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Diagnosing Competitiveness Gaps in the Footwear Industry Cluster: A Capability-Based Approach

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Abstract: The competitiveness of traditional footwear industry clusters has declined due to increasing market competition, technological change, and limited organizational capabilities among small and medium enterprises (SMEs). Despite various development initiatives, the Cibaduyut Footwear Industry Cluster continues to face challenges in sustaining its competitiveness. This study aims to diagnose the competitiveness gaps affecting footwear SMEs using a capability-based approach. A qualitative embedded single-case study was conducted involving 20 purposively selected informants representing SMEs, government, industry associations, academia, and supporting institutions. Data were collected through interviews, focus group discussions, observations, and document analysis, and analyzed using thematic analysis with open coding, axial coding, and triangulation. The findings reveal high capability gaps in production, technology, management, and marketing, together with moderate-to-high gaps in innovation and stakeholder collaboration. These deficiencies lead to inconsistent product quality, weak market positioning, limited innovation, and low adaptability to market changes. The study concludes that competitiveness decline is a systemic capability problem rather than an isolated operational issue. It contributes to the competitiveness literature by proposing a capability-based diagnostic framework that integrates organizational capabilities and cluster ecosystem factors to support more effective competitiveness improvement strategies.

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INTRODUCTION

Industrial clusters have become an important strategy for enhancing the competitiveness of small and medium enterprises (SMEs) by facilitating collaboration, knowledge sharing, innovation, and access to markets and supporting institutions. In an increasingly dynamic business environment characterized by rapid technological advancement, digital transformation, and changing consumer preferences, SMEs are required to continuously strengthen their organizational capabilities to remain competitive. Recent studies indicate that competitiveness is no longer determined solely by production efficiency or product quality but also by the ability of firms to integrate technological capability, innovation, managerial competence, marketing capability, and

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stakeholder collaboration into a sustainable competitive system (Organisation for Economic Co-operation and Development [OECD], 2024; United Nations Industrial Development Organization [UNIDO], 2024)

The footwear industry represents one of Indonesia's strategic manufacturing sectors because of its contribution to employment, regional economic development, export performance, and creative industries. According to the Ministry of Industry of the Republic of Indonesia (2024), the footwear industry continues to contribute significantly to national manufacturing output; however, many footwear SMEs still encounter difficulties in adapting to digital transformation, technological modernization, and increasingly intense competition from imported products and large-scale manufacturers. These challenges are particularly evident in traditional industrial clusters that rely heavily on labor-intensive production and conventional business practices.

One of Indonesia's oldest footwear production centers is the Cibaduyut Footwear Industry Cluster in Bandung. For decades, this cluster has been recognized as an important center of local craftsmanship and entrepreneurship. Nevertheless, recent reports indicate that many SMEs within the cluster continue to experience declining competitiveness, reflected in inconsistent product quality, limited technological adoption, weak product innovation, restricted market expansion, and declining consumer preference (Ministry of Industry of the Republic of Indonesia, 2023). Although various government assistance programs have been implemented, their impact on improving long-term competitiveness remains limited.

Recent research has extensively investigated SME competitiveness from various perspectives. Several studies have demonstrated that digital transformation and technological capability significantly improve operational performance, business resilience, and market competitiveness (Kraus et al., 2022; OECD, 2024). Other researchers emphasize that innovation capability and product development play critical roles in creating sustainable competitive advantage and supporting SME growth in creative industries (Dhewanto et al., 2018; Kraus et al., 2023).

From a cluster perspective, previous studies also highlight that institutional support, collaborative governance, and knowledge exchange among stakeholders are essential for strengthening industrial competitiveness (Ketels and Memedovic, 2008; UNIDO, 2024). Furthermore, recent research increasingly recognizes that SME competitiveness should be viewed as a multidimensional phenomenon involving organizational capability, digital readiness, innovation, and ecosystem collaboration rather than isolated operational factors (Saputra et al., 2024; OECD, 2024).

Although these studies provide valuable insights, most of them investigate production capability, innovation, digital transformation, managerial practices, or institutional support as independent determinants of competitiveness. Consequently, the interaction among multiple organizational capabilities and ecosystem-related constraints remains insufficiently understood, particularly in traditional industrial clusters characterized by long-established production systems and heterogeneous stakeholder involvement.

The Cibaduyut Footwear Industry Cluster represents an interesting empirical context because its competitiveness challenges cannot be adequately explained by a single capability dimension. Existing studies generally focus on improving specific aspects such as technology adoption, innovation, digital marketing, or policy intervention, while limited attention has been given to understanding how deficiencies across multiple organizational capabilities simultaneously influence competitiveness decline. Furthermore, empirical evidence explaining how internal capability limitations interact with external ecosystem constraints to shape competitiveness within traditional industrial clusters remains scarce.

