

Formulating strategies to strengthen resilient MSMEs in the F&B sector of Central Java: An integrated SWOT, IFE, EFE, IE, and QSPM approach

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ABSTRACT

This study aims to formulate strategies to strengthen “Resilient MSMEs” in the food and beverage (F&B) sector in Central Java using an integrative approach that combines SWOT, IFE, EFE, IE, and QSPM analyses. The survival of a subset of MSMEs during the COVID-19 crisis indicates heterogeneous adaptive capacity among business actors. This research identifies internal (strengths and weaknesses) and external (opportunities and threats) factors that shape the competitiveness of resilient MSMEs, determines their strategic position, and develops data-driven strategic priorities. A mixed-methods design was employed, with data collected through in-depth interviews and questionnaires administered to 13 resilient F&B MSMEs. The results show an IFE score of 3.26 and an EFE score of 3.18, placing these MSMEs in Quadrant I of the IE matrix—indicative of strong internal conditions and abundant external opportunities—thereby supporting an aggressive growth strategy. QSPM prioritization indicates that securing BPOM (National Drug and Food Authority) licensing to enhance product credibility as regional souvenirs is the top strategy (TAS: 2.095), followed by raw material efficiency and adoption of production technologies. Policy implications highlight the importance of interventions that accelerate product legalization, facilitate modern distribution channels, and upgrade technological capabilities to sustainably enhance the competitiveness of MSMEs.

Keywords: Resilient MSMEs, business strategy, food and beverage, SWOT, IFE-EFE, IE matrix, QSPM.

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1. INTRODUCTION

The COVID-19 pandemic has had profound consequences across multiple domains, notably the economy and society (Impact of COVID-19 on People's Livelihoods, Their Health and Our Food Systems, 2020). Indonesia's data show an economic contraction of -2.07% in 2020, and a Central Statistics Agency (BPS) survey recorded 39,977 firms reducing their workforce as Large-Scale Social Restrictions (Pembatasan Sosial Berskala Besar, PSBB) disrupted business operations (Pertumbuhan Ekonomi Indonesia Triwulan IV-2020, 2020). The Ministry of Manpower documented 2.1 million workers affected by the pandemic, comprising 383,600 layoffs, 1,130,000 furloughs, and 630,900 business failures, with unemployment reaching 7.07% ([Laporan Kajian Dampak Pandemi Covid-19 Terhadap Ketenagakerjaan di Indonesia, 2021](#)).

Among the most affected sectors, according to the World Bank, is business activity, especially micro, small, and medium enterprises (MSMEs). MSMEs are pivotal to national economic growth and constitute the largest source of employment (Mutula & van Brakel, 2006). They are commonly categorized by headcount, turnover, and net assets (Table 1). Microenterprises typically employ fewer than five workers, small enterprises fewer than 20 workers, and medium enterprises fewer than 100 workers.

Tabel 1. MSME Category Definitions

Enterprise Category	Number of Employees	Net Assets	Annual turnover
Micro	1-4	\leq Rp 50 million	\leq Rp 300 million
Small	5-19	$>$ Rp 50 million - Rp 500 million	$>$ Rp 300 million - Rp 2,5 billion
Medium	20-99	$>$ Rp 500 million - Rp 10 billion	$>$ Rp 2,5 billion - Rp 50 billion

A subset of MSMEs has endured the pandemic and beyond; in this study, they are termed “Resilient MSMEs” (“UMKM Tangguh”). In Central Java’s Food and Beverage (F&B) sector, these enterprises helped sustain local economic resilience during the crisis. Their strategies included product diversification, marketing digitalization via social media and messaging platforms, and localized distribution partnerships. A notable case emerges from the city of Pekalongan, where culinary MSMEs maintained market presence by developing frozen food lines and online pre-order systems aligned with new consumption patterns under social restrictions. Administrative data from the Central Java Office of Cooperatives and MSMEs indicate that of more than 4.2 million enterprises, roughly 90% are micro-scale, and a majority operate in food and culinary activities. However, only approximately 30% have effectively leveraged e-commerce platforms, underscoring persistent challenges in digital literacy and access to technology.

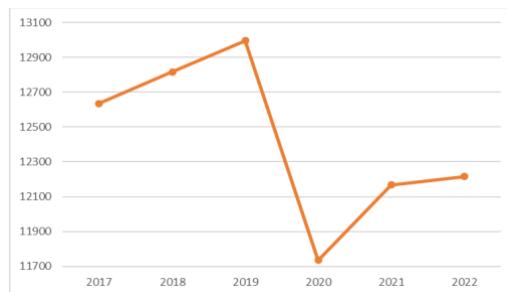


Figure 1. Sales of 13 MSME Samples

Figure 1 depicts the aggregate sales dynamics for 13 Resilient MSMEs in Central Java’s F&B sector over 2017–2022. In the pre-pandemic period (2017–2019), sales followed a steady upward trajectory, from approximately 12,700 units to a near-peak of about 13,000 units in 2019, consistent with an expansionary

macroeconomic environment and rising household purchasing power. In 2020, sales fell sharply to a trough of approximately 11,800 units, reflecting the pandemic's significant shock to economic activity. The contributing factors included PSBB-driven constraints on consumer mobility, disruptions to raw material supply chains, and limited early adoption of digital channels by MSMEs (Dini et al., 2023). This downturn mirrors the national indicators of GDP contraction and unemployment spikes during the same period.

Encouragingly, the series shows a gradual recovery in 2021–2022, with sales rebounding to approximately 12,300 units by 2022. This recovery evidences the adaptive capacity of many MSMEs, including product diversification (e.g., frozen and ready-to-serve offerings), digital market penetration through social media and online marketplaces, and expanded distribution through local resellers. However, 2022 sales had not fully returned to pre-pandemic levels, indicating an ongoing recovery hampered by structural constraints, such as limited digital literacy, restricted access to finance, and intensifying competition from lower-priced manufactured products (Lee et al., 2001; Suwantika et al., 2022).

