

# Coping Strategies of Pili Product Establishments in Sorsogon City: Groundwork for Strategic Opportunities

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**Abstract**— This study explores the coping strategies employed by pili product establishments in Sorsogon City from 2020 to 2022 to address challenges in production, sales, marketing, and management. Using a descriptive research approach, the study integrates quantitative and qualitative methods, surveying 11 establishments to identify problems and assess their responses. Findings highlight significant disruptions caused by the COVID-19 pandemic, supply chain vulnerabilities, rising raw material costs, and financial constraints.

Retail distribution dominated the industry, with products like pili nuts and pasalubong items central to operations. Strategies included online selling, price adjustments, order-based production, and proactive supply management. Marketing efforts focused on social media and enhancing product presentation, while management adopted flexible staffing and operational rule-setting to mitigate financial strain.

The research emphasizes the need for diversified product offerings, government and private sector support, digital transformation, and financial accessibility to ensure industry resilience and sustainability. Recommendations include expanding distribution channels, improving workforce training, and fostering innovation to strengthen the pili industry's competitive position globally.

**Keywords**— pili product, Sorsogon city, COVID-19.

## I. INTRODUCTION

The pili nut, particularly its kernel, oil, pulp, and even by-products such as pili pomace, has gained global demand due to its applications in food, pharmaceuticals, cosmetics, and other industries (Millena & Sagum, 2018). Recognizing its potential, the Philippines has identified the pili industry as a significant contributor to economic growth. Research has further highlighted the utility of the pili tree, with innovations such as the use of pili shell as a coarse aggregate in concrete and an enhancer for soil strength in construction (Bayaborda & Dolor, 2018; Camino, 2017).

In Sorsogon, the pili tree, often called the "tree of hope," is integral to local entrepreneurship. Enterprises utilize pili for food products, handicrafts, and accessories, fostering economic growth and cultural pride. The Intellectual Property Office of the Philippines (IPOP) has boosted this industry by registering the collective mark for Bicol pili products, enhancing global marketability and revenues for local farmers and processors (IPOP, 2022).

The Department of Agriculture's Philippine Rural Development Project (DA-PRDP) supports the industry by addressing development gaps and elevating the quality of pili products, positioning Albay as a global hub (DA-PRDP, 2017). Despite its potential, the

industry faces challenges such as supply constraints due to typhoons, pest infestations, and the pili tree's slow maturation rate of 5-6 years (Valdeavilla, 2018).

Recent advancements have expanded the pili industry's reach to international markets, including the European Union. The nutritional benefits of pili nuts, rich in minerals and omega-3 fatty acids, have driven their popularity in the United States, Japan, and Europe (Tacio, 2009). Innovations, such as using pili oil in cosmetics and utilizing shells for charcoal briquettes, further highlight the industry's versatility (Guarin, 2023).

The COVID-19 pandemic disrupted the pili industry, affecting supply chains, production levels, and consumer demand. Small and medium-sized enterprises (SMEs) in the industry faced vulnerabilities such as reduced workforce and increased operational expenses. Studies emphasize the importance of resilience and adaptability in overcoming such disruptions, with strategies like government funding, diversification, and innovation playing critical roles (Sharma et al., 2023; Oxford Business Group, 2021).

Climate change has also impacted the pili industry, exacerbating supply chain disruptions through typhoons, floods, and other natural disasters. To address these issues, businesses are adopting climate-resilient

practices, diversifying suppliers, and leveraging technology (Boyson et al., 2022; Katsaliaki et al., 2022).

Financial constraints remain a challenge for pili farmers due to the seasonal nature of pili production and the high capital required for development. Addressing this requires investments from both government and private sectors to enhance the industry's financial stability (Lirag et al., 2023).

The shortage of skilled labor for pili processing is another pressing issue, driven by migration to urban areas. Training programs and technological adoption are essential for the industry's sustainability (SEARCA, 2023). Businesses are also leveraging digital marketing and e-commerce innovations, such as augmented reality shopping, to adapt to consumer preferences for eco-friendly and sustainable practices (Bejamas, 2024).

