BUSINESS ENVIRONTMENT: CONDUCT STRATEGY ANALYSIS OF COCONUT SUGAR SMALL ENTERPRISES

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Abstract. The business environment has a significant impact on the productivity and sustainability of a business. This is because it encompasses not only internal but also external conditions which contribute to successful business. This research aims to analyze the business environment of small coconut sugar enterprises, namely determining the best strategies by analyzing the internal and external conditions. It collected data from respondents—coconut sugar entrepreneurs in Purbalingga. The business environment analysis is discussed using Conduct analysis in the Structure-Conduct-Performance (SCP) approach, namely how entrepreneurs' strategies understand their business position, where the business is headed, and what strategies will be adopted. The results show the prominent internal conditions are product design strategy, promotional strategy, and legal tactics, while the external ones are market and stakeholders. The suggested implications are (a) the product design strategy is more focused on developing variant products (powder, crystal, and rock), (b) the promotional strategy emphasizes digital promotion via online due to the speed of spreading and ordering, (c) the recommended legal tactic is legalization as a halal product, (d) the market is becoming more focused on segmentation in certain groups with high demand, and (e) developing business networks through expanding and strengthening stakeholders.

Keywords: coconut sugar, business environment, conduct strategy, sustainability

1. Introduction

The industrial sector—whether micro, small, medium, or large—has long been recognized as a driving force of economic development across countries [1–4]. In developing economies such as Indonesia, the promotion and strengthening of micro, small, and medium enterprises (MSMEs) have become a strategic priority due to their vital contribution to employment, income generation, and local economic resilience [5,6].

According to the Ministry of Cooperatives and Small and Medium Enterprises, Indonesia had 64.2 million MSMEs in 2021, contributing 61.07% to national GDP, 14.37% of total exports, and employing 97.30% of the total workforce [7]. In Central Java Province, the Department of Cooperatives and MSMEs recorded 151,968 MSME units employing 1.17 million workers in 2019 [8]. Among these, small agro-industries—especially coconut sugar producers—form a significant subsector that sustains rural livelihoods and preserves traditional knowledge.

Coconut sugar production is deeply rooted in local culture and rural economies in Central Java, notably in Purbalingga, Banyumas, Cilacap, and Kebumen Regencies, where coconut trees are abundant [9]. The product, made from the sap of coconut inflorescences, has gained international recognition as a natural sweetener with a low glycaemic index and strong export potential [10,11]. This sector not only contributes to household income but also supports gender-inclusive employment and community-based resource management [12].

However, the COVID-19 pandemic that began in late 2019 caused severe economic disruptions. To contain the spread of the virus, Indonesia imposed Large-Scale Social Restrictions (PSBB) in 2020, followed by Community Activity Restrictions (PPKM) during 2021–2022 [13]. These measures limited mobility, trade, and production, resulting in widespread losses among MSMEs. The Central Statistics Agency reported that the number of foreign tourist arrivals in early 2020 dropped by 34.9% compared to the same period in 2019, which indirectly reduced the demand for local crafts and agro-products [14].

In the coconut sugar industry, producers across Central Java suffered from falling prices, disrupted supply chains, and shrinking markets [15]. Field reports in Purbalingga and Banyumas indicated that many small producers had to reduce production by up to 50% or temporarily shut down during the height of the pandemic [16]. The decline in income created ripple effects in rural areas dependent on coconut-based livelihoods.

After the revocation of the PPKM policy in December 2022, the government officially classified COVID-19 as endemic. Since then, economic activity—especially in the agro-industrial sector—has gradually recovered. Coconut sugar production has rebounded as domestic and export demand for natural sweeteners rises, aided by sustainability trends and healthier consumption patterns [17,18]. Nonetheless, disparities in productivity, access to finance, and sustainability practices remain major challenges.

Given this context, like other MSMEs, coconut sugar enterprises in Purbalingga also face similar business problems and challenges, which stem from business environment, both internal and external conditions. This research aims to analyze the business environment of small coconut sugar enterprises, namely determining the best strategies by analyzing the internal and external conditions. It collected data from respondents—coconut sugar entrepreneurs in Purbalingga.

2. Methods

This study took place in Purbalingga Regency, specifically targeting individuals involved in the coconut sugar industry. The research utilized primary data, with the population comprising all coconut sugar producers/entrepreneurs. From a total of 512 producers, the sample was selected using a simple random sampling technique. The sample size was calculated using the Yamane (1967) formula, and a sample of 84 respondents was obtained.

The survey method employed two data collection techniques: (1) in-depth interviews, involving direct verbal questioning of respondents to obtain detailed information, and (2) questionnaires, which included a series of written questions or statements designed to collect relevant data aligned with the research objectives.