This limitation suggests the need for a more comprehensive diagnostic perspective capable of identifying interconnected capability gaps rather than evaluating each

capability independently. Such an approach is expected to provide a deeper understanding of the mechanisms underlying competitiveness decline and support more integrated development strategies for industrial clusters.

Unlike previous studies that examine production capability, innovation, technology adoption, managerial practices, or stakeholder support separately, this study proposes a capability-based diagnostic framework that integrates six interrelated organizational capability dimensions: production capability, technological capability, innovation capability, managerial capability, marketing capability, and stakeholder collaboration. Rather than merely identifying individual capability deficiencies, the proposed framework explains how interactions among internal organizational capabilities and external ecosystem conditions collectively influence competitiveness decline within a traditional footwear industry cluster.

Accordingly, this study contributes theoretically by extending the capability-based competitiveness literature through an integrated diagnostic perspective that links organizational capability and cluster ecosystem dynamics. Practically, the proposed framework offers policymakers and development agencies a systematic diagnostic tool for designing more targeted interventions to strengthen SME competitiveness.

Based on the identified research gap, this study aims to diagnose competitiveness gaps among footwear SMEs in the Cibaduyut Footwear Industry Cluster using a capability-based diagnostic framework. Specifically, the study seeks to identify critical organizational capability deficiencies, explain how these deficiencies interact with ecosystem-related constraints, and provide recommendations for improving the competitiveness of traditional industrial clusters through integrated capability development strategies.

LITERATURE REVIEW

The competitiveness of small and medium enterprises (SMEs) has increasingly been viewed as a multidimensional capability rather than merely an outcome of production efficiency or market performance. Recent studies emphasize that SMEs must continuously develop organizational capabilities to respond to technological change, digital transformation, and dynamic market conditions. Digital capability, innovation, and organizational adaptability have become essential drivers of sustainable competitiveness, particularly in traditional manufacturing industries undergoing industrial transformation (Kraus et al., 2022; OECD, 2024).

Recent empirical studies demonstrate that technological capability and digital transformation significantly improve SME competitiveness by enhancing operational efficiency, business model innovation, and customer value creation. For example, digital capability positively influences digital business model innovation, which subsequently strengthens SME competitiveness in dynamic markets (Kerti Yasa et al., 2024). Similarly, digital transformation within footwear industry clusters has been shown to improve innovation capability, market orientation, and international competitiveness, although the level of digital maturity varies considerably among firms (Casais & Caldas, 2025).

Innovation capability has also been recognized as a critical determinant of SME competitiveness. Recent evidence suggests that competitiveness depends not only on technological innovation but also on the integration of organizational learning, knowledge management, external collaboration, and market orientation. However, existing studies generally investigate these determinants independently, resulting in fragmented explanations of how innovation capability contributes to overall competitiveness (Gohr & Rodrigues, 2025).

In industrial cluster research, stakeholder collaboration is considered an important mechanism for facilitating knowledge exchange, technology transfer, and collective

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capability development. Collaborative ecosystems involving government, universities, industry associations, financial institutions, and SMEs can accelerate innovation and improve business resilience. Nevertheless, empirical findings indicate that collaboration alone does not guarantee competitiveness unless firms possess sufficient organizational capabilities to absorb and utilize external knowledge effectively (Casais & Caldas, 2025; Hafeez et al., 2025).

Although previous studies have provided valuable insights into technology adoption, digital transformation, innovation capability, stakeholder collaboration, and dynamic capabilities, most have examined these variables as separate determinants of SME competitiveness. Existing research rarely explains how multiple organizational capabilities interact simultaneously with ecosystem-related constraints to generate competitiveness gaps, particularly in traditional industrial clusters. Consequently, the mechanisms through which capability deficiencies collectively contribute to declining competitiveness remain insufficiently understood (Kerti Yasa et al., 2024).

To address this gap, the present study adopts a capability-based diagnostic framework that integrates six organizational capability dimensions: production capability, technological capability, innovation capability, managerial capability, marketing capability, and stakeholder collaboration. Unlike previous studies that focus on individual determinants, this framework explains how interactions among these capabilities and the surrounding cluster ecosystem jointly shape competitiveness. Therefore, this study contributes to the competitiveness literature by providing a more comprehensive diagnostic perspective for identifying capability deficiencies and supporting the design of integrated development strategies for footwear SMEs within traditional industrial clusters.

