

Analysis of Entrepreneurial Skills in the Commercialization of Pineapple Fiber Woven Textile

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ABSTRACT

This study analyzes entrepreneurial skills in the commercialization of pineapple fiber woven fabrics among pineapple fiber woven fabric artisans at the Morobayat LKS (Social Welfare Institution) in the West Passi District, Bolaang Mongondow Regency, and maps the internal and external factors that influence them. The method used was a qualitative descriptive method, namely data collected through interviews, observations, documentation, and SWOT analysis supported by the IFE and EFE matrices. The findings indicate that skills such as creativity and innovation, business management, communication skills, market analysis, and environmental awareness, and networking and collaboration are very important in transforming pineapple fiber into valuable woven fabrics, which contribute to the economic independence of the community. The IFE score (0.8) indicates strong internal factors, especially abundant raw materials and distinctive local motifs. The EFE score (1.0) indicates more dominant external opportunities, including the trend towards environmentally friendly products, government support, and tourism potential. The SWOT analysis places the industry in quadrant I (aggressive strategy), recommending increased innovation, digital marketing, and external collaboration. In conclusion, entrepreneurial skills combined with favorable internal and external factors are crucial for the successful commercialization of pineapple fiber woven fabric as a competitive local product.

ABSTRAK

Studi ini menganalisis keterampilan kewirausahaan dalam komersialisasi kain tenun serat nanas pada pengrajin kain tenun serat nanas di LKS (Lembaga Kesejahteraan Sosial) Morobayat Kecamatan Passi Barat Kabupaten Bolaang Mongondow dan memetakan faktor-faktor internal dan eksternal yang mempengaruhi. Metode yang digunakan adalah metode deskripsi kualitatif yakni data dikumpulkan melalui wawancara, observasi, dokumentasi, dan analisis SWOT yang didukung oleh matriks IFE dan EFE. Temuan menunjukkan bahwa keterampilan seperti Kreativitas dan Inovasi, Manajemen Bisnis, Keterampilan Komunikasi, Analisis Pasar dan Kesadaran Lingkungan, serta Jaringan dan Kolaborasi sangat penting dalam mengubah serat nanas menjadi kain tenun yang bernilai, yang berkontribusi pada kemandirian ekonomi masyarakat. Skor IFE (0,8) menunjukkan faktor internal yang kuat, terutama bahan baku yang melimpah dan motif lokal yang khas. Skor EFE (1,0) menunjukkan peluang eksternal yang lebih dominan, termasuk tren menuju produk ramah lingkungan, dukungan pemerintah, dan potensi pariwisata. Analisis SWOT menempatkan industri pada kuadran I (strategi agresif), merekomendasikan peningkatan inovasi, pemasaran digital, dan kolaborasi eksternal. Kesimpulannya, keterampilan kewirausahaan yang dikombinasikan dengan faktor internal dan eksternal yang menguntungkan sangat penting untuk keberhasilan komersialisasi ka



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1. INTRODUCTION

This study aims to explore the entrepreneurial skills required to support the commercialization of pineapple fiber woven textiles, considering the social and cultural context of the West Passi District community. Understanding the synergy between tradition and innovation and strengthening the capacity of artisans is expected to open sustainable economic opportunities while preserving local cultural heritage.

Entrepreneurial skills, including creativity, innovation, communication, and business management, are key elements in increasing the economic value of pineapple fiber woven textiles and supporting the economic independence of local communities. Several studies have shown that entrepreneurial skills can foster the growth of small and medium enterprises (SMEs), enabling them to adapt to changing market conditions and contribute to the local economy (Islam et al., 2020); (Deyshappriya & Padmakanthi, 2022). For example, research describes the challenges faced by SMEs in Bangladesh, where entrepreneurial skills serve to increase competitiveness and adapt to market dynamics (Islam et al., 2020). In the context of commercializing pineapple fiber woven textiles, creativity and innovation are crucial. Creative training can improve community members' abilities to produce attractive and competitive products (Waluyo, 2021).

From an entrepreneurial perspective, commercializing pineapple fiber woven textiles requires a deep understanding of the market and consumer needs. Barriers such as high production costs and limited access to financial services are often key challenges in developing craft products. Therefore, increasing access to technology, marketing training, and support in business management are crucial for strengthening artisans' competitiveness, both locally and globally (Noer, 2021). Business management skills are also vital in this development, as the ability to manage resources and develop marketing strategies can impact the performance of SMEs operating in the woven textile sector. Research by Sutanty et al. emphasized the relationship between entrepreneurial orientation and MSME performance, showing that effectively implementing innovative strategies can improve business outcomes (Sutanty et al., 2023). In terms of marketing, the use of e-commerce, as recommended by Az-Zahro et al., can help artisans reach a wider market and increase income (Az-Zahro et al., 2023).

Furthermore, the use of pineapple fiber as a raw material has a strong scientific basis. Research has shown that pineapple fiber has good mechanical properties and can be processed into strong and flexible composite products (Sutrisno et al., 2023). Therefore, the use of pineapple fiber is not only a creative effort by communities to reduce agricultural waste but also has the potential to become a competitive material if managed properly.

The sustainable development of local pineapple fiber woven fabric skills is strongly influenced by the knowledge and skills of the artisans. Research shows that education and skills development are crucial elements in maintaining weaving traditions (Pryanka & Saskara, 2023). The findings of this study confirm that character development and skills education can help maintain the uniqueness and cultural value of the resulting products. This is relevant to the conditions of the West Passi community, which is still in the early stages of pineapple fiber weaving development. Pineapple fiber woven fabric artisans at the Social Welfare Institution (LKS) play a vital role in this development, directly involved in the production process and product development, which has high economic potential.

The importance of this research is driven by the increasing global attention to environmentally friendly and sustainable products. Pineapple fiber woven textiles, based on local resources, have the potential to be an alternative to meet market needs increasingly focused on sustainability. However, without adequate competency development, these products will struggle to compete in the broader markets (Noer, 2021). Pineapple fiber woven textiles not only offer a solution for pineapple waste processing but also have the potential to become a superior product with high economic value for the community. However, woven textile production in the West Passi District is still hampered by craftsmen's limited skills and knowledge regarding processing techniques, marketing, and business management (Pryanka & Saskara, 2023).

