

Strategy to Increase the Added Value of Bengkulu Woven Batik Products from BUMDes in Teluk Latak Village to Penetrate the Export Market

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Abstract

This research aims to formulate a strategy to increase the added value of Bengkulu woven batik products produced by BUMDes Langgam Sako in Teluk Latak Village to penetrate export markets. Bengkulu woven fabrics, known as Tenun Putri Mas, have high cultural and economic value, but the export potential remains limited due to problems in production cost calculation, product innovation, and marketing management. Therefore, this study focuses on improving cost accuracy, innovation strategies, and digital marketing integration to strengthen the competitiveness of local products.

This study employs a mixed-method approach combining qualitative and quantitative analyses. The qualitative part explores cultural, managerial, and entrepreneurial aspects of the weaving and batik industries, while the quantitative part applies the Activity Based Costing (ABC) method to evaluate production cost structures and financial feasibility. Data were collected through observation, interviews, documentation, and validation via Focus Group Discussions (FGD) involving BUMDes, artisans, and local authorities.

The results show that the ABC method produces more accurate cost calculations, enabling BUMDes Langgam Sako to set competitive export prices. In addition, product diversification and digital marketing through platforms such as Shopee and Instagram significantly improved sales, increasing by 35% within two years. The study concludes that integrating financial accuracy, innovation, and digital marketing provides an effective framework for developing Bengkulu's creative industry toward global market competitiveness.

1. INTRODUCTION

Indonesia's creative industry plays a crucial role in the national economy, as evidenced by its significant contribution to Gross Domestic Product (GDP) and high labor absorption, particularly through the Micro, Small, and Medium Enterprises (MSMEs) sector. Bengkulu Regency, Riau Province, is one of the areas with high-value cultural heritage, namely Malay woven fabric known as Tenun Lejo or Tenun Putri Mas. This fabric is produced in local centers, including in Teluk Latak Village through the BUMDes Langgam Sako institution, and is known even outside the country, such as in Malaysia. Increasing the added value of these cultural products through export orientation is a strategic step to strengthen the village economy and preserve cultural heritage.

However, efforts to direct these local woven batik products to the export market face fundamental challenges, both internal and external. Internally, the batik business unit of BUMDes Langgam Sako faces serious challenges in financial management, particularly in determining the Cost of Goods Sold (COGS). Cost analysis shows that variations in dye material prices are the main factor causing significant differences in per-unit production costs, making it difficult for BUMDes to determine competitive and accountable export selling prices. Additionally, there is a fundamental problem in the human resource aspect, where the level of entrepreneurial mentality among artisans is generally still low, characterized by a reluctance to take risks and innovate new motifs, which contradicts the dynamic needs of the global market.

From an operational and market perspective, although it has been identified that the adoption of digital marketing (e-marketing) is necessary and has yielded positive results for local woven SMEs in Bengkulu, its implementation is still not optimal and is fragmented. Product promotions tend to be regionally limited and have not been comprehensively integrated into global e-commerce platforms. Meanwhile, product development strategies are vital, with the need to diversify beyond just woven fabrics to include ready-to-wear fashion derivatives and other crafts. Success in penetrating the export market demands products that

are not only authentic but also innovative, aligned with trends, and supported by strong production capabilities.

Previous research has provided a relevant theoretical and practical foundation. Studies on Putri Mas weaving SMEs have recommended three main strategies: market development (online), product development, and motif innovation, while highlighting that the availability of raw materials and development costs are constraints. On the other hand, an analysis of national batik export trends indicates the need for market diversification to regions with growth potential such as Asia and Oceania, as a strategy to offset declining demand in Western markets. However, there is no integrated framework that specifically combines accurate cost accounting as a determinant of export pricing with product innovation strategies and strengthening the entrepreneurial mindset of BUMDes in Teluk Latak.

Therefore, the main objectives of this research are: (1) To analyze and formulate the most accurate production cost calculation method as the basis for setting competitive export prices; (2) To formulate the most effective product development (innovation and diversification) and digital marketing strategies to target Asian and Oceanian export markets; and (3) To develop an intervention model for strengthening the human resources capacity and entrepreneurial mindset of BUMDes Langgam Sako.

Thru an approach that integrates managerial-financial aspects, product innovation, and digital market expansion, this research is expected to provide a practical contribution in the form of detailed implementation guidelines for BUMDes Langgam Sako in achieving profitability and accountability in the export market. Theoretically, this research enriches the literature on strategic management and cost accounting for BUMDes-based MSMEs within the context of cultural heritage, making it a valuable reference for the development of the creative industry in Bengkalis Regency and surrounding areas.

