

The Role of the Bandung City Department of Trade and Industry in Empowering SMEs to Enhance Competitiveness

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ABSTRACT

Purpose: This study examines the strategic role of the Bandung City Department of Trade and Industry in empowering small and medium industries (SMIs) and developing their competitiveness through digitalization, certification, capacity building, and Octa Helix collaboration.

Research Method: A descriptive qualitative design was applied using in-depth interviews, field observations, and document analysis. Data were analyzed through an interactive qualitative model, IFAS–EFAS, and SWOT analysis, with source and method triangulation supporting trustworthiness.

Results and Discussion: The IFAS and EFAS scores place Bandung's SMIs in a growth-oriented strategic position. Digitalization and certification assistance expanded, while export performance improved. However, financing constraints, unequal digital capabilities, and fragmented coordination remain. The Octa Helix framework connects government, academia, businesses, communities, media, financial institutions, supporting organizations, and society in SME development.

Implications: Disdagin should expand continuous digital mentoring, simplify certification, improve access to financing, strengthen industrial clusters, and formalize stakeholder coordination.

Originality: This study integrates the Octa Helix framework with IFAS–EFAS and SWOT analyses to formulate municipal-level SME development strategies.

Keywords: competitiveness; digitalization; empowerment; octa helix; small and medium industries.

1. Introduction

Small and Medium-Sized Enterprises (SMEs) constitute an important component of Bandung City's economy, particularly in the culinary, fashion, and craft sectors. These business sectors contribute to employment creation, community income, local production, and the development of Bandung's identity as a creative city. Nevertheless, SMEs in Bandung continue to encounter various obstacles, including limited managerial capacity, inadequate financial literacy, restricted access to markets, weak product innovation, and unequal adoption of digital technology. These constraints can reduce their ability to respond to changing consumer behavior and increasingly intense business competition. Therefore, SME empowerment requires coordinated and sustainable intervention from the municipal government and other relevant stakeholders.



Bandung City's socioeconomic conditions reinforce the urgency of SME empowerment. Data from the Central Statistics Agency of Bandung City (BPS Kota Bandung, 2025) show that the city recorded an economic growth rate of 5.29% and a Human Development Index of 84.66. However, the open unemployment rate remained at 7.22%, accompanied by a Gini coefficient of 0.42 and a poverty rate of 3.78%. These indicators suggest that relatively strong economic growth has not fully resolved unemployment, inequality, and poverty. In this context, competitive SMEs can function not only as drivers of local economic growth but also as instruments for expanding employment opportunities and distributing economic benefits more equitably (Jeppesen, 2005). Achieving this potential, however, depends on the effectiveness of government policies and institutional support in addressing the specific needs of SME actors.

Previous studies indicate that Bandung City has adopted several coordinated approaches to strengthening its SME ecosystem. Umam & Mafruhah (2022) found that the municipal government developed a smart economy strategy by utilizing Bandung's image as a creative city and providing government support to improve SME competitiveness. This strategy demonstrates that local economic development can be strengthened by integrating the city's identity, technological development, and entrepreneurship policies. Nevertheless, implementing such a strategy requires institutional coordination to ensure that empowerment programs are accessible and relevant to the characteristics of SMEs in different business sectors.

Government assistance has also been implemented through mentoring and business development programs. Maswin & Sudrajat (2023) documented that the Bandung City Government provided business mentors and organized various coaching activities for SME actors, particularly programs aimed at improving financial literacy. Such programs are important because inadequate financial knowledge can prevent business owners from recording transactions, separating personal and business finances, obtaining external financing, and evaluating business performance. Mentoring can therefore help SMEs translate government programs into improvements in managerial practices. However, the available evidence generally discusses the role of the Bandung City Government. It does not clearly distinguish the specific responsibilities and measurable contribution of the Bandung City Department of Trade and Industry.

Digitalization and innovation are other important dimensions of SME empowerment in Bandung. Kusendang *et al.*, (2023) reported that digital marketing and product innovation positively influenced the competitive advantage of SMEs assisted by the relevant government agency, with the two factors explaining 40.9% of the variation in competitive advantage. Their findings indicate that SMEs need to combine digital market access with product development to establish a stronger competitive position. Competitive advantage was subsequently found to have a substantial relationship with marketing performance, with a coefficient of determination of 80.8%. These results suggest that government assistance should not be confined to technical training but should also support SMEs in transforming innovation and digital adoption into sustainable marketing performance.

The importance of institutional support is further demonstrated by Iskanto *et al.*, (2024), who found that government support significantly influenced the performance of SMEs in Bandung. Government assistance can provide business operators with access to knowledge, networks, training, market information, and promotional opportunities that may be difficult to obtain independently. At the program level, Morisson & Fikri (2025) reported that digitalization initiatives, including the UMKM Go Digital Movement, provided training to more than 5,000 SMEs and were associated with an average

revenue increase of 30%. These findings illustrate the potential scale and economic benefits of digitally oriented empowerment programs. Nevertheless, the sustainability and distribution of these benefits across SME sectors still require systematic evaluation.

The Bandung City Department of Trade and Industry is also described as performing the functions of facilitator, mentor, and coordinator through skills training, business assistance, and product promotion (Purnamasari & Wahyutari, 2025). These functions indicate that the Department's role extends beyond administrative implementation because it is expected to connect SMEs with markets, business partners, supporting institutions, and other government programs. Effective empowerment thus requires collaboration among government, academia, businesses, financial institutions, communities, media, and other supporting actors. Such collaboration is consistent with an ecosystem perspective in which SME competitiveness results from coordinated contributions from multiple stakeholders rather than from a single government program.