Pineapple fiber woven textile artisans at the Social Welfare Institute (LKS) in the West Passi District, Bolaang Mongondow Regency, North Sulawesi Province, have significant potential to develop local products based on natural resources, one of which is the utilization of pineapple leaf waste into fiber for woven textiles. This innovation emerged as a creative effort by the community.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

2.1. Entrepreneurial Skills Concept

Entrepreneurial skills encompass a range of competencies and attributes that facilitate the initiation and sustainability of business ventures. Recent literature emphasizes that these skills encompass not only alertness and creativity but also self-awareness, communication, and innovation, which collectively

enhance an entrepreneur's ability to generate business ideas and maintain operational success (Buil et al., 2020); (Albanus et al., 2022). Entrepreneurial skills are increasingly recognized as essential for individuals seeking to establish self-employment or contribute significantly to economic growth. This is particularly relevant in the context of high unemployment rates, as possessing relevant entrepreneurial skills can foster independence while creating employment opportunities for others (Agogbua & Mgbatogu, 2022).

Research shows that acquiring entrepreneurial skills is crucial in educational settings to equip students with the competencies needed for a successful career path. For example, studies show that entrepreneurship education significantly influences students' entrepreneurial intentions and behaviors and fosters the skills necessary to proactively address business challenges (Liu et al., 2022). Furthermore, by integrating practical experiences, such as student entrepreneurship projects, educational institutions can provide valuable exposure to real-world business environments, thereby enhancing students' entrepreneurial competencies and contributing to reducing post-graduation unemployment (Mohamad, 2023; Liu et al., 2022).

Furthermore, project-based learning and innovative teaching strategies have been identified as effective methods for developing entrepreneurial skills. The significance of hands-on learning experiences in enhancing students' entrepreneurial competencies has been documented, highlighting how such approaches encourage student engagement and the acquisition of skills essential for entrepreneurship (Kristiawan et al., 2021). Entrepreneurship training programs that emphasize critical thinking skills, decision-making, and risk-taking are essential for preparing students for the increasingly complex business landscape (Ngele & Nzelibe, 2023).

Furthermore, the development of entrepreneurial skills is not only limited by individual characteristics but is also influenced by external factors, including family background and socioeconomic status. Studies show that a supportive family structure and access to resources can increase students' entrepreneurial intentions and opportunities, while also highlighting the importance of a conducive environment beyond the acquisition of specific skills (Liu et al., 2022). More broadly, cultivating entrepreneurial skills among various community groups, including women and marginalized communities, is crucial for promoting inclusivity and harnessing economic potential (Khalid et al., 2022).

2.2. Commercialization of Handicrafts and Woven Textiles

The commercialization of craft products, including handicrafts and woven textiles, is a strategic effort to increase the selling value and sustainability of the creative industry. Craft products, which often contain cultural values and local stories, need to be marketed effectively to reach a wider market (Upadhyay, 2020). Improving artisans' skills in business management and marketing is crucial to enable them to adapt to evolving market demands; for example, through training in production techniques and digital marketing strategies (Awa et al., 2024). Furthermore, collaboration with educational institutions and non-governmental organizations can assist in additional skills training and create networks that support artisans in marketing their products more effectively (Putri et al., 2023). Innovation in design and the use of local raw materials can also be attractive to consumers, especially those concerned about sustainability and ethical consumption (Upadhyay, 2020). With the right strategy and adequate training, craft products and woven textiles have the potential to not only become a significant source of income for artisans but also as a tool for preserving cultural heritage and regional identity (Harahap & Wijayanti, 2022).

2.3. The Advantages and Challenges of Pineapple Fiber Weaving

The commercialization of craft products, including handicrafts and woven textiles, is a strategic effort to increase the selling value and sustainability of the creative industry. Craft products, which often contain cultural values and local stories, need to be marketed effectively to reach a wider market (Upadhyay, 2020). Improving artisans' skills in business management and marketing is crucial to enable them to adapt to evolving market demands; for example, through training in production techniques and digital marketing strategies (Awa et al., 2024). Furthermore, collaboration with educational institutions and non-governmental organizations can assist in additional skills training and create networks that support artisans in marketing their products more effectively (Putri et al., 2023). Innovation in design and the use of local raw materials can also be attractive to consumers, especially those concerned about sustainability and ethical consumption (Upadhyay, 2020). With the right strategy and adequate training, craft products and woven textiles have the potential to not only become a significant source of income for artisans but also as a tool for preserving cultural heritage and regional identity (Harahap & Wijayanti, 2022).

2.4. Entrepreneurial Skills in the Commercialization of Local Products

Entrepreneurial skills play a significant role in the commercialization of local products, including crafts and food, to improve community welfare and market competitiveness. Entrepreneurship training programs, such as chili sauce production in Malacca, have increased the individual capacity to produce goods in high demand in the local community (Juleha et al., 2024). Research by (Liwaul, 2023) indicates that strong

managerial skills help local entrepreneurs manage and grow their businesses, although challenges such as Limited knowledge of best practices continues to hinder some. Furthermore, skills in marketing management and innovation are crucial, as the commercialization of local products often relies on effective marketing strategies and an understanding of consumer behavior (Muhayat, 2024). Sustainable entrepreneurial approaches, such as training to harness local potential, enable entrepreneurs not only to produce but also to sell their products more efficiently, while contributing to the overall economic development of the village (Ikhwan et al., 2024). A focus on training, collaborative empowerment, and product innovation can directly facilitate increased incomes for artisans and entrepreneurs, as well as strengthen their position in the local market (Zafriana et al., 2024); (Anggarani et al., 2024).