The business environment analysis is discussed using Conduct analysis in the Structure-Conduct-Performance (SCP) approach, namely how entrepreneurs' strategies understand their business position, where the business is headed, and what strategies will be adopted. It consists of pricing strategies, product design strategies, research and innovation, promotional strategies, plant investment strategies, legal tactics, market, and stakeholders.

3. Results And Discussion

The business environment is crucial for business success because it influences the behaviour of entrepreneurs in determining their business strategies. In industrial economics, this entrepreneurial behaviour is referred to as conduct. The Structure-Conduct-Performance (SCP) approach is used to analyse the business environment. In conduct analysis, entrepreneurial behaviour (internal conditions) is analysed through pricing strategies, product design strategies, research and innovation, promotional strategies, plant investment strategies, and legal tactics.

Meanwhile, the business environment (external conditions) is analysed by discussing the market and stakeholders. An analysis of internal conditions is presented in the explanation below.

a. Pricing Strategies

This strategy explains the behaviour of artisans in determining product prices. Most of the product pricing is based on production costs (46.2%). Based on their product prices, the majority (75.20%) of business units choose to set prices equal to those of competitors, while the remainder (24.80%) set prices higher than the market price.

Although most coconut sugar enterprises adopt a cost-based pricing approach and tend to follow competitors' prices, this strategy limits their ability to capture higher value from differentiated products. Future pricing policies should gradually shift from cost-based pricing toward value-based pricing by emphasizing product quality, organic certification, geographical origin, and product uniqueness.

Producers should also improve production cost recording systems to calculate more accurate cost structures and profit margins. Furthermore, market segmentation should be introduced so that premium-quality coconut sugar can be sold at higher prices in niche domestic and export markets. The adoption of digital market intelligence would also enable producers to monitor market price fluctuations and adjust pricing strategies more competitively [19,20].

b. Product Design Strategies

This strategy analyses how entrepreneurs face competition through the design of their products. Most business units (81.43%) determine product design based on market demand. Others base their decisions on trends (2.86%) and the influence of similar products in the market (2.86%). Most business units (88.6%) produce moulded materials. Others use moulded and powdered materials.

The predominance of market-demand-oriented product design demonstrates responsiveness to consumer preferences; however, innovation remains relatively limited because most enterprises continue producing traditional moulded coconut sugar. To strengthen competitiveness, SMEs should diversify product portfolios by developing granulated coconut sugar, liquid coconut sugar, low-glycaemic products, organic-certified products, and modern consumer packaging.

Product innovation should also incorporate environmentally friendly packaging, attractive branding, and compliance with international food safety standards to expand market access. Product innovation has consistently been recognized as one of the primary drivers of SME competitiveness and customer purchasing decisions [22,24].

c. Promotional Strategies

Only 7.14% of entrepreneurs employ promotional strategies, while 92.86% do not. Of those who employ promotions, 100% of artisans experience no difficulties. After promotions, sales increased less than twofold in 80% of businesses and up to twofold in 20% of businesses. This means that promotions are only a small part of their business strategy because they already have their own market.

The limited use of promotional activities indicates that most enterprises still depend on traditional marketing channels and existing buyers. This condition reduces opportunities to expand market reach and increase bargaining power. SMEs should strengthen digital marketing capabilities by utilizing social media platforms, e-commerce marketplaces, business websites, and storytelling marketing that highlights product authenticity and sustainability.

Participation in trade fairs, exhibitions, and business matching events should also be intensified to establish new commercial partnerships. Digital promotion combined with strong branding has been shown to significantly improve purchase intention and market expansion among SMEs [22,27].

d. Plant Investment Strategies

This strategy is used to analyse entrepreneurs' behaviour in developing their businesses through investment planning. Based on the source of capital obtained, 46.72% were self-funded, with the remainder coming from banks. 62.51% of foreign investors invested their capital. 96.14% of businesses conducted planning. 97.23% of entrepreneurs increased their capital year after year.

Although most entrepreneurs continue increasing investment annually, investment decisions should be directed toward improving productivity rather than merely expanding production capacity. Priority investments include modern processing equipment, energy-efficient technology, quality control systems, warehouse facilities, and digital production management. SMEs should also diversify financing sources through government programs, cooperative financing, microfinance institutions, and impact investors to reduce dependence on commercial bank loans. Investment in technology adoption and production efficiency has been widely recognized as a major determinant of SME productivity and long-term competitiveness [24,25].

e. Legal Tactics

This strategy is used to analyse entrepreneurs' behaviour in using legal tactics to prevent other producers from entering. This can include unique product designs to make it difficult for others to copy, trademarks, product quality, and so on. 60.71% of businesses have unique characteristics, such as product authenticity, rarity elsewhere, and scarcity of raw materials. 72.44% of businesses stated that their products are easily copied by others. A small number of entrepreneurs (24.86%) do not have a trademark. To maintain business continuity, 61.43% maintain product quality, 8.57% expand relationships/connections, and 4.28% use other methods.