Despite these findings, several research gaps remain. First, previous studies have mainly examined individual aspects of SME empowerment, such as smart economy policies, financial literacy mentoring, digital marketing, product innovation, and government support. Consequently, the findings remain fragmented and have not fully explained how these programs are integrated into a comprehensive municipal SME development strategy. Second, previous studies generally refer to the Bandung City Government without explicitly examining the organizational and strategic role of the Bandung City Department of Trade and Industry. Information regarding the Department's program priorities, stakeholder coordination mechanisms, and measurable outcomes also remains limited. Third, existing studies have not adequately applied the Octa Helix framework to evaluate the participation and interaction of multiple stakeholders in Bandung's SME ecosystem.

A methodological gap is also evident because previous research has predominantly assessed the statistical effects of specific factors on SME competitiveness or performance. Such studies provide valuable evidence about relationships among variables but do not comprehensively identify SMEs' internal strengths and weaknesses or the external opportunities and threats affecting their development. Moreover, no systematic study has integrated the Octa Helix framework with Internal Factor Analysis Summary–External Factor Analysis Summary (IFAS–EFAS) and Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis to evaluate SME empowerment strategies in Bandung City. This limitation makes it difficult to determine the strategic position of Bandung's SMEs and formulate policy priorities based on both internal and external conditions.

Accordingly, this study addresses three research questions: (1) What is the strategic role of the Bandung City Department of Trade and Industry in empowering SMEs to enhance their competitiveness? (2) What is the strategic position of Bandung City's SMEs based on IFAS–EFAS analysis? Moreover, (3) What strategies are most appropriate for sustainably enhancing the competitiveness of Bandung City's SMEs? Based on these questions, this study aims to examine the Department's strategic role, analyze the internal and external position of Bandung's SMEs, and formulate appropriate strategies for sustainable competitiveness. The novelty of the study lies in integrating the Octa Helix framework with IFAS–EFAS and SWOT analyses at the municipal-government level. This integration enables the study to connect multi-stakeholder collaboration with evidence-based strategic formulation and provide practical recommendations for strengthening Bandung City's SME ecosystem.

The remainder of this paper is organized as follows. Section 2 provides a literature review and hypothesis development. Section 3 presents the research method and design. Section 4 provides the results and discussion. Section 5 presents Concluding Remarks and Recommendations.

2. Literature Review and Hypothesis Development

2.1 Empowerment and Competitiveness of MSMEs

Empowerment of Micro, Small, and Medium Enterprises (MSMEs) is a systematic process of strengthening business actors' capacity, autonomy, and access to productive resources so that they can sustain and develop their businesses. It encompasses financial assistance, managerial training, technological support, mentoring, market facilitation, institutional strengthening, and business-network development. Empowerment should therefore not be interpreted merely as the distribution of capital because financial support without managerial and technological capabilities may not generate sustainable improvements. Access to information and communication technology can reduce information asymmetry between MSMEs and financial institutions, thereby expanding financing opportunities, particularly for businesses capable of demonstrating innovation and credible operational information (Mushtaq *et al.*, 2022). Digitalization also enables MSMEs to reorganize business activities, interact more efficiently with customers, and identify new market opportunities. However, its benefits are influenced by owner and business characteristics, indicating that empowerment programs must consider differences in demographic profiles, experience, and organizational readiness (Chatterjee *et al.*, 2022).

MSME competitiveness refers to a business's ability to create superior customer value, respond to market changes, maintain operational efficiency, and achieve sustainable performance relative to competitors. This capability is formed through the interaction of internal resources, managerial competence, innovation, technological adoption, and strategic orientation. Digital technologies can support value creation when MSMEs combine them with organizational ambidexterity, namely the capacity to exploit existing resources while exploring new business opportunities (Chaudhuri *et al.*, 2022). Nevertheless, technology adoption alone does not automatically produce competitive advantage. Managerial education, professional knowledge, firm size, and international market involvement determine MSMEs' ability to initiate and manage digital transformation (Clemente-Almendros *et al.*, 2024). A systematic review by Sagala & Óri (2024) similarly shows that successful digital transformation requires the alignment of technological readiness, human-resource competence, organizational culture, managerial capability, and business strategy. Accordingly, empowerment initiatives must strengthen both technical skills and the organizational capacity required to convert digital investment into innovation, efficiency, and improved market positioning.

The competitiveness of MSMEs is also affected by institutional support and their ability to integrate multiple strategic orientations. Government policies can strengthen MSME performance through financial incentives, training, mentoring, infrastructure, market information, and an institutional environment that encourages entrepreneurial behavior. However, the effectiveness of government support depends on its suitability for the sector, resource constraints, and growth intentions of recipient businesses (Prasannath *et al.*, 2024). Internally, entrepreneurial orientation encourages innovation and opportunity seeking, market orientation improves responsiveness to customer needs, and sustainability orientation directs businesses toward long-term economic, social, and environmental value. The



complementary implementation of these orientations provides stronger performance benefits than relying on a single strategic orientation (Khizar *et al.*, 2023). Environmental innovation is likewise becoming an important source of competitiveness because circular-economy practices can improve resource efficiency, reduce waste, differentiate products, and strengthen market performance (Rehman *et al.*, 2023). Thus, MSME empowerment and competitiveness are interrelated: empowerment provides resources and capabilities, while competitiveness reflects the ability to transform this support into differentiated value and sustainable performance. Effective MSME development consequently requires coordinated interventions that integrate financing, digitalization, innovation, managerial development, sustainability, and institutional collaboration.