The urgency of this research is the need to improve human resource competency in managing pineapple derivative products, especially pineapple fiber woven textiles, which are environmentally friendly textiles with high economic potential. In the context of market development and product standardization, strengthening competency is a crucial step to achieving the sustainability of the local agricultural industry (Salsabila & Fadli, 2023), (Ghozali et al., 2020). This product is very interesting and worthy of development by providing touches, both in terms of training assistance and product quality innovation to make it smoother and more aesthetic. Therefore, there is a need to improve entrepreneurial skills to contribute to increased productivity and job creation (Fiernaningsih et al., 2022), (Syarif et al., 2023), (Ghozali et al., 2020).

Therefore, this study is expected to provide useful insights to improve the skills of local workers in the technical aspects of pineapple fiber woven textile production and marketing (Ramadani et al., 2020). From an economic perspective, processing pineapple leaf fiber into woven textiles also has the potential to increase community income. By utilizing abundant and relatively inexpensive raw materials, local workers can produce products with high sales value, which in turn can stimulate regional economic growth. This study aims not only to identify training needs but also to design a comprehensive training program that will provide technical assistance to the community (Safitri & Salahudin, 2024). Against this background, it is hoped that this study can serve as a basis for further development in the pineapple fiber woven textile industry and provide recommendations for broader village development policies (Rustandi, 2019).

2.5. SWOT Analysis

A SWOT analysis was conducted to measure the potential for pineapple commodity development by comparing external factors (opportunities and threats) with internal factors (strengths and weaknesses) within the pineapple sector. External factors were entered into the External Strategic Factor Matrix (EFAS), while internal factors were entered into the Internal Strategic Factor Matrix (IFAS). The steps for determining the Internal Strategic Factor Matrix (IFAS) include the following: (1) Identify strengths and weaknesses in column 1; (2) Assign a weight to each factor on a scale from 1.0 (most important) to 0.0 (unimportant), based on its influence on the company's strategic position; (3) Calculate a rating (in column 3) for each factor on a scale from 4 (outstanding) to 1 (poor), based on its influence on the company's condition; and (4) Multiply the weight in column 2 by the rating in column 3 to obtain the weighting factor in column 4 (Rangkuti, 2006).

How to determine external strategic factors (EFAS): (1) List the factors that represent opportunities and threats to development activities in column 1, (2) Assign a weight to each factor in column 2, ranging from 1.0 (very important) to 0.0 (unimportant), (3) Calculate a rating (in column 3) for each factor on a scale from 4 (outstanding) to 1 (poor) based on its impact on the company's condition. Opportunity factors are rated positively (greater opportunities are rated 4, while smaller opportunities are rated 1) (Rangkuti, 2006).

2.6. SWOT Matrix

After the external and internal strategic factor matrices were compiled, the results were input into a qualitative model, the SWOT matrix, to formulate strategies for sustainable pineapple commodity development in Bo- laang Mongondow Regency. This matrix clearly illustrates how existing strengths and weaknesses align with the opportunities and threats faced. This matrix generates four possible strategic alternatives.

SO Strategy: This strategy is based on the company's mindset of using all its strengths to maximize opportunities.

ST Strategy: This strategy uses strengths to overcome threats.

WO Strategy: This strategy is implemented by exploiting existing opportunities to minimize weaknesses.

WT Strategy: This strategy seeks to minimize weaknesses and avoid threats.

Table 1. SWOT Matrix

Internal Factors External Factors	STRENGTHS (S) List of Strengths	WEAKNESSES (W) List of Weaknesses
OPPORTUNITIES (O) List of Opportunities	S-O STRATEGY Strategy to use strengths to take advantage of opportunities	W-O STRATEGY Strategy to minimize weaknesses to take advantage of opportunities
THREATS (T) List of Threats	S-T STRATEGY Strategy to use strengths to overcome threats	W-T STRATEGY Strategy to minimize weaknesses to avoid threats

Sumber : Rangkuti, 2006

1. SWOT Quadrants

After identifying the internal and external factors of the sustainable pineapple commodity development strategy in Bolaang Mongondow Regency, as recorded in the SWOT matrix, the next step was to determine the quadrant coordinates. These quadrant coordinates were determined based on the recapitulation of weightings and ratings from the Internal Factor Analysis Summary (IFAS) and External Factor Analysis Summary (EFAS). For the IFAS, the coordinates were calculated by subtracting the total strengths score from the total weaknesses score. For the EFAS, the coordinates were calculated by subtracting the total opportunities score from the total threats score.

The final step was to determine the quadrant position based on these calculations. This quadrant position indicated the appropriate strategy for sustainable pineapple commodity development in the Bolaang Mongondow Regency. According to Muharto (2020), the four SWOT quadrants that can be adapted to this topic are:

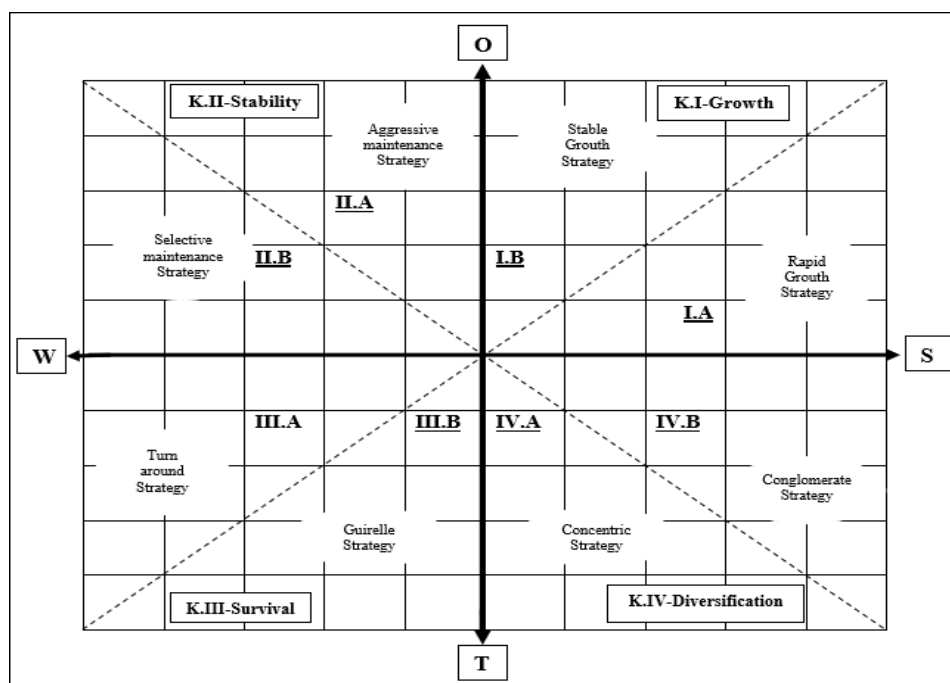


Figure 1 SWOT Quadrants

Quadrant I: Growth strategy aims to achieve improvements in various aspects, such as sales volume, assets, and profits. In the context of pineapple commodity development, growth can be seen from increases in production volume and quality of pineapple products, the development of new markets, and