2. Problem Formulation and Policy Objectives

The problem underpinning this study stems from uneven adaptive capacity and resilience among micro, small, and medium-sized enterprises (MSMEs) in Central Java's food and beverage (F&B) sector, particularly during the COVID-19 pandemic. The pandemic triggered severe shocks to both global and national economies, forcing firms across sectors to confront sharp demand contractions, raw material distribution disruptions, and social-activity restrictions that directly affected supply chains and consumption patterns. F&B MSMEs were among the hardest hit, given their dependence on direct consumer interaction and their typically limited capital buffers to absorb short-term losses. National data for 2020 recorded negative economic growth, surging unemployment, and the closure of thousands of firms. Yet, amid this pressure, a subset of F&B MSMEs not only survived but also posted positive performance by rapidly innovating and adjusting their business strategies (Abdullah et al., 2018).

The persistence of some F&B MSMEs during the pandemic highlights the heterogeneity in adaptive capability, often conceptualized in the strategy literature as organizational resilience. These “Resilient MSMEs” (UMKM Tangguh) display distinct capabilities: sensing shifts in consumer trends, developing frozen food product lines, adopting online pre-order systems, strengthening social media marketing, and forging local distribution partnerships. In Pekalongan City, for example, F&B MSMEs capitalized on rising demand for home-based frozen foods during social restrictions while recalibrating business models to match new consumption patterns. Conversely, most of Central Java's F&B MSMEs continue to struggle with effective digital adoption. Data from the Central Java Office of Cooperatives and MSMEs indicate that only about 30% of MSMEs have effectively leveraged e-commerce platforms, with the remainder still reliant on conventional methods constrained by limited digital literacy.

This adaptation gap presents a strategic challenge with implications beyond individual firm survival (Andersson & Mossberg, 2004; Remar et al., 2022) and extends to the stability of the local economy. Within regional ecosystems, F&B MSMEs are significant not only as job creators but also as buffers of household economic resilience and as drivers of creative industries rooted in local knowledge. Therefore, it is essential to develop a deeper understanding of the internal factors that strengthen or weaken the competitiveness of Resilient MSMEs, as well as the external factors that present opportunities or threats to their sustainability. Such a comprehensive understanding can inform data-driven, realistic, and actionable strategies for strengthening MSME performance.

A further problem is the absence of a strategic framework that systematically integrates multiple strategic management tools to holistically map MSME conditions. Prior studies tend to be descriptive or employ only one or two tools, falling short of producing strategy priorities that account for the interactions among strengths, weaknesses, opportunities, and threats. Consequently, policy recommendations often remain general and insufficiently operational for practitioners. This study addresses this gap by combining SWOT (Strengths, Weaknesses, Opportunities, Threats), IFE (Internal Factor Evaluation), EFE (External Factor Evaluation), the IE (internal–external) matrix, and QSPM (Quantitative Strategic Planning Matrix).

This integrated approach supports layered analysis: identification of internal and external factors, weighting and scoring, strategic positioning via the IE matrix, and prioritization of feasible strategies based on relative attractiveness.

Accordingly, the study is motivated by two principal problems: first, the need for a more comprehensive strategic analysis framework to understand the factual conditions of Resilient F&B MSMEs in Central Java, particularly in the post-pandemic recovery context; and second, the need to generate strategies that are replicable for other MSMEs—going beyond description to evidence-based, implementable guidance capable of strengthening the collective competitiveness of the regional F&B sector.

With respect to policy formulation, this study aims to develop adaptive and widely applicable strengthening strategies for Resilient F&B MSMEs. The strategies are designed not only for MSMEs that already exhibit adaptive capacity but also as practical guidance for more vulnerable enterprises seeking to build resilience. Through the integrated framework, this study systematically identifies internal strengths, such as product uniqueness, input quality, and service excellence, alongside internal weaknesses, including limited product variety, weak promotion, and suboptimal packaging. Externally, it explores opportunities (e.g., positive industry growth, streamlined licensing, and technological advances) while accounting for threats (e.g., rising input prices, intense competition, and shifting consumer preferences).

The resulting strategies are then prioritized using the QSPM to ensure that the recommendations are not merely conceptual but also realistic for small- to medium-scale MSMEs operating with constrained resources. From this process, high-priority strategies—such as securing BPOM certification, adopting appropriate production technologies, and sourcing more efficient alternative inputs—emerge as both urgent and highly attractive for sustaining enterprise viability.

Practically, the findings can support local government policy in designing MSME development programs that are data-driven and genuinely needs-based. They can help target assistance more precisely, ranging from the facilitation of collective licensing and subsidized access to efficient production equipment to the development of collective branding that amplifies local identity. Other relevant policy implications include expanding market access through strategic partnerships with modern retail and optimized digital channels—initiatives that local governments can facilitate by acting as aggregators and negotiators on behalf of local MSMEs.

Beyond practical contributions, this study advances theory in MSME strategic management by extending an integrated analytical framework to small, locally embedded firms (Behl et al., 2022; Supari et al., 2022), particularly in the F&B sector. The results suggest that strategic management methodologies typically associated with large corporations can be adaptively applied to MSMEs with appropriate contextualization. In doing so, this study reinforces the literature on MSME resilience through a data-driven approach that is highly relevant in an era of global economic uncertainty (Badoc-Gonzales et al., 2021; Dewi & Mahendrawathi, 2019; Mangla et al., 2020).

Ultimately, the study's problem formulation and policy objectives seek not only to diagnose the current condition of resilient food and beverage MSMEs more deeply, but also to deliver strategies that other MSMEs can implement and that can be reinforced by more responsive public policy. These strategies are intended to address short-term disruptions from the pandemic while equipping MSMEs with sustainable competitive strength in the long run (Agarwal et al., 2022; Futri et al., 2023). Under this approach, F&B are expected to endure crises and grow as adaptive, innovative, and highly competitive pillars of the local economy.

3. Theoretical Foundations and Planning

3.1 Stages in Strategic Management

The strategic management process comprises six steps: strategy formulation, implementation, and evaluation (Robbins & Coulter, 2018).