2.2 The Role of Local Governments in the Development of SMEs

Local governments have a strategic role in creating an enabling environment for SME establishment, survival, and growth. Their responsibilities extend beyond issuing business permits and regulations to include infrastructure provision, institutional assistance, managerial training, market facilitation, technology adoption, and protection of local businesses. A supportive political and legal environment can improve SME performance when regulations are transparent, administrative procedures are accessible, and business support services correspond to entrepreneurs' actual needs (Wube & Atwal, 2023). Local governments must also anticipate economic disruptions because SMEs are particularly vulnerable to declining demand, financing constraints, and operational restrictions. Evidence from the pandemic demonstrates that regional entrepreneurship policies can reduce business vulnerability through targeted financial assistance, regulatory relief, information services, and recovery programs. However, their effectiveness varies according to regional economic structures and policy implementation capacity (Zemtsov *et al.*, 2022). Consequently, local SME policies should be formulated using accurate regional data and periodic evaluations rather than relying on standardized interventions.

The role of local government also involves coordinating policy instruments and mobilizing stakeholders within the entrepreneurial ecosystem. Effective SME development cannot be generated through an isolated program because financing, infrastructure, innovation, skills, market access, and institutional quality are mutually connected. Wang *et al.*, (2023) demonstrate that different configurations of policy instruments are required according to firms' development stages and the characteristics of regional entrepreneurial ecosystems. Local governments should therefore act as ecosystem orchestrators by connecting SMEs with universities, financial institutions, private companies, business associations, communities, and innovation-support organizations. Thawesaengskulthai *et al.*, (2024) show that public-private and university collaboration can strengthen innovation-oriented enterprises by integrating research, entrepreneurship education, incubation, investment, and commercialization support. Local authority engagement may also include consultation, technical assistance, awareness campaigns, and partnerships with business associations. Nevertheless, engagement strategies must consider differences in SME motivation, capacity, and resource availability to avoid low program participation or benefits being concentrated among already capable businesses (Sugar *et al.*, 2024).

Local governments must further design policies that respond to SMEs' changing needs throughout their business life cycle. Early-stage enterprises generally require simplified licensing, mentoring, initial financing, and market validation, whereas growing enterprises need skilled labor, investment networks, innovation infrastructure, and access to broader markets. Public policies must

therefore distinguish between startup creation and scale-up development because uniform assistance may fail to resolve growth-specific constraints (Pardo-del-Val *et al.*, 2025). Regional financial ecosystems are equally important: cooperation among governments, banks, venture-capital providers, business angels, crowdfunding platforms, incubators, and accelerators can broaden SMEs' financing alternatives and support young-firm growth (Vega-Pascual *et al.*, 2025). Local economic development policies may also use special economic zones and industrial linkages to foster entrepreneurship, provided that incentives are accompanied by access to financing, human-capital development, technology adoption, and connections between large industries and local businesses (Batoool *et al.*, 2024). Thus, local governments serve simultaneously as regulators, facilitators, coordinators, and catalysts. Their effectiveness depends on policy coherence, institutional capacity, stakeholder collaboration, program accessibility, and continuous assessment of measurable SME outcomes.

2.3 The Evolution of Collaboration Models: From the Triple Helix to the Octa Helix

The evolution of helix collaboration models reflects the increasing complexity of innovation and regional development. The Triple Helix model initially emphasized interaction among government, academia, and industry. Government establishes regulations and provides institutional support, academia produces knowledge and technology, while industry commercializes innovation and responds to market demand. The effectiveness of this model depends not merely on the presence of the three actors but also on the quality, intensity, and institutional conditions of their relationships (Fidanoski *et al.*, 2022). Collaborative interaction allows each actor to complement the others' limitations by combining public authority, scientific knowledge, and commercial resources. Empirical evidence further indicates that simultaneous cooperation among Triple Helix actors produces synergistic benefits for environmental innovation that cannot always be achieved through bilateral relationships alone (Murillo-Luna & Hernández-Trasobares, 2023). Nevertheless, the Triple Helix tends to treat society mainly as a recipient of innovation, making it insufficient for addressing challenges that require public participation, social legitimacy, and contextual knowledge.

The Quadruple Helix extends the framework by incorporating civil society, including communities, users, and citizens, as active contributors to knowledge creation and innovation. This addition emphasizes that innovation should respond to public needs and be developed through participation and co-creation. The Quintuple Helix subsequently incorporates the natural environment, thereby connecting innovation with ecological sustainability and recognizing environmental limits as an integral consideration rather than an external consequence. Cloitre *et al.*, (2023) that these extensions transform entrepreneurial ecosystems by broadening institutional participation and incorporating social and environmental dimensions. Within Society 5.0, the Quintuple Helix can be combined with design thinking to develop human-centered solutions through iterative interaction among government, academia, industry, society, and the environment (Bartoloni *et al.*, 2022). Its practical application is demonstrated through urban living labs, which provide experimental spaces where stakeholders jointly design, test, and evaluate technological and policy solutions before wider implementation (Almeida & Deutsch, 2025). Thus, collaboration evolves from institutional knowledge exchange toward participatory and sustainability-oriented innovation.

Recent applications indicate that simply increasing the number of actors does not automatically improve collaborative outcomes. Implementing the Quintuple Helix requires clearly defined objectives, actor responsibilities, resource-sharing arrangements, performance indicators, and coordinating

mechanisms. Shkarupeta & Babkin (2024) demonstrate that collaboration among government, academia, industry, civil society, and the natural environment facilitates knowledge exchange and collective responses to eco-innovation challenges. Similarly, the eco-5HM framework emphasizes the need to connect stakeholder participation with circularity and measurable sustainability outcomes (van Bueren *et al.*, 2023). Helix models may otherwise remain superficial when social and environmental actors are symbolically included without meaningful decision-making authority (van Bueren *et al.*, 2025). In this study, the Octa Helix is operationally defined as a context-specific expansion involving government, academia, SMEs, communities, media, financial institutions, supporting organizations, and the wider public. These actors contribute regulation, knowledge, production capacity, social networks, information dissemination, financing, technical assistance, and market legitimacy. The Octa Helix should therefore be understood not as a universally standardized successor to the Quintuple Helix but as an analytical framework for mapping the broader stakeholder configuration required in Bandung's SME ecosystem. Its effectiveness ultimately depends on orchestration, role clarity, mutual accountability, and the ability to transform diverse resources into coordinated SME empowerment programs.