increased revenue from sales and product diversification. Growth in the pineapple farming sector can be divided into two main strategies: (1) Rapid Growth Strategy: This strategy focuses on rapidly increasing pineapple production and expanding the market, for example, by increasing production to meet greater market demand or introducing innovative processed pineapple products (2) Stable Growth Strategy: This strategy aims to maintain existing growth by focusing on improving production quality and efficiency, maintaining market stability and consumer relationships, and ensuring sustainability in pineapple production.

Quadrant II: Stability Strategy, the stability strategy focuses on internal consolidation to mitigate existing weaknesses and maintain an established market position. In pineapple development, these strategies include:

(1) Aggressive Maintenance Strategy: This strategy involves efforts to address weaknesses in production and distribution, as well as improving the quality of pineapple products. For example, introducing new agricultural technologies or improving farmer skills (2) Selective Maintenance Strategy: This strategy focuses on improving the weakest areas and pays particular attention to increasing process efficiency, such as improving distribution management or increasing storage capacity to reduce product waste.

Quadrant III: Survival Strategy, this survival strategy is used to address existing deficiencies in the pineapple farming sector and aims to improve unfavorable conditions. Two approaches to survival strategies are: (1) Turnaround Strategy: This strategy focuses on changing existing negative conditions, such as declining yields or marketing difficulties, by making significant improvements in agricultural techniques or distribution management (2) Guirelle Strategy: If existing conditions are unfavorable, this strategy may involve changing focus, such as changing the type of pineapple processed product to a more profitable one or changing the target market to remain competitive.

Quadrant IV: Diversification Strategy, a diversification strategy aims to introduce new variations in a product or business that can reduce risk and increase profits. In pineapple development, this can include: (1) Concentric Diversification Strategy: Diversifying pineapple-based products, such as juice, jam, or other processed products, to reduce dependence on a single product or market (2) Conglomerate Diversification Strategy: Bringing in investors or external parties to fund product diversification, which can include products not directly related to pineapples but still within the potentially profitable agribusiness sector.

3. RESEARCH METHOD

In this study, which aimed to analyze entrepreneurial skills in the commercialization of pineapple fiber woven fabric, a qualitative approach was highly relevant and effective. The research process began with data collection, which was conducted through observation, in-depth interviews, and questionnaires. This data collection aimed to gain a more comprehensive understanding of the factors influencing the development of pineapple fiber woven fabric at the Morobayat LKS in the West Passi District. The researchers interacted directly with business actors and community members to explore their perspectives and experiences (Anthoni & Yulianto, 2023;).

Next, a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis was conducted to summarize the results of the IFE and EFE. Through the SWOT analysis, researchers were able to identify internal strengths and weaknesses, as well as external opportunities and threats facing the pineapple fiber woven cloth business. This step is crucial because it helps formulate a more effective development strategy. In the context of woven cloth, strengths could include the quality of abundant raw materials and unique designs, while weaknesses could relate to limited market access and suboptimal marketing (Fatma et al., 2023; Irmaida et al., 2021).

After the data were collected, the next step was data processing. The data were analyzed using the internal factor evaluation (IFE) and external factor evaluation (EFE) methods. The IFE analysis was used to evaluate internal factors that could contribute to a business's strengths and weaknesses, such as resource availability, managerial capabilities, and entrepreneurial skills. Meanwhile, the EFE focuses on external conditions, including existing opportunities and threats, such as market trends and government policies. This is supported by references explaining the use of IFE and EFE analysis in the context of business development (Anthoni & Yulianto, 2023; Baga & Priatna, 2025). In the IFE analysis, we assessed internal factors, including strengths and weaknesses. Each factor was weighted on a scale from 0.0 (not important) to 1.0 (important), with a total IFE weight of 1.00. Factors are ranked on a scale from 1 to 4, with 1 representing no influence and 4 representing a significant influence. The weighted score is calculated by multiplying the factor weights and ratings. The total IFE score is obtained by summing all the weighted scores for the strengths and weaknesses factors.

In the EFE analysis, we assess external factors, including opportunities and threats. Similar to the IFE, the weights are assigned on a scale from 0.0 to 1.0, with a total EFE weight of 1.00. The ranking of external factors is also assigned a score from 1 to 4. The weighted score is calculated by multiplying the weights and

rankings of the factors, and the total EFE score is calculated by adding up all the weighted scores of the opportunity and threat factors. The results of the IFE and EFE analysis provide an overview of the internal and external positions that influence product commercialization, which will later become the basis for formulating a more effective marketing strategy.

4. DATA ANALYSIS AND DISCUSSION

4.1. Profile of Pineapple Fiber Woven Textile Craftsmen at the Morobayat Weaving Center

Pineapple fiber woven textile craftsmen at the Morobayat Weaving Center in West Passi District are a community group that plays a vital role in developing crafts based on local potential. Based on field data, there are nine active craftsmen involved, with diverse age backgrounds. The majority of craftsmen are of productive age (30–39 years old), representing 66.7%. This age group dominates production activities, demonstrating significant potential in terms of energy, creativity, and openness to new innovations in weaving. Additionally, there are craftsmen aged 40–49 (11.1%) and 50–59 (11.1%), who typically have more experience in business management and mature decision-making. The presence of craftsmen aged 60 and over (11.1%) also provides added value, particularly in maintaining the continuity of traditions and serving as role models for the younger generation.