METHODS

This study employed a qualitative research approach using an embedded single-case study design to investigate the competitiveness gaps within the Cibaduyut Footwear Industry Cluster, Bandung, Indonesia. A qualitative case study was considered appropriate because the research aimed to obtain an in-depth understanding of the interactions between organizational capabilities and ecosystem-related factors within their real-life context. According to Yin (2018), case study research is suitable for investigating contemporary organizational phenomena where contextual conditions are inseparable from the phenomenon being examined. Likewise, Creswell and Poth (2018) argue that qualitative inquiry enables researchers to explore participants' experiences and perceptions in complex organizational settings.

The embedded single-case design was selected because the study examined multiple units of analysis within a single industrial cluster, including footwear SMEs and supporting stakeholders. This design enabled the researcher to capture different perspectives regarding competitiveness issues while maintaining the integrity of the cluster as the primary unit of analysis.

The research was conducted in the Cibaduyut Footwear Industry Cluster, Bandung City, Indonesia, one of the country's oldest footwear manufacturing clusters. Although the cluster has received continuous support through government development programs, it continues to experience declining competitiveness, making it an appropriate empirical setting for diagnosing capability gaps.

Participants were selected using purposive sampling, which is widely recommended in qualitative research to identify information-rich cases capable of providing in-depth understanding of the phenomenon under investigation. A total of 20

informants participated in this study, comprising: 12 footwear SME owners; 3 representatives of local government agencies; 2 representatives of industry associations; 1 academic specializing in industrial development; and 2 representatives from supporting institutions. These participants were selected because of their direct involvement in production activities, business management, policy implementation, and cluster development.

Data were collected between January and April 2025 using four complementary qualitative techniques to enhance the comprehensiveness of the findings. First, semi-structured interviews were conducted to explore participants' experiences regarding production capability, technology adoption, innovation practices, managerial capability, marketing activities, and stakeholder collaboration. Second, focus group discussions (FGDs) were organized to validate emerging themes and facilitate collective reflection among different stakeholder groups. Third, non-participant observations were conducted to examine actual production processes, machinery utilization, quality-control practices, workflow, and marketing activities within SMEs.

The qualitative data were analyzed using thematic analysis through an iterative coding process. Interview transcripts, field observations, focus group discussions, and supporting documents were first examined using open coding to identify meaningful statements. Similar codes were subsequently grouped through axial coding into broader analytical categories, which were synthesized into six organizational capability dimensions. These themes formed the basis for the capability gap assessment and the development of the proposed capability-based diagnostic framework. The overall analytical process is presented in Figure 1.

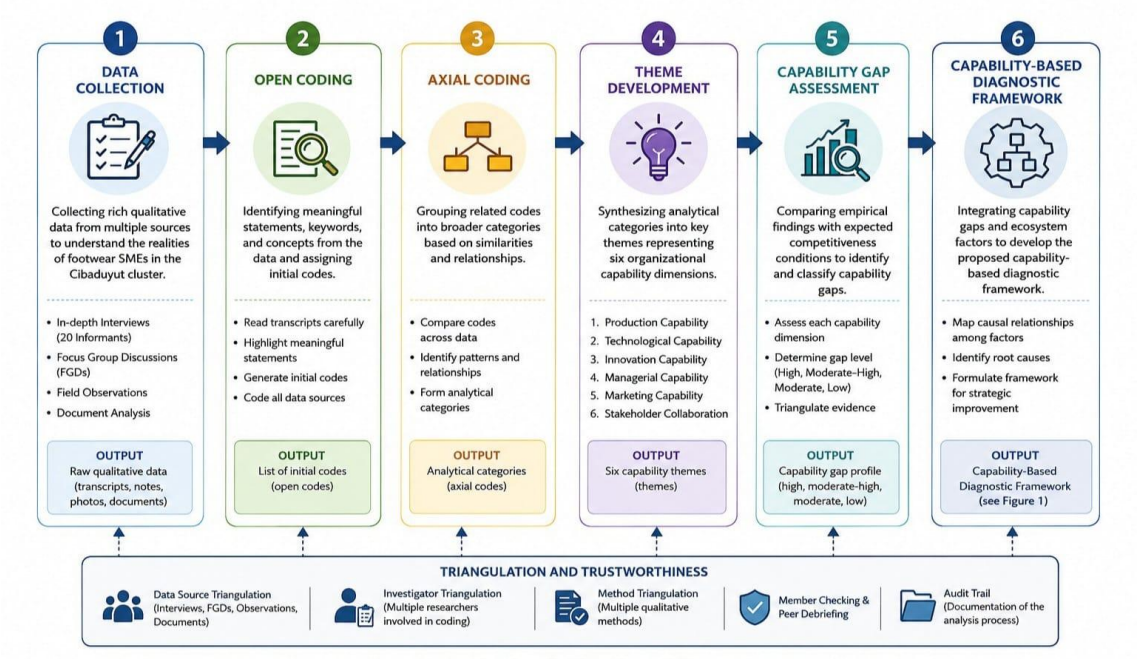

Figure 1. Thematic Analysis Process for Capability Gap Assessment
Source: Developed by the authors (2025)

As illustrated in Figure 1, the analytical process followed a systematic progression from raw qualitative evidence to higher-order analytical themes. The capability gap assessment was conducted by comparing empirical findings with the characteristics of competitive SMEs identified in the literature. This iterative process ensured that the proposed framework was grounded in empirical evidence while maintaining analytical

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rigor through triangulation of interviews, observations, focus group discussions, and documentary evidence. Finally, document analysis was performed using government reports, SME profiles, policy documents, industrial statistics, and previous research to provide contextual understanding and support data triangulation.