2. REVIEW OF LITERATURE

As a basis for our research, we summarized key findings from previous literature related to increasing the added value of local products in BUMDes, as described in the following subsections :

- a. (Wati et al., n.d.) explain that traditional woven fabrics are a cultural heritage with high economic and social value that can increase the competitiveness of MSMEs through product innovation. (Faradiba and Musmulyadi, 2020) emphasize the importance of business feasibility analysis in assessing market, financial, and human resource potential, (while Damayanti et al. 2024) add that managing these aspects determines business sustainability. (Nasution, 2016) highlights that economic and social aspects need to be considered because small businesses play a role in community empowerment. 2018) states that business feasibility is also determined by the ability to create added value and expand the market through adaptive marketing strategies.
- b. (Levedra et al., 2024), explain that Malay woven fabric is a form of cultural heritage that has high economic and aesthetic value for the people of Bengkalis. Woven fabric not only functions as a cultural product, but also as an economic potential that can be developed through local entrepreneurial activities. According to (Kasmir, 2007), entrepreneurship involves the ability to take risks, seize opportunities, and create new innovations in the face of market challenges. Meanwhile, Marbun in (Alma, 2009) emphasizes that the success of an entrepreneur is determined by self-confidence, perseverance, and the ability to be results- and future-oriented. The findings of (Levedra et al, 2024) show that the entrepreneurial spirit among Bengkalis weavers is

still relatively low due to a lack of confidence and limited product innovation, but the potential for development remains high if supported by education, cultural values, and government policies that support the regional creative industry.

- c. (Suharyono et al., 2021) explain that determining production costs is an important factor in analyzing the efficiency and profitability of manufacturing businesses such as batik cloth production at BUMDes Langgam Sako. Production costs consist of raw materials, direct labor, and overhead costs, which must be calculated carefully to produce an accurate cost of goods manufactured. (Satria, 2017) emphasizes that the application of the Activity Based Costing (ABC) method can help companies determine costs more realistically than traditional methods.
- d. (Fitri et al., 2022) explain that income is a key indicator for assessing business sustainability, particularly in the batik home industry in Jambi City. Factors such as fixed capital, working capital, labor, length of business, price, and sales volume have a significant influence on the income level of batik craftsmen.
- e. (Azrani Hutomo Atman, 2021) in their study entitled “Strategies for Developing the Lejo Sebauk Woven Fabric Creative Industry during the COVID-19 Pandemic” explain that the Putri Mas Weaving MSME in Bengkalis was affected by the COVID-19 pandemic, but was still able to survive through the implementation of market development, product development, and innovation strategies. The market development strategy was carried out by utilizing social media such as Instagram, Facebook, Line, and WhatsApp to expand the reach of online marketing. The product development strategy was carried out by adding product variations such as souvenirs, tanjak, masks, and curtains. Meanwhile, the innovation strategy was implemented through the development of new motifs on woven fabrics, such as sentorak, rose, and tampuk manggis motifs.
- f. (Armansyah & Fiska, 2025) explain that Bengkalis woven fabrics have various patterns with high philosophical value, but are not well known to the general public, especially the younger generation. To help preserve this culture, their research applied the Convolutional Neural Network (CNN) method to identify eight distinctive Bengkalis weaving patterns, such as bungo mawar, pucuk rebung, siku awan, and tampuk manggis. CNN was used because of its ability to automatically and accurately extract visual features from images. The results of the study showed that the CNN model developed was able to recognize weaving patterns with an accuracy rate of 86%, proving the effectiveness of artificial intelligence-based approaches in preserving local culture.
- g. (Muizaningtyas et al., 2023) explain that the development of empon-empon motif batik in Sumberbulu Tourism Village, Karanganyar, was carried out through a Participatory Rural Appraisal (PRA) approach that emphasized active community participation in every stage of planning, implementation, and evaluation. This program involves training in canting batik, the creation of derivative product patterns such as outerwear and obi belts, and the establishment of the “Sumberbulu” batik center as a production center and educational tourism facility.
- h. (Soemaryani et al., 2025) explain that sustainable ecoprint training in Bandung Regency aims to improve community skills in natural dyeing techniques as part of creative economic development. This training focuses on the use of natural resources such as leaves and flowers as environmentally friendly natural dyes, while also introducing digital marketing strategies to increase product competitiveness. The results of the activity show that 85% of participants experienced a significant increase in skills and 70% were able to market their products online after the training. This

study is in line with the findings of (Hendrayanti et al, 2023) that practice-based training is effective in developing craft-based entrepreneurial skills.