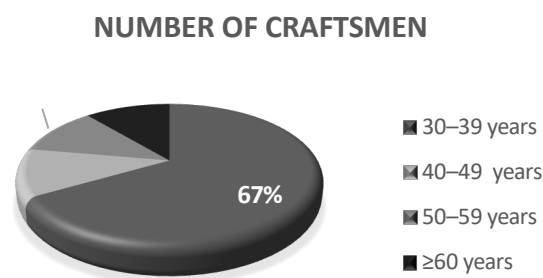


Figure 2. Age Distribution of Pineapple Fiber Weaving Craftsmen at the Morobayat LKS

In terms of gender involvement, pineapple fiber weaving craftsmen are predominantly women, although men also participate in this activity. Women play a crucial role not only as production workers but also as key drivers of textile design and motif innovation. Meanwhile, men generally play a more technical role, such as processing pineapple fiber or supporting marketing activities. Some craftsmen previously lacked permanent employment and utilized weaving as a supplemental or primary source of income. This demonstrates that pineapple fiber weaving not only serves as an effort to preserve local culture but also serves as a means of economic empowerment for the community, particularly for housewives and youth groups in the region.

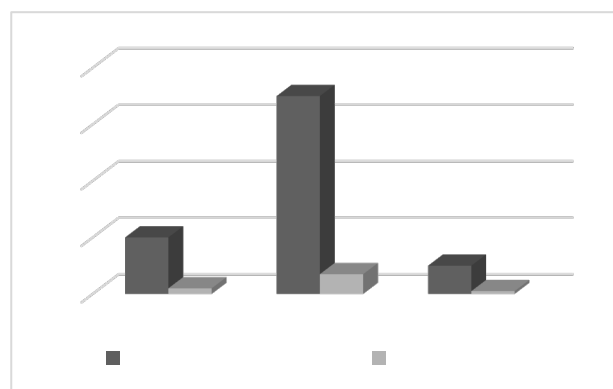


Figure 3. Education Level of Pineapple Fiber Woven Fabric Craftsmen

Figure 2 shows the educational level of the majority of pineapple fiber woven fabric craftsmen at Morobayat LKS, with a high school education, representing 70% of the total. This indicates that most artisans

possess sufficient basic skills to receive training and develop entrepreneurial skills. Meanwhile, two artisans (20%) have an elementary school education, who generally rely more on practical experience than theory. Furthermore, only one artisan (10%) holds a Diploma 3 (D3) degree, which has the potential to drive innovation and business management. Overall, this relatively diverse educational level provides opportunities for capacity building through technical and managerial training, thus supporting efforts to strengthen the commercialization of pineapple fiber woven cloth in the West Passi District.

Entrepreneurial skills are a key factor in the successful commercialization of pineapple fiber woven textiles at Morobayat LKS, Passi Barat District. Consistent with the concepts of Buil et al. (2020) and Albanus et al. (2022), these skills encompass creativity, innovation, communication, and self-awareness. This is evident in the craftsmen's ability to process pineapple fiber into aesthetically pleasing woven textiles, create new motifs, and build marketing networks through effective communication. Entrepreneurial skills have proven to be a key factor in supporting the successful commercialization of pineapple fiber woven textiles at Morobayat LKS, Passi Barat District. These skills encompass creativity, innovation, communication, and self-awareness, as evident in the craftsmen's ability to process pineapple fiber into aesthetically pleasing woven textiles, create new motifs, and build marketing networks through effective communication. These activities not only improve product quality but also encourage community economic independence. Some previously unemployed craftsmen are now actively involved in production, even involving women and youth, thus strengthening local economic inclusivity.

Technical training and practical experience also strengthen craftspeople's competencies in developing their businesses. Through activities such as marketing workshops and weaving training, craftspeople gain a deeper understanding of the importance of production management, quality control, and appropriate sales strategies. Furthermore, critical thinking and decision-making skills are reflected in material selection, dyeing techniques, pricing, and product distribution strategies.

External factors also play a crucial role in encouraging entrepreneurial development, including support from family and the local community, and the abundant availability of pineapple fiber raw materials. This support provides additional motivation for craftspeople to continue innovating and maintain business sustainability. However, the craftspeople group at Morobayat LKS still faces challenges, primarily due to the lack of specialized training in weaving techniques. One effort undertaken is a comparative study to Kediri, which serves as a first step for craftspeople to broaden their horizons and improve their skills.

Therefore, entrepreneurial skills at Morobayat LKS not only contribute to the management of the pineapple fiber woven cloth business but also play a vital role in local economic growth. This is reflected in the creation of new jobs, innovations in product design, and a strengthened marketing network. Commercializing pineapple fiber woven textiles can be an effective strategy to increase the market value of this product, while also opening up broader economic opportunities for the surrounding community.

3.1. Pineapple Fiber Woven Textile Commercialization Process at LKS Morobayat

At LKS Morobayat, pineapple fiber woven textiles are developed from pineapple leaf waste, which is processed into fiber. This process involves raw material preparation, spinning, weaving, and product finishing. The results of the study indicate that artisans at Morobayat LKS are able to apply creative weaving techniques to produce textiles with distinctive motifs, although they are still limited in terms of design variety and production speed. This finding aligns with the concept proposed by Heryadi et al. (2024), who emphasize the importance of design innovation and product quality as key to craft commercialization. Furthermore, marketing is a major challenge in the commercialization of woven textiles. Morobayat LKS artisans utilize direct sales, local exhibitions, and social media to reach consumers. However, limited distribution and promotional networks still limit broader market penetration. This aligns with the findings of Liu et al. (2022), who stated that an effective marketing strategy is a determining factor in the successful commercialization of craft products.