The collected data were analyzed using reflexive thematic analysis following Braun and Clarke (2021). The analytical process consisted of five iterative stages. The first stage involved data familiarization, in which interview transcripts, observation notes, and documentary evidence were reviewed repeatedly to obtain a comprehensive understanding of the data. The second stage involved open coding, where meaningful statements related to competitiveness constraints were identified and coded. The third stage involved axial coding, in which similar codes were grouped into broader analytical categories corresponding to six organizational capability dimensions: (a) Production capability; (b) Technological capability; (c) Innovation capability; (d) Managerial capability; (e) Marketing capability; (f) Stakeholder collaboration.

The fourth stage involved theme development, during which relationships among capability dimensions were identified to explain the mechanism of competitiveness decline. Finally, a capability gap assessment was conducted by comparing empirical findings with the characteristics of competitive SMEs identified in previous literature (OECD, 2024; UNIDO, 2024).

RESULTS AND DISCUSSION

Capability gaps were classified into three categories: (1) Low: Existing capability generally meets competitiveness requirements and requires only minor improvement; (2) Moderate: Capability is partially developed but still demonstrates operational weaknesses requiring structured improvement; (c) High: Significant capability deficiencies substantially reduce competitiveness and require strategic intervention. This classification was based on iterative interpretation of evidence obtained from interviews, observations, FGDs, and documentary analysis.

Table 1. Development of Themes from Qualitative Data Analysis

Initial Codes	Analytical Category	Capability Dimension
Manual production process	Production standardization	Production Capability
Inconsistent product quality	Quality control	Production Capability
Conventional machinery	Technology adoption	Technological Capability
Product imitation	Innovation practices	Innovation Capability
Informal business management	Strategic management	Managerial Capability
Limited digital marketing	Marketing capability	Marketing Capability
Weak institutional coordination	Stakeholder collaboration	Stakeholder Collaboration

Source: Developed by the authors (2025)

Table 1 illustrates the analytical process used to transform raw qualitative data into higher-order analytical categories. The initial codes generated from interviews, observations, focus group discussions, and document analysis were grouped through axial coding into broader analytical categories corresponding to six organizational capability dimensions. These dimensions subsequently formed the basis for the capability gap assessment presented in the Results section.

The classification of capability gaps was derived through triangulation of interview data, field observations, focus group discussions, and documentary evidence. A capability was categorized as high when consistent evidence indicated substantial

deficiencies that significantly constrained SME competitiveness. Moderate gaps reflected partially developed capabilities with observable operational weaknesses.

To ensure the rigor and credibility of the findings, this study adopted the trustworthiness criteria proposed by Lincoln and Guba (1985), including credibility, transferability, dependability, and confirmability. Credibility was established through methodological triangulation by comparing evidence obtained from interviews, FGDs, observations, and documentary analysis. Source triangulation was also performed by comparing perspectives from SME owners, government officials, industry associations, academics, and supporting institutions.

Transferability was enhanced by providing detailed descriptions of the research context, participant characteristics, and analytical procedures, enabling readers to assess the applicability of the findings in similar industrial settings. Dependability was ensured through iterative coding and repeated examination of analytical categories until conceptual consistency was achieved. Finally, confirmability was strengthened by maintaining an audit trail documenting coding decisions, category development, and interpretation throughout the analytical process (Braun & Clarke, 2021).

Table 2. Capability Gap Assessment Matrix

Capability Dimension	Interview Evidence	Observation	FGD	Documents	Gap Level
Production Capability	Strong evidence	✓	✓	✓	High
Technological Capability	Strong evidence	✓	✓	✓	High
Innovation Capability	Moderate evidence	✓	✓	✓	Moderate–High
Managerial Capability	Strong evidence	✓	✓	✓	High
Marketing Capability	Strong evidence	✓	✓	✓	High
Stakeholder Collaboration	Moderate evidence	✓	✓	✓	Moderate

Source: Developed by the authors (2025)

As summarized in Table 2, production capability, technological capability, managerial capability, and marketing capability exhibit the highest capability gaps, whereas innovation capability and stakeholder collaboration demonstrate moderate-to-high deficiencies. As shown in Table 2, the most critical competitiveness gaps are concentrated in production capability, technological capability, managerial capability, and marketing capability, all of which demonstrate high levels of deficiency. Meanwhile, innovation capability and stakeholder collaboration exhibit moderate-to-high gaps, indicating structural limitations in adaptive capacity and ecosystem coordination. These findings provide an analytical basis for diagnosing the mechanisms contributing to competitiveness decline within the Cibaduyut footwear cluster.