Figure 1. The Octa Helix Model in Enhancing the Competitiveness of SMEs in Bandung



Source: Carayannis & Campbell (2021); adapted from the Bandung City Department of Trade and Industry (2025)

3. Research Method

3.1 Research Design and Context

This study employed a descriptive qualitative design to obtain a contextual understanding of the strategic role of the Bandung City Department of Trade and Industry (Dinas Perdagangan dan Perindustrian, Disdagin) in developing the competitiveness of Small and Medium-Sized Enterprises (SMEs). A qualitative approach was considered appropriate because Disdagin's institutional role is multidimensional and embedded in policies, program implementation, and interactions among stakeholders within the SME ecosystem (Creswell, 2018; Yin, 2018). The study focused on Disdagin's roles as regulator, facilitator, coordinator, mentor, and ecosystem orchestrator, as well as the internal

and external conditions affecting SME development in Bandung City. The unit of analysis was therefore the institutional strategy and implementation of SME empowerment programs, while individual officials and SME actors served as sources of information.

3.2 Data Sources and Informants

The study used primary and secondary data. Primary data were obtained from civil servants at Disdagin Bandung City and SME actors who had participated in government-supported empowerment programs. These informants were selected based on their involvement in planning, implementing, or receiving SME development assistance. Field observations were also undertaken at industrial centers and SME promotional events to examine program implementation, business activities, stakeholder interaction, and marketing practices. However, the manuscript should explicitly report the number and positions of government informants, the number and business sectors of SME informants, and their selection criteria to ensure methodological transparency. Secondary data were obtained from official documents, including Bandung City statistical publications for 2025, the Bandung City Medium-Term Regional Development Plan (Rencana Pembangunan Jangka Menengah Daerah, RPJMD) 2025–2029, the Disdagin Strategic Plan (Rencana Strategis, Renstra) 2025–2029, Ministry of Industry reports, and relevant OECD publications. These documents were used to identify socioeconomic conditions, policy priorities, institutional responsibilities, program targets, and strategic issues related to SME development. Table 1 summarizes the data sources and collection methods.

Table 1. Data Sources and Collection Methods

Data category	Source or informant	Information collected	Collection method
Primary	Civil servants at Disdagin Bandung City	Institutional responsibilities, program planning, implementation, stakeholder coordination, and strategic constraints	In-depth interviews
Primary	SMEs supported by Disdagin Bandung City	Experiences with assistance programs, business constraints, program benefits, and competitiveness needs	In-depth interviews and observation
Primary	Industrial centers	Production activities, business conditions, infrastructure, and interactions among SME actors	Field observation
Primary	SME exhibitions and promotional events	Product promotion, market access, stakeholder participation, and implementation of government support	Field observation
Secondary	BPS Kota Bandung publications (2025)	Economic, employment, poverty, inequality, and SME-related indicators	Document analysis
Secondary	Bandung City RPJMD 2025–2029	Regional development priorities, targets, and policy direction	Document analysis
Secondary	Disdagin Renstra 2025–2029	Institutional objectives, programs, performance indicators, and SME development strategies	Document analysis
Secondary	Ministry of Industry reports (2023)	National industrial and SME development policies and supporting data	Document analysis
Secondary	OECD publications	Comparative evidence and policy guidance concerning SME development and competitiveness	Literature and document analysis

Source: Compiled by the authors (2025).

3.3 Data Collection and Trustworthiness

Data were collected through in-depth interviews, field observations, and document analysis. The interviews explored Disdagin's institutional roles, SME empowerment programs, stakeholder collaboration, program constraints, and opportunities to improve SME competitiveness. Observations were used to compare interview statements with actual conditions at industrial centers and promotional events. Document analysis provided policy and statistical evidence against which interview and observational findings could be assessed. To establish credibility, the study applied source triangulation by comparing information from government officials, SME actors, and official documents. Method triangulation was undertaken by integrating interview, observational, and documentary evidence. These procedures helped identify convergent findings, inconsistencies, and context-specific explanations (Denzin, 2017; Lincoln & Guba, 1985). Records of data sources, analytical decisions, and factor classification should also be retained to support dependability and confirmability.

3.4 Data Analysis

Qualitative data were analyzed using the interactive model comprising data condensation, data display, and conclusion drawing or verification (Miles *et al.*, 2014). Interview, observation, and documentary data were first organized and coded according to institutional roles, empowerment programs, stakeholder involvement, internal strengths and weaknesses, and external opportunities and threats. The coded findings were subsequently compared across sources and presented in thematic matrices. Conclusions were developed iteratively and verified against the available evidence. The thematic findings were then integrated with Internal Factor Analysis Summary–External Factor Analysis Summary (IFAS–EFAS) and Strengths, Weaknesses, Opportunities, and Threats (SWOT) analyses. Internal factors were classified as strengths or weaknesses, whereas external factors were classified as opportunities or threats. The factors were evaluated through expert judgment involving relevant Disdagin officials and cross-checked against official statistical and policy documents. The resulting IFAS and EFAS scores were used to determine the strategic position of Bandung's SMEs, while the SWOT matrix generated SO, WO, ST, and WT strategic alternatives. These alternatives formed the basis for formulating recommendations to strengthen SME competitiveness and multi-stakeholder collaboration.