This study aims to empower pili product establishments in Sorsogon City by enhancing their entrepreneurial capabilities. By investing in research, marketing, and a centralized system for producers and distributors, the pili industry can overcome challenges and thrive in a competitive global market.

By addressing these multifaceted challenges and opportunities, the pili industry holds immense potential to uplift the socio-economic conditions of Sorsogon and position the Philippines as a leader in the global nut industry.

## II. OBJECTIVE

This study focused on examining the coping strategies of pili product establishments in Sorsogon City during the period of 2020 to 2022. It specifically aimed to identify the pili product establishments in the city, providing a detailed socio-demographic profile of these establishments in terms of nature of business, monthly income, revenue, types of products, and the year of establishment. The study assessed the challenges faced by these establishments, including issues related to production, sales, marketing, and management. Furthermore, the research investigated the coping strategies implemented by the pili product establishments to address these challenges in the areas of production, sales, marketing, and management. Finally, the study aims to propose strategic recommendations to improve and enhance the coping strategies of pili product establishments in Sorsogon City, contributing to the long-term sustainability and growth of the industry.

## III. METHODOLOGY

This study identified the problems encountered and the coping strategies in terms of production, sales, marketing and management employed by the pili product establishments in Sorsogon City from 2020 to 2022. This is a descriptive type of research that utilized a combination of quantitative and qualitative methods to address the study objectives. Descriptive research gathers data to describe and provide insights into specific phenomena.

To gather the necessary data, a letter request was forwarded to the City Licensing and Permits Division Office for a list of pili product establishments in Sorsogon City. A survey questionnaire was used as the primary data collection tool, supplemented by unstructured interviews to gather qualitative insights. The data collected were analyzed using appropriate statistical tools.

The respondents of the study were selected from the list obtained from the City Licensing and Permits Division Office. The list contained 11 pili product establishments, which included manufacturers, distributors, and retailers. The researcher employed total enumeration to ensure that all relevant respondents were included in the study.

The data were organized and tallied for statistical analysis, employing frequency count and ranking to analyze the socio-demographic profiles of the establishments and the range of products they offered including the problems encountered and the coping strategies employed by the pili product establishments, providing valuable insights into the challenges faced by the industry and their responses to those challenges.

## IV. RESULTS AND DISCUSSION

### 1. Pili Product Establishments in Sorsogon City

A significant portion of the pili product establishments in Sorsogon City (7 out of 11) is involved in retail sales, highlighting the importance of direct-to-consumer sales channels in the region. These establishments are predominantly located in the West District, particularly Barangay Talisay, near the city center. The socio-demographic profile of these establishments reveals a diverse range of operations within the pili industry. Of the 11 establishments, 2 are involved in buy-and-sell, 4 focus on pili food production, 1 is in wholesale, and 4 specialize in pasalubong (souvenir) products, demonstrating the intersection of local tourism and pili-based goods. Among the establishments, 4 produce pili-

based food items such as pili candies, while another 4 focus on pasalubong items, underscoring the link between local gift-giving practices and the demand for pili products.

Financially, most pili product establishments experienced a significant decline in monthly income starting in 2020, coinciding with the onset of the COVID-19 pandemic. Three of the four pasalubong shops, which offer a combination of pili food and non-

food products, demonstrated a strategic advantage through diversification. However, some establishments reported either no transactions or incomplete data during 2019 and 2020. In terms of annual revenue, six of the 11 establishments maintained relatively stable figures from 2017 to 2019, suggesting consistent demand. However, a sharp decline in revenue from 2020 onward reflects the economic downturn triggered by the pandemic. Some establishments also lacked revenue data, limiting a full understanding of the industry's financial state.