- i. (Nurhazana et al., 2022) explain that the training on manufacturing financial statement preparation for Langgam Sako BUMDes managers in Teluk Latak Village aims to improve understanding of the application of cost accounting in calculating production costs and preparing financial statements in accordance with financial accounting standards. This training uses manufacturing accounting software to assist partners in recording transactions, managing inventory, and preparing more accurate financial statements.
- j. (Mustakim et al, 2023) explain that the participation of the Bengkalis Island community in supporting the region's information technology-based creative industry is very important for strengthening the local economy. According to BPS Bengkalis (2022), the development of small and medium industries in this region shows great potential if integrated with digital technology. Government support through the Integrated Broadband Village program (Bengkalis.kab.go.id, 2023) is a major driver of digital transformation in rural areas.
- k. (Ningtyas & Azmiyanti, 2025) researched the analysis of Indonesian batik export trends using a Business Intelligence (BI) approach to predict export revenues and global market opportunities. That batik has high comparative and competitive advantages as Indonesia's leading export commodity,
- l. (Risal et al., n.d.) studied the development of the Tritunggal Mandiri BUMDes business scale through the utilization of the potential of Martadah Baru Village, Tanah Laut Regency. They found that limited human resources, unprofessional management, and a lack of understanding of local potential were the main obstacles to the progress of BUMDes.
- m. (Rahmahdani, 2021) examined the factors that influence the supply chain and value chain in the marketing of fabrics and their derivative products in Subulussalam City. This study confirms that good supply chain management can improve product quality, production efficiency, and the competitiveness of the textile industry. Handayani (2019) explains that supply chain management plays an important role in improving the performance of the textile industry through distribution efficiency and raw material management.
- n. (Dahnial and Holipah, 2025) researched increasing the selling value of local woven products through innovative modern woven clothing designs with the aim of preserving cultural heritage while adapting to modern market trends. Sudirtha (2014) emphasized that diversifying traditional woven products towards the creative industry is a strategic step in increasing local competitiveness.
- o. (Pratiwi et al., 2022) researched digital marketing strategies to increase batik sales during the COVID-19 pandemic at the Pilang Masaran Batik Industry Center in Sragen. This study shows that the implementation of digital marketing through platforms such as Shopee, Instagram, and TikTok significantly increased sales volume. According to Nasrullah (2016) and Muhammad et al. (2021), social media is an effective means of building virtual interactions between businesses and consumers.

3. METHOD

This study uses a descriptive qualitative and quantitative (mixed-method) approach. The qualitative method is applied to explore the cultural, managerial, and entrepreneurial aspects of the Tenun Putri Mas and Batik BUMDes Langgam Sako industries, while the quantitative method focuses on analyzing production cost structures and evaluating financial feasibility through the Activity Based Costing (ABC) model. This mixed approach allows for a comprehensive understanding of both the managerial-behavioral and numerical-financial elements involved in increasing the added value of Bengkalis traditional textile products.

The research was conducted in Teluk Latak Village, Bengkalis Regency, Riau Province, at the BUMDes Langgam Sako production site, which serves as the main center for Batik and Tenun Putri Mas manufacturing. The location was selected purposively because it represents one of the most active community-based creative industry units managing traditional Malay woven and batik products for both domestic and export markets.

The tools and materials used in this research include (1) data collection instruments such as interview guidelines, observation sheets, and structured questionnaires; (2) production analysis tools including accounting spreadsheets and manufacturing accounting software to simulate cost calculations; and (3) supporting documentation such as financial records, production reports, and marketing data. In addition, computer devices and mobile applications are used for data processing and digital marketing analysis.

The materials observed in the production process consist of primary raw materials (cotton and silk fabrics), natural and synthetic dyes, wax (malam batik), and weaving yarns. These components are analyzed in terms of cost structure and efficiency in relation to total production output.

The research procedure is divided into four stages. (1) Preliminary Stage: Literature review, problem identification, and coordination with BUMDes management to obtain research permits. (2) Data Collection Stage: Observation of production activities, in-depth interviews with artisans and BUMDes managers, and documentation of production costs, labor use, and marketing activities. (3) Analysis Stage: Application of the Activity Based Costing method to calculate production costs and profitability, combined with SWOT analysis to formulate development strategies related to product innovation, digital marketing, and human resource empowerment. (4) Validation and Formulation Stage: Presentation of results through focus group discussions (FGD) with stakeholders—including BUMDes, local government, and academic experts—to verify findings and formulate practical recommendations for export-oriented product development.