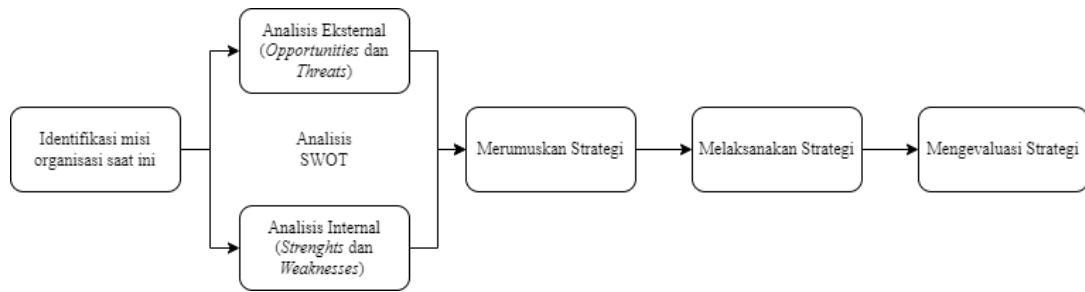


Figure 2. Strategic Management Process

Source: Management (Robbins & Coulter, 2018).

The process begins with an understanding of the organizational strategy and performance. Management then analyzes the external and internal environments using the classic SWOT framework. Following these analyses, the next stage is strategy formulation, which entails developing concrete strategies and actions. The final stages are strategy implementation and evaluation. An effective organizational structure and corporate culture are critical elements for successful implementation (Kennedy, 2020).

3.2 Identification

The identification stage defines the organization's mission or purpose statement, with the aim of specifying the steps the business needs to take.

3.2.1 SWOT Analysis

a. External Analysis

The external environment presents challenges for management; analyzing it is essential in the strategic management process to understand competitor strategies, applicable regulations and industry supply and demand. In conducting an external analysis, managers should examine demographic, economic, political/legal, technological, and global factors to identify trends. After the external scan, managers should accurately determine opportunities that can be exploited and threats that must be addressed. *Opportunities* refer to positive trends in the external environment, whereas *threats* refer to negative trends (Robbins & Coulter, 2018). See table 1

Table 1. Example SWOT Matrix: Opportunities and Threats

Potential External Opportunities	Potential External Threats
Ability to serve additional customer segments	Entry of lower-cost foreign competitors
Expansion of the product line	Rising sales of substitute products
Ability to transfer skills/technology to new products	Slower market growth
Lowering of foreign trade barriers that open attractive markets	Costly regulatory requirements
Satisfaction/complacency among rival firms	Vulnerability to recessions and business cycles
Capacity to grow in response to increasing market demand	Changing buyer needs and tastes

Source: Strategic Management: Concepts and Cases (David & David, 2017).

First, there is rivalry among competing firms. Rivalry is often the most potent competitive force. A strategic move by one firm may trigger countermoves by rivals, such as price cuts, quality improvements, added features, enhanced services, extended warranties, or intensified advertising.

Second, the potential entry of new competitors. Competitive intensity increases when new firms can easily enter an industry. Barriers to entry are shaped by factors such as technological requirements, capital needs, regulation, and the strength of incumbent firms.

Third, the potential development of substitute products. When a product can be readily replaced by alternatives with similar functions, competition intensifies. Substitutes impose a ceiling on prices because buyers may switch to lower-priced alternatives.

Fourth, the bargaining power of suppliers. Supplier power influences competitive intensity, especially when suppliers are few, high-quality substitutes for inputs are scarce, or switching costs for inputs are high.

Fifth, the bargaining power of consumers (buyers). Buyer power shapes competition when customers are numerous or purchase large volumes. Rival firms may offer special deals or services to secure loyalty. Buyer power also increases when products are undifferentiated and functionally standardized.

b. Internal Analysis

In strategic planning, a comprehensive internal analysis of organizational performance across all dimensions is essential. Internal analysis plays a central role in developing, implementing, and evaluating strategies to achieve and sustain competitive advantages. It also provides valuable insights into a firm's distinctive resources and capabilities (David & David, 2017). Organizational resources include financial, physical, human, and intangible assets used to develop, produce, and deliver products to customers (Robbins & Coulter, 2018). See table 2

Table 2. Example SWOT Matrix: Strengths and Weaknesses

Table 2. Example SWOT Matrix—Internal Strengths and Weaknesses

Potential Internal Strengths	Potential Internal Weaknesses
Core competencies in key domains	Lack of clear strategic direction
Recognized market leadership	Obsolete facilities
Well-designed functional strategies	Substandard profitability
Proven management	Insufficient managerial depth and talent

Source: Understanding Business (Nickels et al., 2019).

Every firm exhibits distinct strengths and weaknesses across its business functions; no firm is uniformly strong or weak in all areas. Internal strengths typically fall into six categories: marketing, finance, accounting, management, management information systems (MISs), and production and operations (David & David, 2017).

c. Strategy Analysis

Through strategy analysis and selection, firms identify feasible courses of action to achieve their missions and objectives. Strategies are derived from the current vision and mission statements and informed by insights from external and internal audits to guide appropriate strategy determination and evaluation (David & David, 2017). Strategy formulation techniques can be grouped into a three-stage decision framework, as shown in Table 3.

Table 3. Strategy-Formulation Analytical Framework

Stage 1: Input				
EEF Matrix	CPM Matrix	IFE Matrix		
Stage 2: Matching				
SWOT Matrix	SPACE Matrix	BCG Matrix	IE Matrix	Grand Strategy Matrix

Stage 3: Decision				
QSPM Matrix				

Source: Strategic Management: Concepts and Cases (David & David, 2017).

Stage 1: Input

This stage compiles foundational information for strategy determination: the Internal Factor Evaluation (IFE) Matrix, External Factor Evaluation (EFE) Matrix, and Competitive Profile Matrix (CPM).

Stage 2: Matching

Here, alternative strategies are generated by aligning the internal and external factors. Tools include the SWOT, Boston Consulting Group (BCG), Strategic Position and Action Evaluation (SPACE), Internal–External (IE), and Grand Strategy matrices.

Stage 3: Decision

This stage employs the Quantitative Strategic Planning Matrix (QSPM). Inputs from Stage 1 are used to objectively evaluate and prioritize the strategies identified in Stage 2, providing an evidence-based basis for selecting specific strategies.

d. Conceptual Framework

The conceptual framework is illustrated in Figure 4.