4. Results and Discussion

4.1 Analysis Results

4.1.1 Macroeconomic Conditions and SMEs in Bandung

According to data from the Bandung City Statistics Agency (2025), the city's economic conditions are relatively stable, with a GDP growth rate of 5.29% and an HDI of 84.66. Nevertheless, the open unemployment rate remains at 7.22%, the Gini coefficient at 0.42, and the poverty rate at 3.78%—a sign that strengthening the SME sector is still critically needed to support the economy of the lower socioeconomic strata. The manufacturing and trade sectors are the dominant contributors to Bandung City's GRDP. The SMEs supported by the Department of Trade and Industry (Disdagin) operate in three main creative subsectors: culinary, fashion, and crafts, with a total of 4,278 business units by 2025 spread across 37 industrial centers, including Cibaduyut (footwear), Binong Jati (knitting), and Suci (printing).



4.1.2 The Strategic Role of the Department of Trade and Industry in Empowering SMEs

Throughout 2025, the Bandung City Trade and Industry Agency has implemented various empowerment programs strategically designed to enhance the competitiveness of small and medium-sized enterprises (SMEs):

1. Digital marketing training and marketplace onboarding (Tokopedia without a deposit), benefiting 100 SME owners.
2. Free product certification services—including halal certification, quality testing, PIRT, and SNI—reaching 190 SMEs.
3. Organization of promotional events: Bandung Creative Market (337 participants; revenue of Rp 10.01 billion), Trade Expo Indonesia 2025 (20 participants; Rp 6.96 billion), Indonesia International Furniture Expo (15 participants; Rp 1.59 billion), Bandung Week Market (19 participants; Rp 1.39 billion), Industrial & Culinary Center Festival (40 SMEs; Rp 1.83 billion).
4. Development of industrial hubs, including the revitalization of the Cibaduyut Shoe Monument and industrial cluster festivals.
5. Facilitating access to financing through banking partnerships and the Bank Bandung program.
6. Partnerships between SMEs and shopping malls and supermarket chains.

In a broader context, implementation on the ground demonstrates the Octa Helix approach, which involves eight actors working synergistically: the government (Disdagin as the policy maker and program implementer), academia (joint research with SBM ITB for updating industrial hub data), business actors/SMEs, the creative community and industrial hubs, digital media (marketplaces and social media), financial institutions (banks and KUR), halal certification bodies, quality testing, and SNI, as well as the public as consumers of SME products.

Table 2. Implementation of the Octa Helix Model in the Empowerment of SMEs in Bandung City by 2025

Actor	Functions	Main Programs	Benchmarks
The Government (Disdagin Bandung)	Regulation, facilitation, and catalysts for SME empowerment	Digital marketing training, free certification (halal/quality testing/SNI), trade show promotions, industrial hub development	Competitive SMEs $\geq 3,056$; exports growing by $\geq 0.4\%$ per year
Academics (SBM ITB, University)	Research, product innovation, and human resource development	Research on updating industrial hub data; entrepreneurship training featuring academic experts as guest speakers	≥ 2 joint research projects per year; an increase in trained personnel
Business Owners / SMEs	Production, transactions, and product innovation	Marketplace onboarding (Tokopedia), TEI & Creative Market exhibitions, product certification	Revenue has increased; exhibition revenue $\geq \text{Rp}10$ million/year
Community (Creative & Industrial Hub)	Local production base and creative identity	The Cibaduyut, Binong Jati, and Suci industrial hub communities; industrial hub festival	The number of active SMEs in the community has increased by at least 10% per year.

Media (Digital & Marketplace)	Product promotions and market opportunity information	No-deposit marketplace, social media, promotional content for Bandung Week Market	≥ 100 SMEs digitized; promotional content ≥ 12 per year
Financial Institutions (Banking, KUR)	Business financing and capital strengthening	KUR, Bank Bandung Program, banking partnerships, financial literacy	≥ 30 SMEs per year gain access to financing
Supporting Institutions (Certification, Incubators)	Standardization, certification, and business support	Halal certification, quality testing, SNI; business incubators; packaging and labeling assistance	≥ 190 certified products; incubation of ≥ 10 SMEs per year
Community (Local Consumers)	Market consumption patterns and responses	"Proud of Bandung Products" Campaign; Consumers at the Creative Market & BWM Exhibition	Customer satisfaction has increased; the number of repeat buyers has risen.

4.1.3 Strategic Position Analysis: IFAS–EFAS

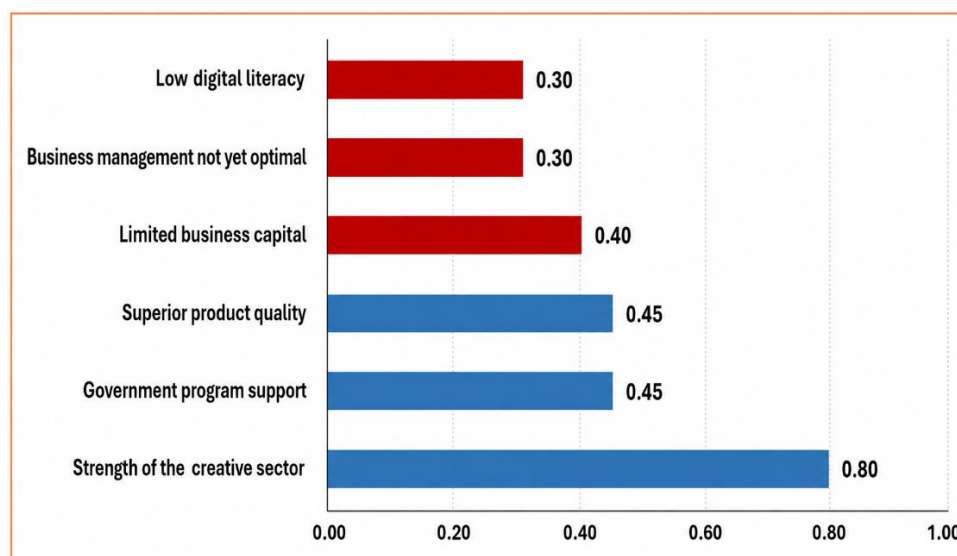
The IFAS–EFAS analysis is used to identify and weigh the strategic factors that influence the competitiveness of SMEs in Bandung, both from internal and external perspectives.