PILI ESTABLISHMENT	CLASSIFICATION	NATURE OF BUSINESS	YEARS IN THE BUSINESS	AVERAGE MONTHLY INCOME
Pili Establishment No. 1	Retailer	Buy & Sell (Pili)	5	Php 6,000.00
Pili Establishment No. 2	Retailer	Foods (Pili Candies)	40	Php 19,000.00
Pili Establishment No. 3	Manufacturer	Pili Candies	6	Php 14,600.00
Pili Establishment No. 4	Retailer	Pili Dealer	50	Php 7,600.00
Pili Establishment No. 5	Retailer	Pili Products	43	Php 8,000.00
Pili Establishment No. 6	Manufacturer	Pili Pulp Oil/Pili/Banig	4	Php 7,200.00
Pili Establishment No. 7	Wholesaler	Wholesale of Pili/ Copra/ Palay	3	-
Pili Establishment No. 8	Retailer	Pasalubong Products	35	-
Pili Establishment No. 9	Retailer	Pasalubong Center	3	-
Pili Establishment No. 10	Retailer	Pasalubong Shop	11	Php 36,400.00
Pili Establishment No. 11	Retailer	Pasalubong Shop	5	Php 19,600.00

Note: Two pili product establishments did not disclose any data regarding their monthly income. One pili product establishment did not have transactions in the years 2019 and 2020.

The most frequently produced pili products are Pili Raw Nuts and Roasted Pili, both of which were produced by eight establishments. Other products such as Salted Pili, Pili Kernel, and Crispy Pili were produced frequently as well, with frequencies of 7 and 6, respectively. Specialty items like Pili with Butter and Roasted Pili Nut in a Shell had lower production frequencies of 3, while products like Skinless Pili and Choco Coated Mazapan had the lowest production frequencies of 1. In addition to food items, ornamental products such as Pili Bracelets (produced 3 times) and Pili Key Chains, Necklaces, Anklets, and Earrings (produced with a frequency of

2.5) also marked a significant portion of the product offerings, although items like Pili Chandelier and Rosaries were less common, each with a frequency of 1. The oldest establishment was founded in 1972, marking 50 years of operation, while another has been in business since 1982. Meanwhile, four establishments have been operating for 3-5 years, indicating a dynamic and evolving market.

## 2. Problems Encountered by Pili Product Establishments

**Production.** The most pressing issues include a Lack of Pili Stock, followed by Rising Raw Material Costs, then

Adverse Weather Conditions, and Staff and Material Shortages. Other production problems were the non-operation of primary buyers, production halts, supplier-

dependent delivery volume, and operating expenses that cannot be covered by product sales.

PROBLEMS ENCOUNTERED IN PRODUCTION	FREQUENCY	RANK
<b>Pili Stock Shortage</b>	4	1
<b>Increased Pili Price</b>	3	2
<b>Bad Weather Conditions</b>	2	3.5
<b>Staff and Material Shortages</b>	2	3.5
<b>Non- Operation of Primary Buyers</b>	1	6.5
<b>Production Halts</b>	1	6.5
<b>Supplier- Dependent Delivery Volume</b>	1	6.5
<b>Operating expenses cannot be covered by product sales</b>	1	6.5

Pili Stock Shortage had a frequency of 4 and ranked 1. A stock shortage of pili nuts is perhaps the most pressing concern, as it can disrupt production schedules and severely limit output. The frequent shortage of pili stock can point to a critical supply chain issue. This shortage may result from factors such as limited harvests, inefficient supply chain management, or external disruptions like the pandemic. Increased Pili Price with a frequency of 3 and rank 2. The rising cost of pili nuts is a critical challenge, as it directly impacts production expenses. As the primary raw material, any price fluctuations can significantly affect the overall profitability of pili candy production. The rising cost of raw materials poses a significant threat to profitability.

Bad Weather Conditions had a frequency of 2 and a rank of 3.5. Unfavorable weather conditions, such as

typhoons and heavy rains, can severely affect pili nut harvesting and processing. The unpredictability of weather patterns adds another layer of complexity to the production process. Investing in weather-resistant storage facilities and diversifying sourcing regions can help establishments manage the risks associated with weather. The influence of adverse weather on production is a significant concern, especially in agricultural industries like pili farming. While businesses cannot control weather conditions, they can implement adaptive strategies to mitigate these risks.