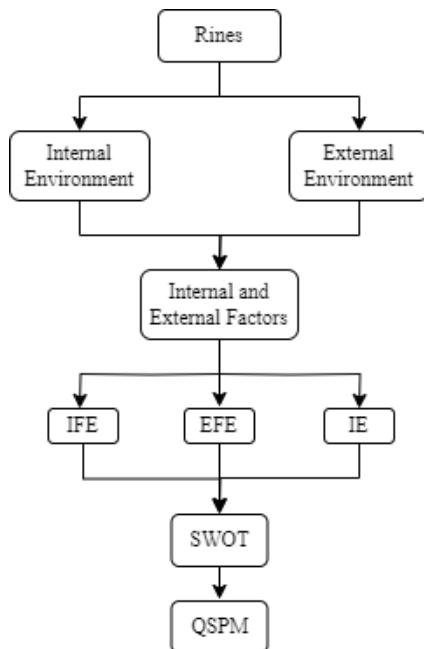


Figure 4. Conceptual Framework

4. Methodology and Data Sources

This study employs a mixed-methods design, integrating qualitative and quantitative approaches with SWOT, EFE, IFE, IE, and QSPM matrices to analyze the internal and external factors for *Resilient MSMEs* (UMKM Tangguh). The procedure follows three phases—input, matching, and decision. The factors were elicited via questionnaires and interviews with business owners and consumers. The unit of analysis comprises 13 Resilient MSMEs with cross-sectional data (Sekaran & Bougie, 2019). Qualitative data (SWOT indicators) are combined with quantitative data (weights and rankings for each indicator).

A literature review was conducted to obtain research-relevant concepts and procedures, drawing on David and David's *Strategic Management: Concepts and Cases* (16th ed., 2017), which details matrix-based business development methods and step-by-step data processing. The fieldwork involved interviews and questionnaires. Interviews were conducted directly with two members of the management team in each MSME (the owner and the marketing lead) and with two Resilient-MSME resellers (gift-shop owners in Central Java and a snack distributor). Interviews identified internal and external business factors to be operationalized as questionnaire indicators. The questionnaire was then administered to the same respondents to obtain the factor weights for the IFE, EFE, and QSPM matrices.

5. Result

5.1 Internal Analysis

Based on the respondent interviews, several strengths and weaknesses of Resilient MSMEs were identified, as shown in Tables 4 and 5.

Table 4. Strength Factors of Resilient MSMEs

No.	Strengths
1	Unique products
2	Assured input quality and consistent taste
3	Competitive prices
4	Long shelf life
5	Readily available raw materials
6	Satisfying customer service

Table 5. Weakness Factors of Resilient MSMEs

No.	Weaknesses
1	Low brand recognition
2	Limited product variety
3	Lengthy production process
4	Unattractive packaging
5	Insufficient promotional activity

The internal analysis—through interviews with owners and marketing personnel of Resilient F&B MSMEs—reveals a set of strengths that underpin competitive viability even under pandemic pressure. The most frequently cited strength is product uniqueness, reflecting the ability to offer differentiated local flavors or presentation formats that rivals cannot easily replicate. This uniqueness is reinforced by the assured input quality and consistency of taste, which builds consumer trust and signals professional standards. Competitive pricing also features prominently, enabling MSMEs to contend with both industrial products and local rivals without eroding margins. The long shelf life of the products facilitates distribution to consumers and resellers while lowering the risk of spoilage. Ready access to local raw materials secures production continuity and reduces dependence on out-of-region supplies. Finally, responsive and personalized services, such as fast responses and tailored requests, help sustain loyalty amid rising expectations for service quality.

However, several weaknesses constrain its performance. The most salient is low brand awareness beyond immediate local markets: despite sound product quality, the reach remains limited. A narrow product variety increases exposure to shifting consumer tastes, including the demand for healthier or more innovative options. Prolonged production times, often due to manual equipment constraints, reduce efficiency and capacity, limiting the ability to meet larger orders and scale. Packaging that lacks shelf appeal reduces competitiveness against modern, professionally branded products both offline and online. Limited promotion and overreliance on word-of-mouth and conventional methods mean that social media and

digital marketing remain underutilized. Overall, these strengths and weaknesses suggest substantial growth potential, provided MSMEs address internal constraints and leverage their strengths more deliberately.

5.2 External Analysis

Interviews also identified multiple opportunities and threats affecting Resilient MSMEs (see Tables 6 and 7).

Table 6. Opportunity Factors for Resilient MSMEs

No.	Opportunities
1	Streamlined procedures for MSME licensing (e.g., PIRT, halal certification, BPOM permits)
2	Local market dominance in respective areas
3	Ability to sell directly via consignment or reseller networks
4	Positive growth trajectory in Indonesia's F&B industry
5	Technologies that improve production and sales efficiency
6	Availability of trade fairs and bazaars

Table 7. Threat Factors for Resilient MSMEs

No.	Threats
1	Many competitors operating in the same locality
2	Rising raw-material costs
3	Proliferation of similar factory-made snacks at lower prices
4	Competition from modern snack products
5	Increasing consumer preference for healthy foods

The external analysis points to tangible opportunities and risks that shape the operating landscape of Resilient F&B MSMEs in Central Java. On the opportunity side, simplified licensing, such as PIRT, halal certification, and BPOM distribution permits, enhances formal legitimacy and market access, particularly to modern retail channels and digital platforms. This aligns with local government efforts to formalize micro-enterprise operations for greater competitiveness. Local dominance in home markets provides a base of loyal customers and established traditional distribution, offering a springboard for a broader expansion.

Sales-model flexibility—consignment in souvenir shops and reseller networks—extends the reach without heavy investment in proprietary distribution. Broader industry growth, sustained by household consumption and the appreciation of quality local products, further expands demand. Technological advances unlock efficiency gains in production and enable digital marketing through social media, online marketplaces, and pre-order systems. Trade fairs and bazaars remain effective channels for reaching new customers, building networks, and gathering market feedback for product innovation.