Rather than representing isolated organizational weaknesses, these findings indicate that the identified capability gaps interact systematically to shape SME competitiveness. For example, limited technological capability constrains production standardization and quality consistency, while weak managerial capability reduces firms' ability to plan technology investment, implement quality-control systems, and respond strategically to changing market conditions. At the same time, fragmented stakeholder collaboration restricts SMEs' access to technology, knowledge, financing, and market information, thereby limiting innovation capability and digital marketing readiness. Consequently, competitiveness decline should be understood as the cumulative effect of interconnected organizational capability deficiencies rather than independent operational problems.

This interpretation is consistent with recent studies demonstrating that SME competitiveness emerges from the interaction among organizational capability, digital

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capability, and ecosystem support rather than from single organizational resources (Kerti Yasa et al., 2024; OECD, 2024; Saputra et al., 2024). However, unlike previous studies that primarily examine technology adoption or innovation capability separately, the present study demonstrates that capability gaps reinforce one another through dynamic interactions, creating a cycle of declining operational performance and weakening market competitiveness. This finding supports the capability-based diagnostic framework proposed in this study, which explains competitiveness decline as a systemic phenomenon involving multiple organizational capabilities and cluster ecosystem conditions.

Therefore, the findings suggest that competitiveness improvement requires integrated interventions rather than isolated development programs. Policies focusing solely on technology upgrading or entrepreneurship training are unlikely to produce sustainable competitiveness unless accompanied by improvements in managerial capability, production standardization, digital marketing capability, and institutional collaboration. This integrated perspective provides practical guidance for policymakers and cluster managers in designing coordinated capability-development programs that address both internal organizational weaknesses and external ecosystem constraints.

Production and Technological Capability Gaps

The findings identify production capability and technological capability as the most critical competitiveness gaps among footwear SMEs in the Cibaduyut Footwear Industry Cluster. Most SMEs continue to rely on manual production processes and conventional machinery, resulting in inconsistent product quality, limited production efficiency, and difficulty maintaining standardized production. One SME owner explained:

"Most of the production process is still based on practices passed down through generations. There are no formal, written work standards; workers learn from their seniors and from long-established habits." (SME Owner)

This statement indicates that production activities remain highly dependent on individual experience rather than standardized operating procedures. While traditional craftsmanship preserves product authenticity, the absence of formal production standards limits organizational learning, quality consistency, and operational efficiency.

Technological limitations further reinforce these production constraints. Most SMEs have delayed machinery modernization because of limited financial resources, inadequate technical expertise, and uncertainty regarding investment returns. As one industry representative stated:

"The most frequent issues arise during the sewing and assembly stages. This is due to variations in workforce skills, a lack of modern machinery, and the quality characteristics of the raw materials." (Industry Representative)

The findings suggest that technological capability is closely linked to workforce competence and managerial capability rather than merely the availability of machinery. Limited technology adoption reduces production precision, while weak managerial planning constrains long-term investment decisions, creating a cycle of low productivity and inconsistent product quality.

These findings are consistent with recent studies indicating that technological capability and digital orientation improve SME competitiveness only when supported by managerial capability, workforce competence, and organizational learning (Lestari et al., 2024; Saputra et al., 2024; Wimpertiwi et al., 2024). Theoretically, this study extends the capability-based competitiveness perspective by demonstrating that production capability cannot be enhanced through technology investment alone but requires the integration of production, technological, managerial, and human resource capabilities. Managerially, improving competitiveness requires integrated interventions, including production standardization, quality-control systems, workforce development, appropriate technology upgrading, and long-term managerial planning.

Innovation Capability Gaps

Innovation capability emerged as another significant competitiveness gap among footwear SMEs in the Cibaduyut Footwear Industry Cluster. The findings indicate that product innovation is generally incremental and market-reactive rather than strategic and knowledge-driven. Most SMEs tend to replicate popular footwear designs or make minor product modifications in response to customer requests instead of developing original products through systematic market research, product testing, or design innovation. Consequently, product differentiation remains limited, forcing SMEs to compete primarily on price rather than on innovation and customer value.