Table 3. IFAS Matrix (Internal Factor Analysis Summary)

Internal Factors	Weight	Rating	Score
The strength of the creative sector (culinary, fashion, crafts)	0.20	4	0.80
Government program support	0.15	3	0.45
Premium product quality	0.15	3	0.45
Limited business capital	0.20	2	0.40
Business management is not yet optimal	0.15	2	0.30
Digital literacy remains low	0.15	2	0.30
Total	1.00	–	2.70

Source: Compiled by the Author (2025)

Figure 2. Weighted Score Chart for the IFAS Matrix for SMEs in Bandung City



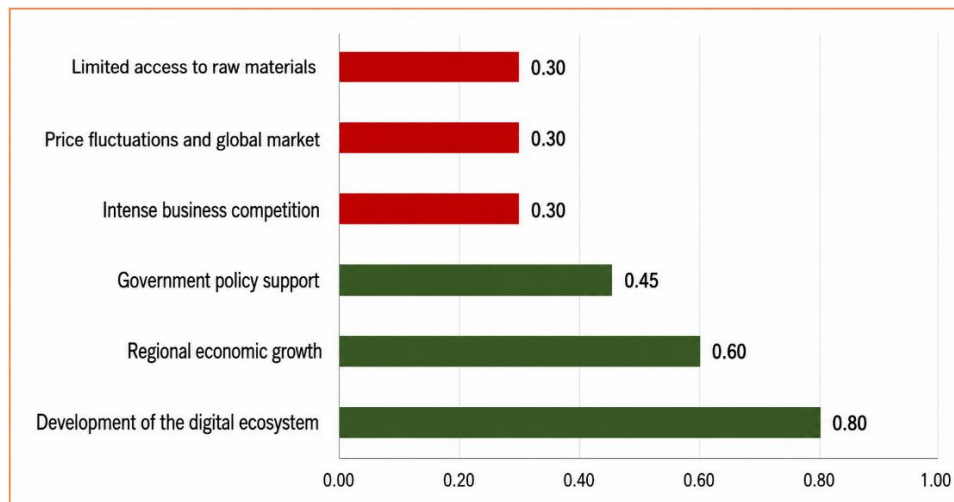
Source: Compiled by the Author (2025)

Table 4. Matriks EFAS (External Factor Analysis Summary)

External Factors	Weight	Rating	Score
The Development of the Digital Ecosystem	0.20	4	0.80
Regional economic growth (5.29%)	0.20	3	0.60
Government policy support	0.15	3	0.45
Increasingly fierce business competition	0.15	2	0.30
Price fluctuations and the global market	0.15	2	0.30
Limited access to raw materials	0.15	2	0.30
Total	1.00	–	2.75

Source: Compiled by the Author (2025)

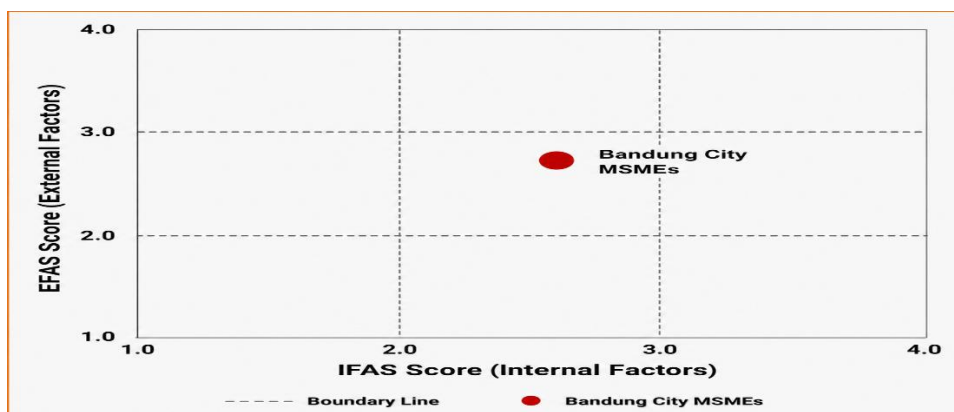
Figure 3. Graph of the Weighted Scores for the EFAS Matrix of the Bandung City SME Sector



Source: Compiled by the Author (2025)

An IFAS score of 2.70 and an EFAS score of 2.75 place Bandung's SMEs in the "growth strategy" quadrant—a quadrant that reflects significant internal strengths and external opportunities that can be optimally leveraged. On the IE Matrix, the coordinates (2.70; 2.75) fall in cell V, implying a "hold and grow" strategy, where SMEs need to focus on market penetration and the development of existing products while continuing to strengthen internal capacity.