Nevertheless, these threats are non-trivial. Intensifying rivalry—especially from proximate local competitors—requires MSMEs to guard and renew their competitive advantage. Volatile input prices can compress margins and destabilize cost structures, particularly for firms with low working capital. Large manufacturers with similar products at lower prices exert strong price pressure, widening the array of consumer options, even if quality differs. Modern snack products often outpace MSMEs in packaging appeal, variety, and digital promotion. Finally, the shift toward healthier consumption may disadvantage MSMEs that have not reformulated offerings to meet these preferences. A clear grasp of these dynamics is essential for crafting strategies that are genuinely relevant, adaptive, and supportive of sustainable growth for Resilient MSMEs.

A synthesis of these opportunities and threats indicates that, although numerous external factors can be leveraged to scale operations and expand market reach, Resilient MSMEs must sharpen their market sensing, exercise tighter cost control, and innovate continuously to cope with shifting consumer behavior

and rising competitive intensity. A comprehensive grasp of these external forces is essential to ensure that the resulting strategies are truly relevant, adaptive, and capable of supporting the sustainable growth of Resilient MSMEs going forward.

5.3 Input Stage

IFE Matrix

Table 8. IFE Matrix Results

No.	Internal Factor	Weight	Rating	Weighted Score
Strengths				
1	Unique products	0.11	4	0.43
2	Assured raw-material quality and consistent taste	0.22	4	0.88
3	Competitive prices	0.07	4	0.29
4	Long product shelf life	0.13	3	0.38
5	Readily available raw materials	0.09	4	0.36
6	Satisfying customer service	0.11	4	0.43
Weaknesses				
1	Low brand recognition	0.05	2	0.10
2	Limited product variety	0.07	2	0.15
3	Lengthy production process	0.07	2	0.14
4	Unattractive packaging	0.02	2	0.04
5	Insufficient promotional activity	0.07	1	0.07
Total		1.00		3.26

The input stage in formulating strategies for Resilient MSMEs begins with constructing the Internal Factor Evaluation (IFE) Matrix, which quantitatively assesses previously identified internal strengths and weaknesses. The matrix presents each factor's relative weight, current performance rating, and weighted score (weight \times rating). As shown in Table 8, the total weighted score is 3.26, well above the standard mean of 2.50, clearly indicating that, internally, Central Java's F&B Resilient MSMEs are relatively strong and well-positioned to capitalize on opportunities while addressing remaining weaknesses.

More specifically, the largest strength is assured raw-material quality and consistent taste, with the highest weight (0.22), a perfect rating (4), and a dominant weighted score (0.88). This underscores quality consistency as a key success factor for maintaining customer loyalty and differentiation from both local rivals and factory-made products. Other significant strengths include product uniqueness, satisfying service, long shelf life, competitive pricing, and ready access to inputs, each receiving high ratings (3–4). This indicates that MSMEs are effectively leveraging internal assets to meet consumer needs and maintain continuity, even during crises.

Conversely, internal weaknesses remain and should be addressed to optimize competitiveness. The most salient is insufficient promotion, rated one (weight 0.07; weighted score 0.07), consistent with earlier findings that many MSMEs still rely on word-of-mouth while underutilizing digital channels and planned promotional strategies. Additional weaknesses—less attractive packaging, limited product variety, time-consuming production, and low brand recognition—may erode long-term appeal, particularly in modern, innovation-driven segments if left unaddressed.

Overall, the IFE results offer a comprehensive snapshot of internal conditions, guiding policy and managerial priorities. Given the predominance of internal strengths, MSMEs have a solid foundation for growth but need more systematic strategies to mitigate weaknesses, especially in promotion, packaging design, and product diversification. A nuanced reading of the IFE scores ensures that subsequent strategies align with actual internal realities, are feasible to implement, and target a sustained competitive advantage.

EFE Matrix

See table 9 below for EFE Matrix

Table 9. EFE Matrix Results

No.	External Factor	Weight	Rating	Weighted Score
Opportunities				
1	Streamlined MSME licensing procedures	0.13	3	0.40
2	Positioning products as regional souvenirs	0.12	4	0.48
3	Ability to sell directly via consignment or reseller networks	0.13	4	0.50
4	Growth of Indonesia's F&B industry	0.08	2	0.17
5	Technologies to increase production and sales efficiency	0.12	2	0.23
6	Participation in fairs and bazaars	0.03	1	0.03
Threats				
1	Many competitors from the same locality	0.06	3	0.17
2	Rising raw-material prices	0.19	4	0.76
3	Cheaper, similar factory-made snack products	0.08	3	0.25
4	Competition with modern snack products	0.05	3	0.14
5	Growing trend toward healthy foods	0.02	3	0.06
Total		1.00		3.18

The input stage of strategic analysis also comprehensively evaluates external factors shaping opportunities and threats to enterprise continuity. The External Factor Evaluation (EFE) Matrix in Table 9 yields a total weighted score of 3.18, which is well above the benchmark mean of 2.50. This indicates that the external environment for Resilient F&B MSMEs is relatively favorable, offering exploitable opportunities and a reasonable capacity to respond to threats.

Key opportunities include simplified licensing, which reflects supportive local government policies to formalize micro-enterprises for modern market access, and the ability to position products as distinctive regional souvenirs, which strengthens local identity and opens tourist channels. Flexible sales models via consignment and reseller networks extend distribution without heavy investments in proprietary logistics. Together, these factors provide a strong basis for a broader market presence.

Other opportunities—industry growth and technological advances for efficiency—are valuable but not yet fully leveraged, suggesting adaptation challenges in the modernization of operations and marketing. The low weighted score for participation in fairs/bazaars signals underuse of these promotional avenues, likely due to resource constraints or limited planned promotion strategies.

Threats are present but appear manageable. The most significant is rising input prices, with the highest threat weight and weighted score, exposing MSMEs' vulnerability to commodity price volatility and limited bargaining power. Additional pressures come from dense local competition, cheaper factory-made alternatives with stronger packaging and promotion, and shifts toward healthier products, all of which demand product and marketing innovation.

In sum, the EFE results show that opportunities outweigh threats for Resilient MSMEs, provided that strategies prioritize opportunity exploitation while implementing targeted mitigation against input-cost volatility and intensifying rivalry. This assessment is a critical foundation for ensuring that forthcoming strategies are responsive to external dynamics and reinforce competitive positioning in the evolving F&B industry.