**Sales.** Weak Sales and a Lack of Tourists emerged as the top challenge, Decreased Income resulting from Rising Raw Material Prices followed. The inactivity of primary buyers and unsettled receivables further strained cash flow.

PROBLEMS ENCOUNTERED IN SALES	FREQUENCY	RANK
<b>Weak Sales</b>	4	1.5
<b>Lack of Tourists</b>	4	1.5
<b>Decreased Income Resulting from Rising Raw Material Prices</b>	3	3
<b>Inactivity of Primary Buyers</b>	1	4.5
<b>Unsettled Receivables (i.e. online orders)</b>	1	4.5

Weak Sales have emerged as the top concern for businesses, with a notable frequency of 4 and a rank of 1.5. These issues underscore the heavy dependence of pili product establishments on physical sales and tourism. The pandemic-induced decline in consumer spending and tourism has severely impacted sales, highlighting the need for diversification of sales channels. Closely following weak sales, the Lack of Tourists also ranks high in frequency at 4 and ranks at 1.5 mainly because of the COVID-19 pandemic which significantly affected global tourism resulting in substantial economic losses. This problem

emphasizes the need to attract a more extensive customer base to stimulate revenue growth like what Regiondo (2024) highlighted as marketing strategies for attracting tourists.

Lastly, unsettled receivables present another infrequent challenge with a frequency of 1 and rank of 4.5 which can strain cash flow. Issues with Unsettled Receivables, particularly from online sales, could create cash flow challenges, hindering the smooth operation of the business. This issue is particularly pronounced for SMEs, including pili product establishments, which may

lack the financial buffer to absorb delayed payments. A case from a pili product business in Sorsogon City illustrated this problem: after fulfilling an order from outside Sorsogon province, the business owner encountered a customer who never responded after receiving the products, leaving the invoice unpaid. This resulted in a direct financial loss but also highlighted the risks associated with long-distance transactions and the

challenges of ensuring payment once products have been shipped.

**Marketing.** Intense competition is the most challenging problem. Limited advertising budgets, ineffective product displays, and the availability of packaging materials also posed a problem in this aspect.

PROBLEMS ENCOUNTERED IN MARKETING	FREQUENCY	RANK
<b>Tight Competition</b>	2	1
<b>Budget Constraints for Advertisement</b>	1	3
<b>Ineffective Product Displaying</b>	1	3
<b>Unavailability of Packaging Materials</b>	1	3

With a frequency of occurrence ranked as the top concern with a frequency of 2, pili products find themselves in an industry punctuated by tight competition. As numerous brands vie for consumer attention, differentiating their products becomes paramount. Operating in a competitive market requires businesses to continually innovate and differentiate their products. While the challenge of budget constraints for advertisement arises with a frequency of 1 and rank 3, it is a critical concern. Limited funds for advertising can stifle brand visibility and inhibit the establishment's ability to reach a wider audience.

Another challenge pertains to the ineffective product displaying with a frequency of 1 and rank 3, which can deter potential customers from engaging with the brand.

The way products are presented in stores significantly influences consumer purchasing behavior. An unappealing or cluttered display may lead to missed sales opportunities. Creating eye-catching point-of-sale materials or utilizing themed displays during promotional events can enhance customer attraction.

**Management.** The complexity of the loan process with a frequency of 5 surfaced as the ultimate encountered problem by the pili product establishments not only in the management aspect but in overall aspects. Managing diverse worker personalities, and the lack of safety training for harvesters were significant management challenges. Additionally, seasonal labor fluctuations created inefficiencies and affected business sustainability.