Figure 4. IE (Internal–External) Matrix – Strategic Position of SMEs in Bandung City



Source: Compiled by the Author (2025)

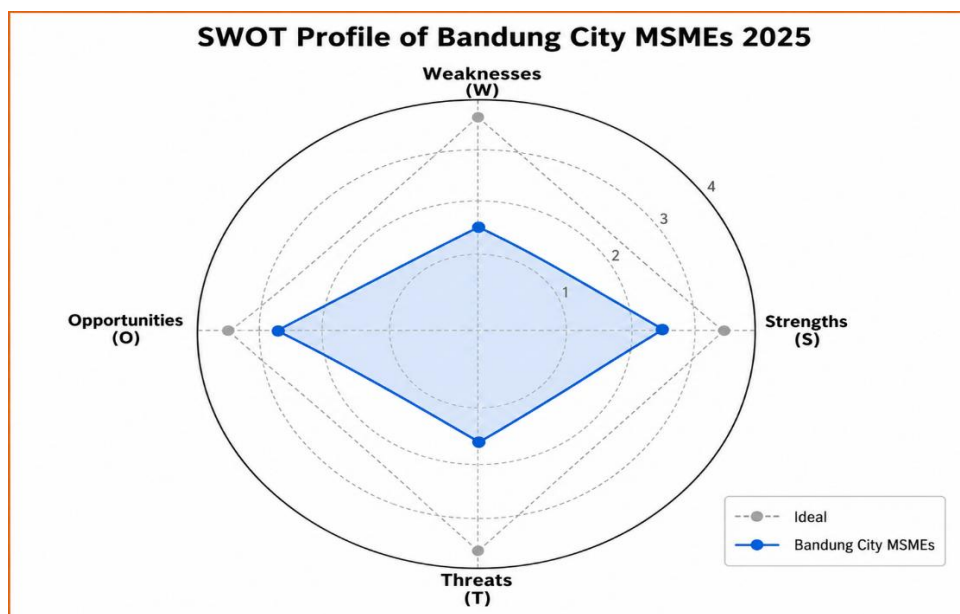
4.1.4 Analisis SWOT

Table 5. Matriks SWOT IKM Kota Bandung 2025

Strengths (S)	Weaknesses (W)
S1. Dominance in three leading creative sectors (culinary, fashion, crafts) S2. A stable LPE of 5.29% fosters a conducive business climate S3. Government program support: training, certification, promotion S4. The presence of 37 industrial centers (Cibaduyut, Binong Jati, Suci)	W1. Access to capital remains limited W2. Low digital literacy hinders the adoption of technology W3. Business management and financial record-keeping are still inadequate W4. Small-scale production with suboptimal efficiency
Opportunities (O)	Threats (T)
O1. Advances in digital technology and the e-commerce ecosystem O2. Support from central and local government policies O3. Growth in the domestic market and tourism in Bandung O4. The export potential of creative products to international markets	T1. Fierce competition between local SME products and imported products T2. Unpredictable fluctuations in raw material prices T3. Rapidly changing consumer trends T4. Global economic uncertainty & U.S. tariff policies
SO: Strengthening digitalization through creative potential and partnerships	ST: Product innovation and differentiation in the face of imported competitors
WO: Improving digital literacy and expanding access to financing	WT: Institutional strengthening and production efficiency

Source: Compiled by the Author (2025)

Figure 5. Radar Chart of the SWOT Profile for Bandung City's SMEs in 2025



Source: Compiled by the Author (2025)

4.1.5 Performance Indicators of the Bandung City Trade and Industry Agency

Table 6. Performance Indicators of the Bandung City Department of Trade and Industry (2024–2025)

Indicator	2024	2025	Changes
Facilitating the digitalization of SMEs	40 IKM	100 IKM	+150%
Facilitation of product certification (halal and quality testing)	125 IKM	190 IKM	+52%
Competitive SMEs	2.826 IKM	3.056 IKM	+8.1%
Export value (in millions of US dollars)	325.88	327.11	+0.4%

Source: Compiled by the Author (2025)

4.2 Discussion

The IFAS–EFAS analysis places Bandung’s SMEs in a growth-oriented strategic position, indicating that their internal capabilities are sufficiently strong to respond to opportunities in the external environment. This position is primarily supported by the diversity and creativity of the culinary, fashion, and craft sectors, which provide a foundation for product differentiation and local value creation. From the resource-based view, these creative capabilities can become sources of competitive advantage when they are valuable, difficult to imitate, and effectively organized (Barney, 1991). Nevertheless, creative potential does not automatically produce sustainable competitiveness. It must be supported by consistent product development, stronger managerial capacity, quality assurance, and access to broader markets. The findings also support Porter’s (1990) argument that competitiveness is maintained through continuous innovation and efficient resource utilization. Thus, the growth position identified in this study reflects strategic potential rather than evidence that all competitiveness constraints have been resolved.

Digital ecosystem development constitutes the most important external opportunity for Bandung’s SMEs. Digital platforms allow business actors to expand customer reach, communicate product value, and develop more responsive marketing practices. This finding is consistent with Chatterjee *et al.*, (2022), who explain that digitalization strengthens entrepreneurial activities by enabling SMEs to reorganize business processes and identify new market opportunities. However, the benefits of digital transformation are not distributed equally. Differences in managerial knowledge, business scale, and organizational readiness influence SMEs’ capacity to adopt and utilize technology (Clemente-Almendros *et al.*, 2024). This explains why participation in digital onboarding programs may increase more rapidly than the number of SMEs capable of achieving sustained competitiveness. Digital empowerment must therefore move beyond platform registration and basic promotional training toward continued mentoring in content management, customer-data utilization, digital transactions, cybersecurity, and performance evaluation.

Disdagin’s empowerment programs demonstrate that local government intervention can address multiple constraints simultaneously. Product certification facilitates formal market entry and strengthens consumer confidence, whereas packaging assistance and promotional activities improve product presentation and visibility. Digital marketing assistance expands market access, while mentoring helps business actors apply the knowledge obtained through training. These interventions show that Disdagin performs several interconnected roles as regulator, facilitator, mentor, and coordinator. The finding supports Wube and Atwal’s (2023) view that a supportive political and institutional environment can improve SME performance when government policy is combined with accessible business-support services. It also extends Prasannath *et al.*, (2024) by showing how government support is operationalized



at the municipal level through certification, market facilitation, digital assistance, and industrial-cluster development. Nevertheless, the limited conversion of assisted SMEs into consistently competitive businesses indicates that short-term activities alone cannot overcome persistent constraints involving financing, managerial skills, and digital capability.