5.4 Matching Stage

IE Matrix

See table 10 below for IE Matrix

Table 10. IE Matrix Results

		IFE score	Strong 3.0 - 4.0	Average 2.0 - 2.99	Weak 1.0 - 1.99
EFE Score	High	3.0 - 4.0	I	II	III
	Medium	2.0 - 2.99	IV	V	VI
	Low	1.0 - 1.99	VII	VIII	IX



The matching stage in strategic analysis is a critical phase that links the results of internal and external evaluations to determine an organization's strategic position on the Internal–External (IE) matrix. The IE matrix integrates the total Internal Factor Evaluation (IFE) and External Factor Evaluation (EFE) scores into nine quadrants, each representing a different combination of internal strength and external opportunity or threat. The findings of this study indicate that Resilient F&B MSMEs in Central Java fall into Quadrant I, the most favorable position in the IE framework, reflecting strong internal conditions ($IFE > 3.0$) and a supportive external environment ($EFE > 3.0$).

A Quadrant I position signifies that Resilient MSMEs possess sufficient internal capability to capitalize on available market opportunities while managing or mitigating existing external threats. More specifically, the results suggest that strengths—such as assured product quality, competitive pricing, satisfying service, and product uniqueness—intersect with external opportunities, including positive industry growth, streamlined licensing, flexible distribution models, and technological advances. This combination creates a business environment conducive to aggressive expansionary growth strategies.

In line with the strategic management literature (David & David, 2017), organizations in Quadrant I are advised to pursue intensive and integrative strategies. Intensive strategies include market penetration, which involves expanding the market share of existing products through enhanced promotion, broader distribution, and competitive pricing. Market development is also relevant, targeting new customer segments and previously untapped geographic areas. In addition, product development is essential to meet market trends, for example, by launching variants that are healthier, more convenient, or visually more appealing.

Beyond intensive strategies, integrative strategies can further strengthen a company's competitiveness. Backward integration can be undertaken by securing raw material supplies through direct partnerships with primary producers or even in-house production to control quality and cost. Forward integration strengthens control over distribution, for example, by opening owned outlets or building proprietary e-commerce platforms. Horizontal integration—collaboration or consolidation with other MSMEs in the same sector—can increase collective bargaining power, enable shared infrastructure, and support co-branding development.

Occupying Quadrant I not only indicates fundamentally strong conditions but also opens up ample room for strategic expansion and innovation. However, it remains essential to ensure that implementation stays realistic given the enterprise scale, resource capacity, and managerial readiness, so each growth step can be executed sustainably. Choosing the right strategies at this matching stage is crucial for elevating MSME performance to a more competitive level while reinforcing their role as key pillars of local economic resilience in the post-pandemic era.

SWOT Matrix

The matching stage does not stop at positioning on the IE Matrix; it also translates into more operational alternative strategies via the SWOT Matrix. This matrix aligns internal dimensions—strengths (S) and weaknesses (W)—with external dimensions—opportunities (O) and threats (T). The SWOT results for Resilient F&B MSMEs in Central Java (Tables 11–13) present specific strategy combinations tailored to the current MSME conditions.

Table 11. SWOT Matrix—Strengths and Weaknesses

Strengths (S)	Weaknesses (W)
S1. Unique products	W1. Low brand recognition
S2. Assured raw-material quality and consistent taste	W2. Limited product variety
S3. Competitive prices	W3. Lengthy production process
S4. Long product shelf life	W4. Unattractive packaging
S5. Readily available raw materials	W5. Insufficient promotional activity
S6. Satisfying customer service	

Table 12. SWOT Matrix—Opportunities with SO and WO Strategies

Opportunities (O)	SO Strategies (leverage strengths to exploit opportunities)	WO Strategies (reduce weaknesses by using opportunities)
O1. Streamlined MSME licensing	SO2 S1, S2, O1, O2: Obtain BPOM approval to guarantee safety and quality, positioning products as nationally standardized regional souvenirs.	
O2. Products as regional souvenirs		WO2 W1, W5, O2, O4: Strengthen promotion and expand marketing so products gain wider recognition as regional specialty snacks.
O3. Ability to sell via consignment/resellers	SO1 S4, O3, O4, O6: Increase product quantities distributed to resellers and featured at fairs/bazaars to boost promotion.	
O4. Positive growth in Indonesia's F&B industry		WO4 W2, O4: Add product variants.
O5. Technologies that improve production/sales efficiency	SO3 S3, S5, S6, O5: Utilize technology to produce faster/larger volumes at lower cost.	WO1 W3, O5: Invest in new machines to make production more efficient and effective.
O6. Availability of fairs/bazaars		WO3 W4, W5, O6: Improve packaging design to attract new customers.

Table 13. SWOT Matrix—Threats with ST and WT Strategies

Threats (T)	ST Strategies (use strengths to counter threats)	WT Strategies (minimize weaknesses to avoid threats)
T1. Many competitors in the same locality	ST1 S2, S3, S6, T1, T4: Build more partnerships with supermarkets and souvenir shops.	WT1 W2, W4, T1: Add product variants and improve packaging.
T2. Rising raw-material prices	ST2 S2, S3, T2, T3: Seek first-tier suppliers/distributors or produce raw materials in-house.	
T3. Cheaper factory-made substitutes		WT3 W1, W5, T3, T4: Increase promotion highlighting product advantages to expand market share.
T4. Competing with modern snack products		
T5. Growing healthy-food trend	ST3 S1, S2, T5: Use/process fresh ingredients (emphasize health attributes).	

SO strategies focus on using internal strengths to fully capture external opportunities. Examples include scaling distribution to resellers and showcasing products at fairs (S4, O3, O4, O6); securing BPOM certification to enhance credibility as nationally compliant regional souvenirs (S1, S2, O1, O2); and leveraging technology for faster, larger-scale, lower-cost production (S3, S5, S6, O5).

WO strategies aim to reduce weaknesses by exploiting opportunities. For instance, slow production can be addressed through technology investments in new machinery (W3, O5). Low brand recognition can be mitigated through more aggressive promotion aligned with regional souvenir positioning and industry growth (W1, W5, O2, O4). Weak packaging can be improved and launched at bazaars/fairs to attract new customers (W4, W5, O6).