PROBLEMS ENCOUNTERED IN MANAGEMENT	FREQUENCY	RANK
<b>Cumbersome Loan Process</b>	5	1
<b>Various Personalities of Workers</b>	2	2.5
<b>Lack of Safety Training for Pili Harvesters</b>	2	2.5
<b>50% harvest share goes to harvesters</b>	1	5.5
<b>Decision on processing orders especially for bulk orders</b>	1	5.5
<b>Knowledge Gaps in Business Management</b>	1	5.5
<b>The challenge of Workforce Management during Lean Seasons</b>	1	5.5

The most pressing concern at Pili products is the extensive documentation required for the Cumbersome Loan Process, which ranks highest in frequency at 5 and ranks at 1. The high incidence of these problems indicates that financial accessibility to support the business operation is a significant barrier for pili product establishments.

The complexity of the loan process, often marked by excessive documentation requirements can impede the

ability of businesses to secure the necessary funding for the improvement or continuity of their organization.

With a diverse team comes the challenge of handling different personality types among workers. This issue, which has been identified with a frequency of 2 and a rank of 2.5, necessitates effective communication strategies and conflict resolution techniques. Managing a diverse workforce can be particularly challenging in small businesses where resources for human resource management may be limited.

Safety is a critical issue in agricultural settings. Pili Products has recognized the Need for Proper Safety Training for its Pili Harvesters, an aspect that occurs with a frequency of 2 and is ranked 2.5.

This is particularly practical to pili farmers and workers who expressed that they have difficulty in harvesting pili from the trees due to red ants' infestation. If they could learn how to navigate through this problem without affecting the quality of the harvest, it would be very beneficial for both the pili owners and workers.

**3. Coping Strategies Employed by Pili Product Establishments**

Production. The primary coping strategy employed by the pili products establishment involves increasing the unit prices of its offerings. This approach, which ranks as the most frequently employed strategy with a frequency of 2 and rank 1.5, aims to enhance revenue and profitability. Raising product prices is a strategy used to offset increased production costs, which may have risen due to higher raw ingredient and material prices or additional expenses incurred during the pandemic.

COPING STRATEGIES IN PRODUCTION	FREQUENCY	RANK
<b>Increasing the unit prices of pili products</b>	2	1.5
<b>Producing upon orders only to avoid wastage of raw ingredients</b>	2	1.5
<b>Advancing Pili product production</b>	1	4
<b>Advancing the purchase of supplies</b>	1	4
<b>Contacting pili products establishments for pili stock leads</b>	1	4

Another vital strategy, also occurring with a frequency of 2 ranks 2.5, focuses on producing products strictly upon receiving orders. This method minimizes raw ingredient wastage and aligns production closely with actual consumer demand. By doing this, businesses can minimize inventory costs and avoid the risks associated with overproduction such as spoilage or unsold stock. However, this strategy is particularly price-sensitive for both pili establishments and their customers. If there are fluctuations in the cost of supply prices especially in raw ingredients and materials, it may lead to an increase in the production costs of pili products, and effect, pili establishments often need to increase the unit prices of their products. This strategy helps offset the reduced income caused by higher raw supply prices to sustain profitability while meeting customer expectations.

Similar to advancing production, proactively purchasing supplies is another strategy that demonstrates the establishment's foresight and commitment to operational effectiveness. With a frequency of 1 and rank 4, anticipating the need for supplies ensures that production processes remain smooth and uninterrupted. Advancing the purchase of supplies and advancing pili product production are strategies that indicate proactive measures to ensure a steady supply chain and maintain production continuity. This strategy gives importance to foresight by securing supplies and advancing production so that pili establishments can maintain consistent production levels, avoid interruptions, and mitigate risks associated with supply chain disruptions.

Given that one of the most frequently encountered problems is the shortage of pili stock and the increase in supply prices, these proactive measures are particularly crucial in seizing the opportunity to purchase and produce in advance when pili stock is abundant. This approach allows them as well to operate more efficiently by capitalizing on lower prices and abundant supplies, reducing the impact of future price hikes or unexpected supply shortages. Thereby, protecting their margins and sustaining operations even during challenging times. Ensuring a stable supply of raw materials is vital for maintaining consistent production levels and meeting market demands.