The collaboration identified in Bandung further suggests that SME development cannot be managed by Disdagin independently. Cooperation with universities supports research, training, and knowledge transfer; business actors provide production and market experience; financial institutions broaden access to funding; communities strengthen social networks; and media increase product visibility. These interactions are consistent with the Triple Helix principle that innovation emerges through complementary relations among government, academia, and industry (Fidanoski *et al.*, 2022). The involvement of communities and wider societal actors also reflects the transition toward broader collaboration models that emphasize participation and contextual knowledge (Cloitre *et al.*, 2023). Within this study, the Octa Helix framework extends this logic by mapping eight contextually relevant actor groups in Bandung's SME ecosystem. Its contribution lies not merely in increasing the number of participants but in clarifying how different resources—regulation, knowledge, financing, promotion, mentoring, production capacity, and social legitimacy—can be coordinated to support SME development.

However, the presence of multiple actors does not necessarily demonstrate that collaboration has become fully integrated. Partnerships may remain fragmented when programs are implemented separately, responsibilities overlap, information is not shared, or no institution assumes a clear orchestration role. The findings therefore reinforce van Bueren *et al.*'s (2025) warning that helix models can become symbolic when actor responsibilities, objectives, performance indicators, and resource-sharing mechanisms are not clearly defined. Disdagin needs to function as the principal orchestrator by establishing shared priorities, coordinating program schedules, maintaining an integrated SME database, and evaluating each stakeholder's contribution. In this regard, the Octa Helix should be understood as an operational framework for collaborative governance rather than as evidence that the number of actors alone improves SME performance.

The SWOT formulation translates these findings into four complementary strategic directions. The SO strategy uses creative-sector strengths to capture opportunities arising from digitalization, tourism, and broader market access. The WO strategy addresses capability gaps through mentoring, digital-literacy development, certification support, and access to appropriate financing. The ST strategy employs product differentiation, local identity, and institutional partnerships to respond to competition and changing market conditions. Finally, the WT strategy seeks to reduce vulnerability by improving business administration, strengthening coordination, and providing continued assistance to less-prepared SMEs. These alternatives should not be treated as mutually exclusive because Bandung's SMEs differ in sector, scale, readiness, and growth orientation. Accordingly, the principal contribution of this study is a differentiated strategic roadmap that connects SMEs' internal and external conditions with the institutional roles of Disdagin and the collaborative resources available within the Octa Helix ecosystem.

5. Concluding Remarks and Recommendation

This study was motivated by the need to understand how municipal institutions can coordinate SME empowerment within a complex multi-stakeholder ecosystem. It addressed three questions concerning the strategic role of the Bandung City Department of Trade and Industry (Disdagin), the strategic position of Bandung's SMEs, and the appropriate strategies for strengthening their sustainable competitiveness. A descriptive qualitative design was employed using in-depth interviews, field observations, and document analysis. The qualitative findings were integrated with IFAS-EFAS and SWOT analyses to evaluate internal and external strategic factors and formulate development priorities. The findings show that Disdagin plays interconnected roles as regulator, facilitator, mentor, coordinator, and catalyst. Its programs support SME development through digitalization, product certification and standardization, market promotion, mentoring, and stakeholder partnerships. The IFAS-EFAS results place Bandung's SMEs in a growth-oriented strategic position, supported mainly by the creative potential of the culinary, fashion, and craft sectors and opportunities arising from digital ecosystem development. Program records indicate improvements in the coverage of digitalization and product-certification assistance, accompanied by increased export value. However, financing constraints, uneven digital literacy, production inefficiency, and fragmented institutional coordination remain important barriers. The SWOT analysis consequently generated four complementary directions: strengthening digital marketing through the SO strategy, improving digital capabilities and financing access through the WO strategy, encouraging product innovation and differentiation through the ST strategy, and enhancing institutional capacity and production efficiency through the WT strategy.

The study provides a theoretical contribution by illustrating how the Octa Helix framework can be operationalized at the municipal level through the involvement of government, academia, SMEs, communities, media, financial institutions, supporting organizations, and the wider public. Its originality lies in connecting this multi-actor framework with IFAS-EFAS and SWOT analyses to translate stakeholder resources and regional conditions into strategic policy alternatives. Practically, the findings provide Disdagin and its partners with a framework for designing differentiated interventions according to SMEs' readiness, sector, and growth needs. From a policy perspective, the study emphasizes that sustainable SME competitiveness requires coordinated programs, clear stakeholder responsibilities, integrated business data, and continuous evaluation rather than separate interventions undertaken by individual institutions.

Several limitations should be acknowledged. The qualitative and city-specific design provides contextual depth but limits the transferability of the findings to regions with different institutional and economic characteristics. The IFAS-EFAS weights and ratings rely partly on expert judgment and may therefore contain subjective assessments. Moreover, the focus on data from a single period does not capture long-term changes in SME competitiveness or establish the causal effects of individual programs. Future studies should employ longitudinal mixed-method designs, involve more diverse SME sectors and stakeholder groups, and compare Octa Helix implementation across Indonesian creative cities. Further research could also evaluate the relative effects and cost-effectiveness of certification, digitalization, financing, mentoring, and promotional programs to provide stronger evidence for government budget allocation.



Statement of Use of Generative AI

During the preparation of this work, the author used generative artificial intelligence tools to support the scientific writing process. Grammarly was used to check grammar, refine writing style, and improve clarity in scientific writing. All interpretations, analyses, and conclusions presented in this study are the sole responsibility of the author.

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