ST strategies deploy strengths to anticipate or neutralize threats. Collaboration with supermarkets and souvenir outlets can help counter intense local rivalry (S2, S3, S6, T1, T4). Upstream sourcing—first-tier suppliers or in-house raw material production—helps manage input-price inflation (S2, S3, T2, T3). The rising healthy eating trend can be addressed by emphasizing fresh ingredients and health attributes (S1, S2, T5).

WT strategies minimize weaknesses while avoiding threats—for example, improving variety and packaging to contend with modern products (W2, W4, T1) and broadening promotion to resist dominance by cheaper factory products (W1, W5, T3, T4).

Overall, the SWOT results indicate substantial growth potential if strategies balance leveraging strengths, exploiting opportunities, and mitigating weaknesses and threats. The outputs from this stage provide a robust basis for QSPM prioritization so MSMEs can select the most appropriate, efficient, and sustainable actions to strengthen competitiveness in an increasingly contested F&B market.

5.5 Decision Stage

QSPM Matrix

Table 14. QSPM Results (Top 10)

Rank	Strategy Code	Strategy Description	STAS
1	SO2	Obtain BPOM approval to ensure safety and quality, positioning products as nationally standardized regional souvenirs	2.10
2	ST2	Secure first-tier distributors/producers of raw materials or produce raw materials in-house	1.66
3	SO3	Leverage technology to produce faster and at larger volumes with lower costs	1.35
4	ST1	Build more partnerships with supermarkets and souvenir shops	1.28
5	SO1	Increase product quantities distributed to resellers and featured at fairs for promotion	1.26
6	WO2	Strengthen promotion and expand marketing so products gain wider recognition as regional specialty snacks	1.07
7	ST3	Use and process fresh ingredients	0.87
8	WT3	Increase promotional activity to expand market share by highlighting product advantages	0.76
9	WO1	Purchase new machines to make production more efficient and effective	0.67
10	WT1	Add product variants and improve packaging	0.52

Table 15. QSPM Results (Continuation)

Rank	Strategy Code	Strategy Description	STAS
11	WO4	Add product variants	0.47
12	WO3	Improve packaging design to attract new customers	0.40

The decision stage is the final phase of the strategic formulation for Resilient MSMEs, aimed at selecting the most feasible and impactful strategies for implementation. The Quantitative Strategic Planning Matrix (QSPM) is employed here to rank alternative strategies based on their Sum Total Attractiveness Scores (STAS), incorporating the relative weights of previously identified internal and external factors. QSPM offers a systematic and objective approach to choosing the best strategies by comparing their relative attractiveness, which is derived from the matching stage.

The results in Tables 14 and 15 show that the highest-ranked strategy is SO2—obtaining BPOM licensing to guarantee product safety and quality as nationally standardized regional souvenirs—scoring STAS = 2.10. This strategy is a top priority because it aligns with external opportunities (regional-souvenir positioning and streamlined licensing) while reinforcing consumer perceptions of product quality and credibility. Implementation can unlock broader markets, including modern retail channels that require legal and assured standards.

The second priority is ST2—securing first-tier raw-material suppliers or producing inputs in-house (STAS = 1.66). This approach is crucial for countering the threat of rising input prices, which is one of the most salient external challenges identified. By solidifying supply through direct partnerships or in-house production, MSMEs can better control production costs, protect margins, and build resilience against price volatility.

Next is SO3—leveraging technology for faster, larger-scale, lower-cost production—(STAS = 1.35). This fits internal needs to improve efficiency (given today's lengthy production) and exploits external

opportunities from increasingly affordable technologies, enabling MSMEs to meet higher demand at competitive prices.

Below the top priorities are strategies with lower scores that remain relevant for medium- to long-term execution: partnering with supermarkets and souvenir shops, increasing reseller and bazaar distribution, and strengthening promotion and packaging. WT-type strategies—such as expanding promotion to counter cheaper factory products or improving packaging to face modern rivals—rank lower because they are more reactive to weaknesses and threats rather than proactively leveraging strengths and opportunities.

Overall, QSPM results show that SO strategies—those that use internal strengths to seize external opportunities—tend to have higher attractiveness scores than others. This aligns with MSMEs' Quadrant I position on the IE Matrix, which favors intensive strategies such as product development, market penetration, and technology adoption. Consequently, the decision-stage outputs provide a clear, actionable priority set that is consistent with organizational realities, market potential and industry trends.

Prioritization via QSPM is especially vital for MSME operators, who face resource constraints and cannot pursue all strategies simultaneously. Concentrating on the highest-attractiveness strategies increases intervention effectiveness, accelerates market-target attainment, and strengthens the sustainable competitive position of Resilient MSMEs in the F&B industry.

Then, the result of the comprehensive Quantitative Strategic Planning Matrix (QSPM) presents detailing the attractiveness score computations for each alternative strategy. The matrix integrates internal and external factor weights, attractiveness scores (AS), and total attractiveness scores (TAS) for all strategies formulated in the matching stage. Its purpose is to prioritize strategies with the highest relative attractiveness in a quantitative manner, taking into account Resilient MSMEs' ability to leverage strengths and opportunities while mitigating weaknesses and threats.

Based on the calculations of QSPM, the strategy with the highest total TAS is Strategy 2—obtaining BPOM certification to guarantee product safety and quality as nationally standardized regional souvenirs—with a total score of 2.095. This result is consistent with the previous QSPM, which also prioritized legality, as it aligns most closely with external opportunities (growing market demand for quality standards and legality) and internal strengths (assured quality of input). This strategy also opens pathways into formal market segments, such as modern retail and national-scale souvenir channels.

The next highest-scoring options are Strategy 1, increasing product quantities distributed to resellers and to fairs for promotional purposes (total 1.258), and Strategy 4, forging more partnerships with supermarkets and souvenir stores (total 1.353). These two strategies complement the top priority by emphasizing wider market penetration and capitalizing on distribution advantages and existing networks.

Other notable strategies include Strategy 3, leveraging technological advances to produce faster and at larger volumes at lower costs (score 1.353), and Strategy 5, securing distributors or producing raw materials in-house (score 1.068). Both focus on production efficiency and cost control, which are critical responses to rising input prices and essential for scaling capacity to meet broader market demand.