The increase in raw material prices has led businesses to increase the unit price of their products to cover costs. By producing only upon confirmed orders, businesses are limiting production risks and potential wastage, addressing both material shortages and preventing unnecessary production halts. By advancing production and supply purchases, businesses ensure that they have enough stock before adverse weather impacts the supply chain. By contacting other establishments for stock leads and advancing supply purchases, businesses attempt to manage the unpredictability of pili stock availability.

**Sales.** Topping the list of coping strategies, engaging in online selling emerged as the most frequently employed tactic, with a significant frequency of 5, and a rank of 1. This shift from traditional physical retail to e-commerce platforms is likely driven by the limitations imposed by

the pandemic such as lockdowns and reduced foot traffic. By leveraging online platforms, businesses can extend their reach beyond their immediate geographic location and tap into a broader customer base. The adoption of selling is crucial in mitigating the impact of reduced physical sales due to the decline in tourism and

other pandemic-related restrictions. This strategy not only sustains sales during disruptions but also presents a long-term opportunity for businesses to expand their market reach. The move towards e-commerce could potentially lead to a permanent shift in sales strategies, allowing businesses to diversify their sales channels.

COPING STRATEGIES IN SALES	FREQUENCY	RANK
Engaging in online selling	5	1
Requiring a 50% downpayment before processing orders	2	2

While engaging in online selling emerges as the primary strategy, pili product establishments also employ a prudent financial approach by requiring a 50% downpayment before processing orders—a tactic observed with a frequency of 2 and rank 2. This strategy emerged as a direct response to the issue of unsettled receivables which helped pili establishments reduce the risk of non-payment. By ensuring that customers are financially committed before production begins, this strategy safeguards a business' financial health but also serves as an essential source of working capital for these establishments. By collecting half of the payment upfront, businesses can allocate these funds towards purchasing raw ingredients, and materials and covering operating expenses necessary to fulfill the orders. This practice is particularly important for SMEs with limited cash reserves which allows them to maintain production without relying on external financing while awaiting full payment upon delivery of the goods. Establishments have turned to online selling to expand their reach,

especially in the absence of in-person buyers, addressing weak local demand. To address issues with unpaid orders (e.g., online transactions), businesses now require a 50% downpayment before processing sales, ensuring they receive part of the payment upfront and reducing the risk of uncollected revenues.

**Marketing.** Social media has become an indispensable tool for businesses seeking to amplify their presence in the marketplace. For pili products, posting content on platforms like Instagram, Facebook, and Twitter emerges as the most frequently utilized strategy, with a high engagement frequency of 3 and rank 1. While a frequency of 2 and rank 2, the strategy of highlighting the local origin and superior quality of pili nuts plays a vital role in Pili Products' marketing efforts, earning it a frequency ranking of 2. To overcome this challenge, pili product establishments could focus on developing unique value propositions that set them apart from competitors.

COPING STRATEGIES IN MARKETING	FREQUENCY	RANK
Posting Pili products on social media	3	1
Leveraging the pili nut	2	2
Maintain Quality and Flavor	1	3.5
Improving packaging and presentation	1	3.5

Given the limited budget, businesses use social media as a cost-effective marketing tool, ensuring they maintain visibility despite financial limitations. To stand out from competitors, businesses are focusing on leveraging the unique qualities of the pili nut while maintaining product quality and flavor to appeal to customers who may be considering alternatives. Establishments are improving packaging and presentation to make their products more attractive to potential buyers, especially online. While the availability of packaging materials remains an issue, improving product presentation with whatever resources they have enhanced their competitive edge.

**Management.** The most significant coping mechanisms employed by pili product establishments is hiring part-time personnel exclusively based on demand. This strategy ranked as their top coping mechanism, occurs with a frequency of 3 and rank 1. Hiring part-time personnel upon orders indicates a flexible workforce management approach, where staffing levels are adjusted based on demand. By employing part-time personnel as needed, businesses can minimize labor costs during periods of low demand while still having the capacity to meet order spikes.