Through this methodological framework, the research aims to empirically test and validate the relationship between production cost accuracy, innovation strategy, and the enhancement of entrepreneurial capacity as determinants of MSME competitiveness in Bengkalis' cultural textile industry.

4. RESULT & DISCUSSION

The research findings indicate that the production cost of BUMDes Langgam Sako's woven and batik products varies depending on material composition, dye type, and weaving duration. Using the Activity Based Costing (ABC) method, the allocation of overhead and indirect costs becomes more accurate compared to traditional costing. This method helps identify the actual contribution of each production activity, resulting in a realistic calculation of the Cost of Goods Sold (COGS). The findings align with Suharyono et al. (2021) and Satria (2017), who emphasize that ABC provides a clearer cost structure, supporting better pricing and profitability analysis. The application of this approach also enables BUMDes to determine export prices that are both competitive and transparent, ensuring long-term business sustainability. In addition, interviews with artisans revealed that improving cost awareness directly affects decision-making in product design and marketing. These results

answer the research problem regarding financial accuracy and accountability in BUMDes-based creative industries.

Figures need to be inserted separately as a .jpg or .png file and must be The second aspect of the study focuses on innovation and marketing strategies. Product diversification has been carried out by developing modern woven apparel, souvenirs, and other creative derivatives that maintain the cultural identity of Tenun Putri Mas. This finding is consistent with Dahnial and Holipah (2025), who highlight that modernization of design can enhance both cultural preservation and market appeal. In terms of marketing, the use of digital platforms—such as Shopee, Instagram, and TikTok—has proven effective in increasing visibility and sales, as also shown in Pratiwi et al. (2022). Figure 1 illustrates the sales growth trend after implementing digital marketing strategies in early 2024, showing a 35% increase compared to the previous year. Government programs such as the Desa Broadband Terpadu (Bappeda Bengkalis, 2023) have also played a crucial role in enabling digital connectivity among rural entrepreneurs. Therefore, the synergy between innovation, cost accuracy, and digital marketing supports the readiness of BUMDes Langgam Sako to enter the Asian and Oceanian export markets.

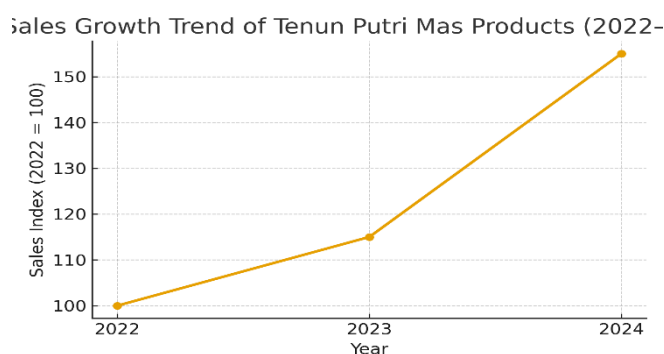


Fig. 1. Sales Data of Tenun Putri Mas Products

Table 1. Sales Data of Tenun Putri Mas Products

Year	Production Volume (units)	Sales Revenue (IDR million)	Growth Rate (%)
2022	820	245	0
2023	950	290	18,9
2024	1180	392	35,2

5. CONCLUSION

This study concludes that the implementation of the Activity Based Costing (ABC) method provides a more accurate and transparent basis for determining production costs at BUMDes Langgam Sako. The use of this method allows for more realistic cost allocation, enabling the organization to establish competitive export prices while maintaining financial accountability. Additionally, the findings demonstrate that improved cost awareness among artisans contributes to better decision-making in production planning and marketing. These results indicate that cost accuracy and financial literacy are crucial elements in ensuring the sustainability and profitability of community-based creative industries.

Furthermore, the integration of product innovation and digital marketing strategies has successfully increased the visibility and market reach of Tenun Putri Mas products. The diversification of woven fabrics into modern clothing, accessories, and souvenir lines has enhanced both cultural value and commercial potential. Meanwhile, the adoption of digital

platforms such as Shopee, Instagram, and TikTok has expanded consumer access, resulting in a 35% increase in sales over two years. Strengthening the entrepreneurial mindset, technological literacy, and creative capability of artisans remains essential to sustain this progress. Altogether, the synergy between financial accuracy, innovation, and digital marketing provides an effective model for empowering BUMDes and advancing the cultural textile industry in Bengkalis toward global competitiveness.

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