This condition is closely associated with limited financial resources, inadequate design capability, weak market intelligence, and the absence of formal research and development (R&D) activities. Furthermore, most SMEs lack structured mechanisms for collecting customer feedback, evaluating product performance, and transforming market information into new product ideas. As a result, organizational learning processes remain weak, limiting firms' ability to generate continuous innovation and respond proactively to changing consumer preferences.

The interview findings reinforce this interpretation. One retailer explained:

"We know from in-store customers and from which items sell quickly—or eventually—what works. If an older model isn't selling well, we ask the artisans for a design similar to current trends." (Retailer)

This statement indicates that innovation decisions are primarily driven by short-term market responses rather than by systematic product development strategies. Instead of creating distinctive product designs, SMEs generally imitate products that are already successful in the market. Such reactive innovation reflects limited design capability, insufficient organizational learning, and weak collaboration with external knowledge providers, thereby constraining the development of sustainable competitive advantage.

The findings further reveal that innovation capability is closely linked to managerial capability and stakeholder collaboration. Weak managerial capability limits strategic planning for product development and investment in design activities, while fragmented collaboration with universities, designers, and supporting institutions restricts SMEs' access to new knowledge, technological expertise, and market insights. Consequently, limited innovation capability should not be interpreted as an isolated organizational weakness but rather as the outcome of interconnected capability deficiencies within the cluster ecosystem.

These findings are consistent with recent studies demonstrating that innovation capability is strengthened through the integration of organizational learning, digital capability, market orientation, and collaborative networks rather than through technological resources alone (Gohr & Rodrigues, 2025; Kerti Yasa et al., 2024). Similarly, Casais and Caldas (2025) found that SMEs participating in collaborative innovation ecosystems are more likely to develop differentiated products and strengthen their market competitiveness through knowledge sharing and digital transformation. However, unlike previous studies that primarily examine innovation capability as an independent determinant of competitiveness, the present study demonstrates that innovation capability interacts dynamically with managerial capability and stakeholder collaboration, creating either reinforcing or constraining effects on overall competitiveness.

From a theoretical perspective, these findings extend the capability-based competitiveness literature by showing that innovation capability should be understood as an emergent organizational capability resulting from the interaction among managerial capability, organizational learning, market orientation, and collaborative ecosystems. This perspective supports the proposed capability-based diagnostic framework, which

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conceptualizes competitiveness decline as a systemic consequence of multiple interconnected capability gaps rather than isolated organizational deficiencies.

From a managerial perspective, strengthening innovation capability requires integrated interventions that go beyond product design training. Cluster development programs should facilitate continuous collaboration between SMEs, universities, designers, government agencies, and industry associations to improve product design capability, establish customer feedback systems, strengthen market intelligence, and encourage knowledge-sharing mechanisms. Such integrated initiatives are expected to transform SMEs from imitation-based producers into innovation-oriented enterprises capable of creating differentiated products and sustaining long-term competitiveness.

Managerial and Marketing Capability Gaps

Managerial capability emerged as one of the most critical competitiveness gaps among footwear SMEs in the Cibaduyut Footwear Industry Cluster. Most SMEs continue to rely on informal, owner-centered management practices in which business decisions are based on personal experience rather than systematic production planning, financial management, inventory control, performance measurement, or long-term strategic planning. As a result, financial records, production targets, and quality indicators are inconsistently maintained, limiting firms' ability to evaluate performance and make strategic decisions.

The interview findings confirm that managerial practices remain largely reactive. One SME owner stated:

"It is not always successful. Remedial solutions fail if the raw materials are already damaged or production time is extremely tight. In cases of urgent orders, it is sometimes impossible to achieve optimal quality." (SME Owner)

This statement indicates that managerial decisions focus primarily on resolving immediate operational problems rather than preventing them through systematic planning and risk management. Consequently, weak managerial capability constrains technology investment, quality management, and innovation activities, while simultaneously reducing organizational adaptability. These findings suggest that managerial capability functions as a foundational capability influencing the effectiveness of production, technological, innovation, and marketing capabilities.

The findings are consistent with recent studies showing that managerial capability strengthens SME competitiveness by improving strategic decision-making, organizational learning, and resource reconfiguration (Fernandes et al., 2025; Supramono et al., 2025; Wimpertiwi et al., 2024). However, unlike previous studies that examine managerial capability independently, this study demonstrates that managerial capability acts as an enabling capability that reinforces the performance of multiple organizational capabilities within the proposed capability-based diagnostic framework.

Marketing capability also remains limited. Most SMEs continue to depend on conventional marketing channels, including local distributors, repeat customers, and direct store visits, despite the rapid growth of digital commerce. Limited competencies in digital branding, social media marketing, customer engagement, and e-commerce management restrict market expansion and weaken competitiveness against modern footwear brands with stronger digital capabilities.