COPING STRATEGIES IN MANAGEMENT	FREQUENCY	RANK
The hiring of part-time personnel only upon orders	3	1
Setting of new rules to guide personnel	1	2

During the lean season, one of the significant problems encountered by these businesses is the lack of consistent work for their full-time employees. To address this, they adapted by hiring part-time workers only when there are orders to fulfill. This approach is especially practical since many of these pili establishments are family-owned with the owners themselves heavily involved in the day-to-day operations.

With the cumbersome loan processes ranked 1st as the encountered problems by the establishments, avoiding unnecessary staffing expenses by only hiring part-time personnel upon orders helps alleviate financial pressure, reducing labor costs during low-demand periods and the need to seek loans. However, this was not directly addressed by hiring strategies employed by the establishments. The setting of new rules helps manage different worker personalities, creating a more structured and harmonious working environment, which is essential for smoother operations. Although no direct coping strategy addresses these knowledge gaps, the approach to staff hiring and rule-setting shows an effort to streamline management, potentially compensating for weaknesses in business management skills.

#### IV. CONCLUSIONS AND RECOMMENDATIONS

From the findings, several key conclusions can be drawn regarding the pili product industry in Sorsogon City. First, retail distribution plays a critical role in the industry, with strategic location and direct customer engagement being central to success. The socio-demographic profile of the pili product establishments reveals a diverse industry, encompassing buy-and-sell operations, pili food production, and pasalubong items, highlighting the resilience and adaptability of these businesses. While the COVID-19 pandemic significantly impacted monthly income trends, businesses that diversified their product offerings experienced less severe declines in income. Annual revenue data from 2017 to 2021 also underscores the importance of diversification, as businesses with a broader range of products showed greater stability during economic challenges.

The most frequently produced pili products, such as Pili Raw Nuts, Roasted Pili, and Salted Pili, reflect the continued popularity of traditional items, while

businesses are also diversifying to appeal to a broader market. Notably, wearable pili non-food products, particularly pili bracelets, are the most frequently produced and sold items, suggesting a focus on small, affordable souvenirs that cater to tourists. The longevity of these establishments, particularly those with diversified portfolios, demonstrates the importance of adaptability and customer loyalty, while newer entrants bring innovation and growth opportunities. However, production challenges such as a shortage of pili nuts and rising raw material costs, along with declining sales and reduced tourism, highlight vulnerabilities in the industry. Budget constraints for advertising, product display limitations, and complex loan processes further complicate growth and sustainability.

To address these challenges, the study suggests several recommendations. Establishing a multi-channel distribution strategy integrating retail and wholesale approaches could help maximize market reach and ensure sustained growth. Continued diversification within the industry would enhance resilience, while expanding product offerings could provide income stability during economic downturns. Strategic planning, coupled with government or industry support, would facilitate recovery and strengthen the financial stability of the industry. Developing niche and specialty products while maintaining traditional offerings would help tap into emerging market opportunities. Emphasizing wearable pili products and exploring innovative marketing for larger decorative items could help cater to niche markets. Additionally, alternative sourcing strategies and partnerships should be established to manage supply chain disruptions and rising costs. To combat raw pili shortages, methods such as dry-freezing should be explored. Strengthening digital sales channels and diversifying revenue streams by reducing reliance on tourism is also crucial for long-term success.

Finally, simplification of access to financing, investing in workforce training, and implementing long-term supply chain improvements are vital for addressing production challenges. More aggressive and comprehensive marketing strategies, including partnerships and event participation, should be pursued to increase visibility. Alternative financing options, coupled with improved financial planning, would ease



management challenges related to capital acquisition. Future studies should focus on the impact of digital marketing on sales, supply chain resilience, and the role of government and institutional support in strengthening SMEs in the pili industry.

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