3.2. Factors Supporting and Inhibiting Commercialization

Based on field analysis, several factors support the commercialization of pineapple fiber woven textiles: abundant availability of local raw materials, community involvement, and support from the Morobayat LKS in technical and entrepreneurial training. These factors strengthen production capacity and artisans' ability to produce high-value products. On the other hand, several obstacles hinder commercialization. Limited technical skills, inconsistent product quality, limited access to capital, and a lack of understanding of marketing strategies are key obstacles. These findings support a previous study by Noer (2021), which showed

that the successful commercialization of craft products depends heavily on the mastery of production techniques, business management, and effective marketing.

3.3. The Impact of Commercialization on the Local Economy

The research results show that the commercialization of pineapple fiber woven textiles has a positive impact on the local economy. Craftsmen who initially relied on informal economic activities now earn additional income through the sale of woven textiles. This activity also creates jobs for other community members, including women and youth, thereby increasing economic inclusiveness. This aligns with the concept proposed by Khalid et al. (2022), which states that developing craft-based entrepreneurship can stimulate local economic growth and empower marginalized groups.

3.4. Advantages and Challenges of Pineapple Fiber Weaving

Pineapple fiber woven textiles have several advantages that make them potential candidates for the development of superior craft products: (1) Environmentally Friendly: Pineapple fiber weaving utilizes previously unused pineapple leaf waste. Utilizing agricultural waste into woven textiles not only reduces organic waste but also creates new economic value (2) Uniqueness and Cultural Value: Pineapple fiber weaving motifs and techniques have distinctive characteristics that distinguish this product from other woven textiles. This uniqueness can become a local identity as well as an attraction for consumers who value traditional and authentic products (3) Economic Value: In addition to being environmentally friendly, pineapple fiber woven textiles have a high selling value when marketed with the right strategy. This product can open up new business opportunities and increase community income, especially for artisans involved in the Morobayat LKS (4) Processing Flexibility: Pineapple fiber can be combined with other materials, such as cotton or silk, to produce a softer and more comfortable textile. This allows for varied design innovations to meet market needs.

3.4.1. Advantages of Pineapple Fiber Weaving

Despite its advantages, the development and commercialization of pineapple fiber woven textiles also face several challenges: (1) Limited technical skills: Artisans at the Morobayat LKS are still learning how to process pineapple fiber into high-quality textiles. The weaving process requires precision, precise dyeing techniques, and consistent product quality, which remain a challenge (2) Limited Production scale: Pineapple fiber woven textiles are still produced manually and on a small scale. This limits the artisans' ability to meet larger market demands (3) Limited access to capital and marketing: Lack of capital to purchase production equipment, dyes, and additional materials hinders production capacity. Furthermore, limited marketing networks make it difficult for the product to gain widespread recognition in both local and national markets (4) Market acceptance and consumer education: As a new product, pineapple fiber woven textiles still require market education to ensure that consumers understand its advantages and added value compared to other woven textiles.

3.5. Entrepreneurial Skills in the Commercialization of Local Products

Entrepreneurial skills are crucial for the successful commercialization of local products, including pineapple fiber woven cloth. These skills include creativity, innovation, business management, marketing, decision-making, and the ability to build social networks (Buil et al., 2020; Albanus et al., 2022). In the context of local products, these skills enable artisans to transform local resources, such as pineapple fiber, into products with high sales values and market acceptance.

3.5.1. Increasing Production Capacity and Innovation

At LKS Morobayat, entrepreneurial skills encourage artisans to develop more creative weaving techniques and textile motifs. Creativity and innovation are key to producing products that differ from conventional woven cloth. With these skills, artisans can adapt product designs to market trends and consumer preferences, thereby increasing product appeal in both local and national markets.

3.5.2. Supporting Marketing and Networking Strategies

Entrepreneurial skills also influence artisans' ability to market and build networks. Morobayat LKS artisans utilize social media, local exhibitions and community networks to promote their products. Communication and negotiation skills are crucial for establishing partnerships with distributors, souvenir shops, and other parties who can help expand their market reach.

3.5.3. Managing Risks and Business Decisions

Craftsmen with entrepreneurial skills are better able to make strategic decisions related to production and sales, including selecting raw materials, setting prices and assessing business risks. At LKS Morobayat,

Craftsmen who master these skills can maintain business sustainability despite fluctuating market demand or limited capital.

3.5.4. Empowering Communities and Boosting the Local Economy

In addition to enhancing individual capacity, entrepreneurial skills play a role in community empowerment. Skilled craftsmen can involve other community members, including women and youth, in the production and marketing process, thereby creating new jobs.

3.5.5. Synergy with Local Product Commercialization

Overall, entrepreneurial skills serve as a key driver in the commercialization of local products. At LKS Morobayat, developing entrepreneurial skills enables craftsmen to: (1) produce high-quality pineapple fiber woven textiles; (2) innovate designs and motifs to align with market trends; (3) market products effectively through various channels; and (4) manage business risks and make strategic decisions.

Thus, entrepreneurial skills not only support the success of individual craftsmen but also strengthen the competitiveness of local products, increase community income, and encourage community-based economic sustainability.

3.6. Strategies to Strengthen the Commercialization of Pineapple Fiber Woven Textile in West Passi District

SWOT Analysis of Pineapple Fiber Woven Textile

3.6.1. Internal Conditions

Internal conditions consist of strategic factors that are strengths and possessed by West Passi District and strategic factors that are weaknesses in the commercialization of pineapple fiber woven textiles in West Passi District. *Strengths*: (1) abundant availability of local raw materials, (2) unique local motifs and cultural values, (3) support from Morobayat LKS in training, (4) creativity and innovation of artisans, and (5) collaboration and networking capabilities. *Weaknesses* : (1) Limited technical skills (2) Small production scale (3) Limited capital and equipment (4) Limited marketing strategy (5) Simple business management

3.6.2. External Conditions

External conditions consist of opportunities, which are strategic factors that provide profitable opportunities for the commercialization of pineapple fiber woven textiles in the West Passi District, and threats, which are threats and have the potential to cause losses. *Opportunities* include : (1) Global trend of eco-friendly products,

(2) Government support and creative economy programs, (3) Potential partnerships with designers and creative industries, (4) Potential local tourism market, (5) Promotion opportunities through digital media, and (6) Support from local communities is also important. *Threats* include (1) competition with other manufactured and woven textiles, (2) fluctuating prices of additional materials, (3) lack of consumer awareness, and (4) dependence on LKS.

