variables amounted to Rp1,324,600, yielding an accounting operating profit of Rp890,400. Factoring in the micro enterprise tax rate of 0.5% on gross revenue pursuant to Indonesian Government Regulation (PP 55/2022) resulting in a tax obligation of Rp11,075, the final calculated NOPAT stands at Rp879,325.

To establish the hurdle rate for wealth creation, the Weighted Average Cost of Capital

(WACC) was calculated. Since the community enterprise is entirely funded by equity reserves without external high-interest bank debt liabilities, the WACC corresponds directly to the opportunity cost of equity capital. This cost is derived from the national risk-free benchmark interest rate (Bank Indonesia government deposit yield) set at a conservative 5.0%. Multiplying the WACC of 5.0% by the Invested Capital base of Rp16,476,260 yields an absolute Capital Charge of Rp823,813. The structural breakdown of the financial parameters and the final EVA formula are detailed in Table 2 below.

Table 2. Economic Value Added (EVA) Calculation Summary

Financial Variable Matrix	Formula / Basis	Amount (IDR)
Net Operating Profit After Tax (NOPAT)	Operating Profit - Micro Tax (0.5% Gross)	879,325
Invested Capital (IC)	Total Active Operating Assets Base	16,476,260
Weighted Average Cost of Capital (WACC)	National Risk Free Opportunity Rate	5.0%
Capital Charges (CC)	Invested Capital x WACC	823,813
Economic Value Added (EVA)	NOPAT - Capital Charges	+55,512

The positive EVA result (EVA = +Rp55,512) indicates that the business is able to create economic value beyond its capital costs. Conventional accounting standards assume a firm is successful if its operating profit is greater than zero. However, as argued by Gurung (2025), accounting profits fail to consider the baseline risks and the cost of invested capital. This finding is consistent with Munawaroh et al. (2024) and Yanto & Astawa (2024), who stated that positive EVA reflects efficient financial performance and value creation.

This result indicates that the cooperative is not only financially stable, but also capable of generating economic value beyond its capital costs. In addition, the program contributed to a 70% increase in rural household income and reduced dependence on seasonal fresh pineapple sales through the development of diversified processed products.

The success of SIBUNATA demonstrates the important role of circular economy practices in rural business development. By utilizing 47% of pineapple processing waste to produce “Sakulnas,” the business was able to reduce production inefficiencies while creating additional sources of revenue. This finding supports previous studies showing that pineapple peel waste can be transformed into products with economic value (Sari & Anggraini, 2023). The institutional backing provided by the PPK Ormawa framework served as a catalyst for capacity expansion, helping the local cooperative shift from unstable raw fruit sales to more stable and diversified processed products, thereby providing a clear answer to the central problem of rural economic dependency (Athoillah et al., 2024; Soegiarto et al., 2024).

CONCLUSION AND RECOMMENDATIONS

Conclusion

The results of this study indicate that the development of processed pineapple products and waste utilization activities at SIBUNATA contributed to the creation of positive economic value. The application of the Economic Value Added (EVA) method showed a positive EVA value of Rp55,512, indicating that the business was able to generate returns above its capital costs. In

addition, product diversification and circular economy practices helped improve business sustainability and reduce dependence on raw pineapple sales. The utilization of pineapple waste into value-added products also created additional economic opportunities and reduced production inefficiencies. Furthermore, support from the PPK Ormawa program contributed to strengthening production capacity, product innovation, and local business management. These findings demonstrate that local resource optimization through value-added activities can support sustainable rural economic development and improve the economic potential of village-based enterprises.

Recommendations

To ensure business sustainability and practical implementation of these findings, it is highly recommended that BUMDes SIMASE implement a more systematic financial recording system to monitor real time WACC and capital allocations. For commercial expansion, the management should transition from temporary pop-up markets (such as expos and Car Free Day) to integrated digital B2C platforms via established e-commerce channels. Finally, from an academic standpoint, future researchers should expand this qualitative anchored EVA model into comprehensive, long-term quantitative analysis to fully evaluate the long-term economic impacts of community partnership programs.

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