Although many enterprises maintain product quality as their primary competitive defence, legal protection remains relatively weak because a considerable number of businesses still lack registered trademarks and intellectual property rights. Strengthening legal protection through trademark registration, geographical indication certification, halal certification, food safety certification, and business licensing would significantly improve market credibility while preventing product imitation. Continuous quality standardization should accompany these legal initiatives to enhance consumer trust and support market expansion [21,26].

f. Market

External market analysis explains the condition of the hair craft market. In terms of market position, 80% of entrepreneurs have a market within Purbalingga Regency, and 14.29% outside Purbalingga Regency. Marketing techniques used include: 15.71% sell directly to consumers themselves, 25.71% sell through intermediaries, 1.43% sell to stores/companies, and 48.57% sell to local collectors. Therefore, the majority of products are marketed to collectors.

The marketing structure remains highly dependent on local collectors, reducing producers' bargaining position and limiting profit margins. Market diversification should therefore become a strategic priority by expanding direct sales to retailers, wholesalers, supermarkets, hospitality businesses, exporters, and digital marketplaces. Strengthening producer cooperatives or marketing associations would also improve collective bargaining power, reduce transaction costs, and facilitate larger-scale market penetration. Previous studies on coconut sugar marketing in Central Java similarly recommend strengthening institutional marketing channels and reducing dependence on intermediary traders to improve producer welfare [23,26].

g. Stakeholders

The government's role in supporting the development of this business is still considered very weak (60.71%). They are not partnered with any party as they mostly play individually. The weak involvement of stakeholders indicates the absence of an integrated business ecosystem capable of supporting sustainable SME development. Stronger collaboration should therefore be established through the quadruple-helix approach, involving government, universities, private sector, and local communities.

Government agencies should facilitate training, financing, certification, and market access, while universities can contribute through technology transfer, business incubation, product innovation, and research collaboration. Private companies may participate through partnership programs, supply chain integration, and corporate social responsibility initiatives. Collaborative stakeholder engagement and social capital have been demonstrated to enhance innovation capability and improve SME business performance [25,28].

4. Conclusion

The results show the prominent internal conditions are product design strategy, promotional strategy, and legal tactics, while the external ones are market and stakeholders. The conduct strategy analysis demonstrates that coconut sugar small enterprises continue to rely on conventional business practices that prioritize operational continuity rather than long-term competitive advantage. Pricing decisions remain predominantly cost-oriented and follow competitor pricing, limiting opportunities to capture higher value through product differentiation. Product development is largely driven by market demand, yet innovation remains limited to traditional product forms with minimal diversification. Promotional activities are still weak, as most enterprises depend on established buyers instead of adopting digital marketing and broader branding strategies.

Although entrepreneurs have shown positive investment behavior by continuously increasing business capital and planning future investments, these investments should be directed toward productivity-enhancing technologies, quality improvement systems, and modern production facilities. Likewise, legal protection remains insufficient due to the limited adoption of trademarks and other intellectual property rights, despite product quality serving as the primary competitive defense. Strengthening legal protection and quality certification would improve market credibility and create stronger barriers to imitation.

The marketing system is characterized by heavy dependence on local collectors, resulting in relatively weak bargaining power and limited market expansion. Diversification of marketing channels through direct marketing, digital commerce, institutional buyers, and export-oriented distribution networks would improve market resilience and increase producers' value capture. Furthermore, the limited involvement of government and other supporting institutions indicates that the coconut sugar industry has not yet developed a robust collaborative business ecosystem. Strengthening partnerships among government agencies, universities, private companies, financial institutions, and producer organizations is therefore essential to accelerate innovation, technology transfer, financing access, certification, and market development.

Overall, improving the competitiveness of coconut sugar small enterprises requires an integrated business strategy encompassing value-based pricing, continuous product innovation, digital promotion, productivity-oriented investment, legal protection, diversified marketing channels, and stronger stakeholder collaboration. These strategic initiatives are expected to enhance business sustainability, strengthen competitive advantage, increase producers' income, and improve the resilience of coconut sugar SMEs in increasingly dynamic domestic and global markets.

Accordingly, several strategic implications can be formulated to support sustainable business development: (a) the product design strategy is more focused on (powder, crystal, and rock), developing variant products, (b) the promotional strategy emphasizes digital promotion via online due to the speed of spreading and ordering, (c) the recommended legal tactic is legalization as a halal product, (d) the market is becoming more focused on segmentation in certain groups with high demand, and (e) developing business networks through expanding and strengthening stakeholders.

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