In contrast, lower-scoring strategies, such as Strategy 12 (improving packaging design to attract new customers, 0.523) and Strategy 11 (adding product variety, 0.755), remain relevant but are sequenced for later implementation, given their comparatively smaller short-term impact.

Overall, Table 16 reinforces that Resilient MSMEs should first concentrate on strategies grounded in existing internal strengths and significant external opportunities. Legality (BPOM certification), distribution expansion via resellers/fairs and modern retail, and the adoption of production technologies form the most realistic and impactful combination in the short to medium term. The QSPM also demonstrates its practical value for MSME decision-makers by enabling more measured and objective prioritization. Consequently, the results in Table 16 provide a solid foundation for targeted, market-competitive strategies that strengthen Resilient MSMEs' contribution to local economic resilience on a sustainable basis.

6. Discussion and Implications

The strategic analysis conducted in this study offers a holistic view of the internal and external conditions facing Resilient MSMEs in Central Java's F&B sector, as well as the most suitable strategies to enhance their competitiveness. In general, the findings indicate strong internal assets, a relatively supportive external environment, and sizable strategic opportunities, tempered by several material challenges that must be mitigated.

Internal conditions. The Internal Factor Evaluation (IFE) yielded a total score of 3.26, well above the standard average (2.50), indicating that internal strengths outweigh weaknesses. The primary strength is assured input quality and product taste (weighted value 0.88), which sustains consumer preference even amid pandemic-induced disruption. Additional strengths—competitive pricing, product uniqueness, satisfying service, and ready access to raw materials—further consolidate their position in local markets (Medina-Mijangos et al., 2020). Nonetheless, weaknesses such as low brand recognition, limited product variety, slow production processes, less attractive packaging, and minimal promotion still hinder expansion into broader markets. These findings underscore the need for managerial improvements, product innovation, and modern marketing to optimize performance (Arnaud & Sekerka, 2010; Huang et al., 2013; Johannessen & Olsen, 2010).

External conditions. The External Factor Evaluation (EFE) produced a total score of 3.18, again above the average, signaling a conducive external environment with meaningful opportunities. Key opportunities include streamlined licensing, positioning products as regional souvenirs, flexible distribution through resellers, positive sectoral growth, technological progress, and access to fairs and bazaars for promotion. Non-trivial threats remain: rising raw material prices (the highest weighted threat at 0.76), intense competition from local rivals and major manufacturers, and a shift toward healthier foods. These patterns confirm the need for adaptation to market trends and tighter cost management to maintain competitiveness (Bekchanov & Mirzabaev, 2018; Merino-Saum et al., 2020; Mishra et al., 2022).

IE Matrix position. The IE Matrix places Resilient MSMEs in Quadrant I—a strong position combining robust internal capacity and abundant external opportunity—implying growth-and-build strategies. Priorities include market penetration, market development, product development, and integrative moves, such as forward integration (distribution strengthening) and backward integration (securing input supply). While the platform for expansion is solid, implementation must remain sustainable.

SWOT-derived strategy. SO strategies (leveraging strengths to seize opportunities) include obtaining BPOM certification to build market trust, expanding distribution via resellers and fairs, and adopting technology to improve production efficiency. WO strategies (using opportunities to address weaknesses) involve intensifying promotion, improving packaging, and adding product variants to modern markets. ST strategies (using strengths to counter threats) include partnering with supermarkets to confront local rivalry, sourcing from first-tier suppliers to curb costs, and in-house production to hedge against price spikes. WT strategies (minimizing weaknesses and avoiding threats) emphasize packaging and promotion upgrades to defend existing shares (Christian et al., 2022; Saleem et al., 2019; Shimp & Andrews, 2013).

QSPM priorities. The final QSPM ranking places BPOM certification first (TAS 2.095), as it boosts legitimacy and unlocks access to modern retail and online channels requiring quality certification. Next is securing distributors or producing raw materials in-house (1.66), which is crucial for managing input-cost inflation. Another high priority is technology adoption to increase capacity at lower unit costs, which is vital for scaling and operational efficiency. Collectively, these confirm that SO strategies best fit the MSMEs' Quadrant-I position, indicating the appropriateness of offensive, forward-leaning moves over purely defensive ones.

7. Conclusion and Policy Recommendations

The findings have concrete implications for MSME operators, policymakers, and other stakeholders in Central Java's F&B sector. First, product legality and market access. MSMEs should prioritize BPOM certification to elevate credibility and broaden market access. Local

governments can support this by offering fast, low-cost, group-based licensing services for MSME cohorts.

Second, operational efficiency and supply resilience. Technical training should be provided to raise production efficiency using appropriate and affordable technologies. Facilitating supply chain assistance so MSMEs can secure first-tier suppliers or develop selective in-house input production, thereby reducing costs and stabilizing margins.

Third, collective branding and demand generation are important. Launch a collective branding campaign, for example, *Kuliner Khas Jawa Tengah*, integrated with digital promotion, national fair participation, and collaborations with local influencers to strengthen visibility and extend geographic reach.

Fourth, channel development and aggregation. Governments can act as aggregators/mediators to broker distribution agreements with supermarkets, rest areas, and major souvenir chains, enhancing MSMEs' bargaining position and enabling entry into modern channels.

Fifth, product and promotion innovation. Encouraging MSMEs to diversify their offerings, upgrade packaging, and professionalize digital marketing is essential to remain relevant amid rising competitive standards and shifting consumer preferences.

Sixth, evidence-based MSME programs. These results can be used as an empirical basis for targeted programs that strengthen quality, efficiency, and market access, rather than relying primarily on short-term cash assistance. Properly implemented, these priorities can create jobs, raise household incomes, and reinforce culinary identity as a regional tourism asset while improving the local economic structure, reducing informality, and bolstering resilience under global uncertainty.

Together, these recommendations provide a pragmatic roadmap for scaling Resilient MSMEs' competitiveness and deepening their long-run contribution to local economic development.

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Not Applicable

Informed Consent Statement

Not Applicable

Authors' contributions

ID contributed to the conceptual framework, methodological design, and overall supervision of the research. She also served as the corresponding author responsible for manuscript preparation and submission. MJ contributed to data collection, quantitative and qualitative data analysis, and drafting of the discussion and conclusion sections.

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