Based on the results of the internal and external condition mapping, a scoring process was conducted to determine the strategic development quadrants deemed most urgent for action. This factor assessment process was conducted through tabulation of Internal Factor Analysis (IFA) and External Factor Analysis (EFA). The details of the weighting of internal and external factors are presented in Tables 1 and 2.

Table 2. Assessment of Strategic Factors of Internal Conditions

Internal Factors		Weight	Rating	Score
Strength	1 Abundant availability of local raw materials	0,15	4	0,6
	2 Unique local motifs and cultural values	0,1	4	0,4
	3 Support from Morobayat LKS in training	0,1	3	0,3
	4 Creativity and innovation of artisans	0,1	3	0,3
	5 Collaboration and networking skills	0,1	3	0,3
Total Weight		0,55		1,9
Internal Factors		Weight	Rating	Score
Weakness	1 Limited technical skills	0,15	2	0,3
	2 Small production scale	0,1	2	0,2
	3 Limited capital and equipment	0,1	2	0,2
	4 Limited marketing strategy	0,1	2	0,2
	5 Simple business management	0,1	2	0,2

Total Weight	0,55	1,1
IFA = S-W Score Value : 1,9-0,9 = 0,8		

Source: Jumie Mokoginta, 2025

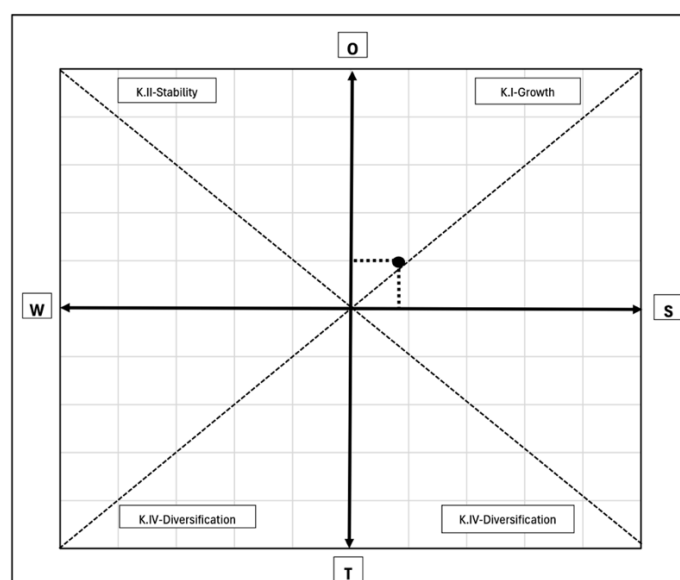
Tabel 3 Assessment of Strategic Factors of External Conditions

	External Factors	Weight	Rating	Score
Opportunity	1 Global trend of eco-friendly products	0,15	4	0,6
	2 Government support and creative economy programs	0,1	3	0,3
	3 Potential partnerships with designers/creative industries	0,1	3	0,3
	4 Potential local tourism market	0,1	3	0,3
	5 Promotion opportunities through digital media	0,1	3	0,3
	6 Local community support	0,05	4	0,2
Total Weight		0,6		2
	External Factors	Weight	Rating	Score
Threat	1 Competition with other manufactured/woven textiles	0,15	2	0,3
	2 Fluctuating prices of additional materials	0,1	2	0,2
	3 Lack of consumer awareness	0,15	2	0,3
	4 Threat of dependence on LKS	0,1	2	0,2
Total Weight		0,5		1
EFA = O-T Score Value : 2-1 = 1				

Source: Jumie Mokoginta, 2025

To identify the quadrants of high-priority strategies that require immediate implementation, the X- and Y-axis formulas are used. The X-axis represents the Opportunities-Threats (EFA) and the Y-axis represents the Strengths-Weaknesses (IFA), expressed as scoring values. Based on the calculations, the Strengths-Weaknesses (IFA) score is 0.8 (1.90-1.10), while the Opportunities-Threats (EFA) score is 1.0 (2.00-1.00).

Thus, the strategic coordinates are (0.8:1.0). This indicates that the pineapple fiber woven textile from Morobayat LKS falls into quadrant I (Growth Strategy). This indicates that the most appropriate strategy is to leverage internal strengths such as raw material availability, unique motifs, and Morobayat LKS support to seize external opportunities, such as the trend toward environmentally friendly products and the potential tourism market. Therefore, the strategic priorities for developing pineapple fiber woven textiles are strengthening entrepreneurial skills, increasing production capacity, and expanding marketing networks so that products can compete sustainably in a wider market.

**Figure 4** Quadrant Location of Pineapple Fiber Woven Textile Commercialization in West Passi District

Source: Jumie S.L. Mokoginta, 2025 (adapted from Muhammad 2008:65)

Based on the coordinate points in the SWOT quadrant, the IFA calculation results of 0.8 and EFA = 1 indicate that the pineapple fiber woven textile development strategy at Morobayat LKS is in Quadrant I, which is the intersection of internal strengths and external opportunities. This position indicates the need for a Stable Growth Strategy that focuses on leveraging internal strengths, such as the availability of pineapple fiber raw materials and unique local motifs, to respond to market opportunities, particularly the trend for environmentally friendly products and government support. This strategy emphasizes consistent and sustainable growth through improving production quality, developing innovative designs, and expanding marketing networks. Thus, the pineapple fiber weaving business is directed towards gradually but purposefully strengthening its competitiveness, thereby increasing its contribution to the local economy while maintaining the sustainability of the artisans' businesses. Strategies that can be implemented to strengthen the commercialization of pineapple fiber woven cloth in West Passi District are outlined in the following SWOT analysis matrix.