The findings further indicate that weak marketing capability is closely linked to inadequate managerial capability. Limited strategic planning, organizational learning, and financial management reduce SMEs' readiness to implement digital marketing effectively. Consequently, digital marketing activities remain sporadic and are rarely supported by customer analytics or market evaluation. These findings support recent evidence that digital capability and digital marketing orientation enhance SME competitiveness by expanding market access and strengthening customer engagement (Kerti Yasa et al., 2024; OECD, 2024). Nevertheless, this study extends previous

research by demonstrating that digital marketing capability cannot be effectively developed without strengthening managerial capability.

Theoretically, the findings suggest that managerial capability serves as the coordinating capability that integrates production, technology, innovation, and marketing capabilities within the capability-based diagnostic framework. Managerially, improving SME competitiveness requires integrated interventions through managerial training, financial management improvement, digital marketing development, continuous mentoring, and organizational learning to strengthen long-term competitiveness within traditional industrial clusters.

Stakeholder Collaboration Constraints

The findings indicate that competitiveness challenges within the Cibaduyut Footwear Industry Cluster are influenced not only by internal capability deficiencies but also by weaknesses in the cluster ecosystem. Although government agencies, industry associations, universities, financial institutions, and supporting organizations have implemented various development programs, collaboration among these stakeholders remains fragmented, project-based, and insufficiently coordinated. Consequently, capability development initiatives tend to operate independently, reducing their long-term effectiveness in strengthening SME competitiveness.

One government representative explained:

"*Coordination challenges persist, particularly regarding disparities in business readiness, limited participation in the program, and weak cross-sector coordination.*" (Government Representative)

This quotation indicates that fragmented collaboration is driven not only by institutional limitations but also by differences in organizational readiness among SMEs and the absence of a coordinated governance mechanism. As a result, training, technical assistance, and business development programs are often implemented as isolated activities without sustained mentoring, integrated monitoring, or cross-institutional coordination. Consequently, newly acquired knowledge and capabilities are rarely translated into continuous organizational improvement, limiting the long-term impact of cluster development initiatives.

The findings further suggest that stakeholder collaboration should be understood as an enabling ecosystem capability that strengthens organizational capabilities rather than as an independent development activity. Weak coordination restricts SMEs' access to technology, financing, market information, and innovation networks, thereby constraining production improvement, innovation, and digital transformation.

These findings are consistent with recent studies emphasizing that collaborative ecosystems improve SME competitiveness by facilitating knowledge sharing, innovation, technology transfer, and resource mobilization (Casais & Caldas, 2025; Hafeez et al., 2025; UNIDO, 2024). However, unlike previous studies that primarily regard collaboration as a direct determinant of competitiveness, this study demonstrates that the effectiveness of stakeholder collaboration depends on SMEs' internal capability to absorb and utilize external support. Accordingly, strengthening competitiveness requires collaborative governance characterized by regular stakeholder coordination, continuous mentoring, integrated performance monitoring, and long-term partnership programs.

Mechanism of Competitiveness Decline

The results indicate that competitiveness decline in the Cibaduyut footwear cluster is caused by interconnected capability gaps rather than isolated weaknesses. Production and technological limitations contribute to inconsistent product quality and low efficiency. Weak innovation capability limits product differentiation and reduces the ability of SMEs to respond to changing consumer preferences. Informal managerial practices reduce

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planning quality and operational control, while weak marketing capability limits market reach and customer engagement.

At the ecosystem level, fragmented stakeholder collaboration reduces the effectiveness of support programs and limits access to technology, finance, knowledge, and market networks. These conditions collectively create a mechanism of competitiveness decline in which weak internal capability and limited ecosystem support reinforce each other. As a result, SMEs experience low adaptability, weak market positioning, inconsistent product quality, and reduced competitiveness against imported products and modern domestic brands.

This finding extends previous studies that often examine technology adoption, innovation, or policy support as separate determinants of competitiveness. The present study demonstrates that competitiveness in traditional industrial clusters should be understood as a capability system involving production, technology, innovation, management, marketing, and stakeholder collaboration. This perspective is consistent with the resource-based view, dynamic capability theory, and cluster competitiveness literature, which emphasize the interaction between internal capabilities and external ecosystem conditions in shaping firm performance.

Based on the capability-based diagnostic findings, the decline in competitiveness within the Cibaduyut Footwear Industry Cluster can be interpreted as a systemic and interconnected process involving multiple capability deficiencies and ecosystem-related constraints. Rather than emerging from isolated operational weaknesses, competitiveness decline is shaped by the interaction between internal capability gaps, weak operational performance, limited market positioning, and insufficient ecosystem support.