Table 4. SWOT Matrix of Pineapple Fiber Woven Textile Commercialization Strategy in West Passi District

Internal: Strategic factors in the Commercialization of Pineapple Fiber Woven Textile in West Passi District External: Strategic factors in the External Commercialization of Pineapple Fiber Woven Textile in West Passi District	Strengths (S)	Weaknesses (W)
	1. Abundant availability of local raw materials (such as pineapple fiber). 2. Unique motifs and distinctive local cultural values 3. Support from Morobayat LKS for training and mentoring. 4. Artisans' creativity and innovation in design and color.	1. Limited technical skills of artisans 2. Small production scale. 3. Limited capital and equipment 4. Simple marketing strategy
Opportunities (O)	SO Strategies (Using strengths to capitalize on opportunities)	WO Strategies (Overcoming weaknesses by capitalizing on opportunities)
1. Global trends in environmentally friendly products 2. Government support and creative economy programs 3. Potential partnerships with designers and creative industries. 4. Potential local tourism market 5. Promotion opportunities through digital media and local community support	1. Strengthen the identity of pineapple fiber woven textiles as environmentally friendly and sustainable products by utilizing unique motifs and local raw materials. 2. Build partnerships with the government and local designers to expand the market for woven products 3. Innovative designs should be developed in collaboration with designers to increase product appeal. 4. Open product showrooms/galleries in tourist areas to increase sales 5. Strengthen the branding of pineapple fiber woven products through digital campaigns that highlight local cultural values and uniqueness.	1. Improve the technical skills of artisans through intensive training to meet growing market needs 2. Access capital/equipment support from government programs to expand production capacity 3. Use digital media to expand marketing reach, even though the production scale is still limited. 4. Encourage artisans to participate in tourism exhibitions to introduce their products. 5. Improve digital marketing skills for artisans to enable them to compete in the online market
Threats (T)	ST Strategies (Using strengths to face threats)	WT Strategies (Defensive strategies, minimizing weaknesses and avoiding threats)
1. Competition with manufactured textiles and other woven textiles is also a concern. 2. Fluctuating prices of additional materials 3. Lack of consumer awareness of the value of pineapple fiber woven textiles 4. Threat of dependence on Lembaga Usaha Karya (LKS) as a business development center.	1. Emphasizing their unique cultural value and handmade nature can differentiate them from mass-produced items. 2. Optimizing the use of alternative local materials can reduce dependence on additional materials whose prices fluctuate. 3. Educate consumers through digital promotions and cultural exhibition events on the value and advantages of pineapple fiber woven textiles. 4. Build the independence of artisan groups through entrepreneurship training and cooperative formation.	1. Improving business management and product quality control is necessary to compete with other products. 2. Develop efficient production systems to reduce operational costs of production. 3. Strengthen distribution networks with local communities to ensure product recognition, despite low consumer awareness. 4. Reducing dependence on LKS by encouraging independent businesses and product diversification by artisans.

The SWOT matrix provides a comprehensive overview of the internal and external conditions of the pineapple fiber weaving business. In terms of strengths, the artisans have advantages in the abundant availability of local raw materials, unique motifs and cultural values, and support from the Morobayat LKS in the form of training. The artisans' creativity and innovation in developing designs, as well as their ability to network with the local community, are crucial assets in driving business development. However, several weaknesses remain, limiting business development. The artisans' technical skills are uneven, production

Scale is still small, capital and equipment are limited, marketing strategies are still simple, and business management tends to be traditional. These weaknesses could hinder product competitiveness if not addressed promptly.

Externally, there are numerous opportunities to capitalize on, such as the global trend toward environmentally friendly products, government support through creative economy programs, potential collaborations with designers and creative industries, and the growing local tourism market. Furthermore, digital media offers extensive promotional opportunities, with the support of the local community as a potential initial market. On the other hand, there are threats that need to be anticipated, such as competition with other manufacturers' products and woven textiles, fluctuations in the prices of additional materials, low consumer awareness of the value of pineapple fiber woven textiles, and the risk of dependence on LKS as the sole driver of the business.

Based on the combination of these factors, the recommended strategy is the SO (Strengths-Opportunities) strategy, which utilizes internal strengths to seize external opportunities. For example, developing environmentally friendly products by highlighting the uniqueness of local culture, utilizing government support to expand production capacity, and strengthening branding through digital media. The ST (Strengths-Threats) strategy can be used to face threats by differentiating handmade products, while the WO (Weaknesses-Opportunities) strategy emphasizes improving technical skills and access to capital so that weaknesses can be offset by opportunities. Finally, the WT (Weaknesses-Threats) strategy focuses on defensive measures, such as improving business management efficiency and reducing dependence on LKS. Thus, the SWOT matrix confirms that pineapple fiber woven textile has great potential for development, especially if internal weaknesses can be addressed immediately and external threats are managed well.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

Research on entrepreneurial skills in the commercialization of pineapple fiber woven cloth at the Morobayat LKS in West Passi District shows that the main factors for business success lie in the creativity, innovation, communication skills, and social networks of the artisans. These skills can improve product quality, expand market access, and open new job opportunities for local communities, particularly women and youth. The results of a SWOT analysis with an IFA of 0.8 and an EFA of 1.0 place the pineapple fiber woven cloth business in quadrant I (stable growth strategy), indicating that the business has sufficient internal strengths and significant external opportunities for development. Thus, the commercialization of pineapple fiber woven cloth will not only increase artisan income but also encourage community-based economic growth and the preservation of local culture.

Strengthening artisan capacity is essential through continuous training in weaving techniques, business management, and digital marketing strategies, enabling craftsmen to enhance their entrepreneurial skills. Equally important is access to capital and modern equipment, where support from local governments and related institutions can provide financial assistance, affordable raw materials, and updated production tools to increase efficiency and quality. To broaden market opportunities, product diversification should be pursued by developing derivative items such as bags, accessories, and home décor, which can attract wider consumer segments. Collaboration and networking also play a vital role, particularly by building partnerships with designers, creative industry players, and the tourism sector to improve the competitiveness of pineapple fiber woven products. Finally, a strong digital-based promotion strategy is needed, making full use of social media, online marketplaces, and local branding initiatives to expand market reach, both nationally and internationally.

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