Figure 2 presents the capability-based diagnostic framework developed from the empirical findings of this study, illustrating the mechanism through which competitiveness decline occurs within the cluster.

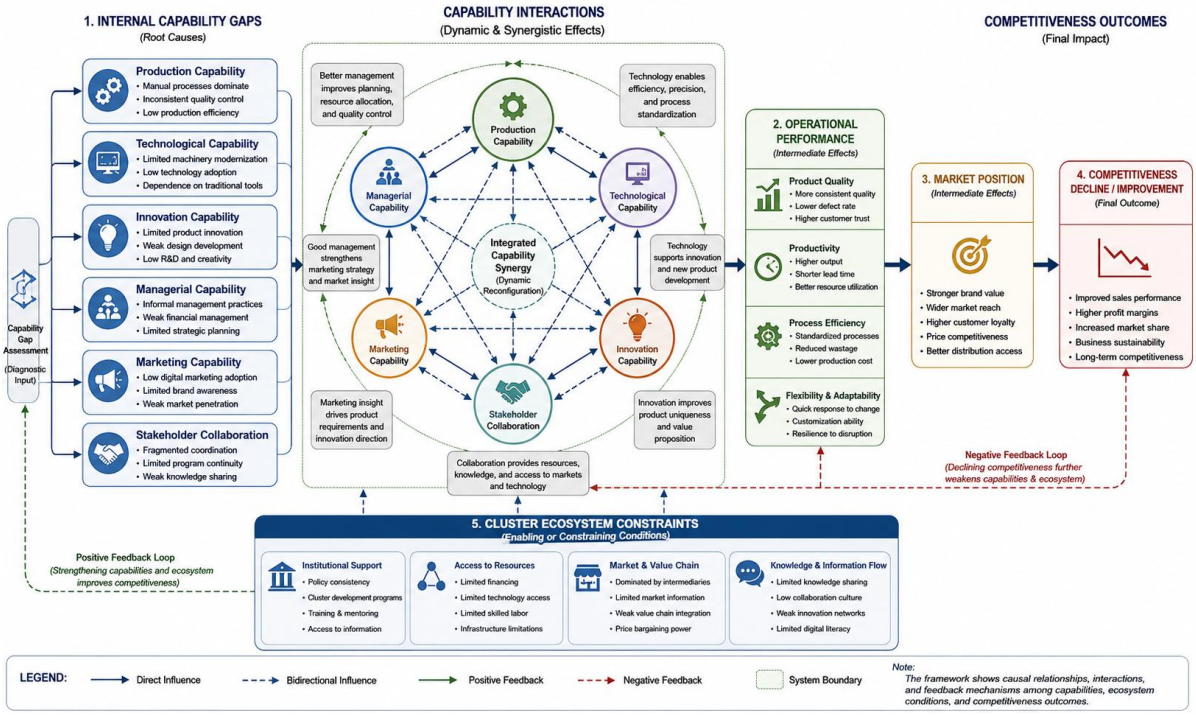

Figure 2. Capability-Based Diagnostic Framework of Competitiveness Decline in the Cibaduyut Footwear Industry Cluster
Source: Developed by the authors (2025)

Figure 2 illustrates the proposed capability-based diagnostic framework developed from the empirical findings of this study. Unlike previous studies that primarily examine production capability, technology adoption, innovation, or stakeholder support as independent determinants of SME competitiveness, the proposed framework demonstrates that competitiveness decline results from dynamic interactions among multiple organizational capabilities and ecosystem conditions rather than from isolated capability deficiencies.

The framework identifies six internal organizational capability dimensions—production capability, technological capability, innovation capability, managerial capability, marketing capability, and stakeholder collaboration—as the primary sources of competitiveness gaps. These capability deficiencies are not independent but interact dynamically and reinforce one another. For example, limited technological capability reduces production efficiency and product consistency, while weak managerial capability constrains technology investment planning, quality management, and organizational learning. Similarly, insufficient stakeholder collaboration limits SMEs' access to knowledge, financial resources, technology, and market information, further restricting innovation and business development.

The interaction among these capabilities subsequently influences operational performance, reflected in inconsistent product quality, low production productivity, inefficient production processes, and limited organizational adaptability. Poor operational performance weakens the market position of SMEs by reducing product differentiation, brand competitiveness, market reach, and customer value creation. Ultimately, these interconnected capability gaps contribute to declining competitiveness, characterized by reduced sales performance, shrinking market share, declining profitability, and weakened business sustainability.

Unlike conventional linear competitiveness models, the proposed framework also incorporates feedback mechanisms that explain the dynamic nature of competitiveness decline. The negative feedback loop illustrates that declining competitiveness further weakens firms' financial capacity, technology investment, organizational learning, and collaboration, thereby reinforcing existing capability deficiencies. Conversely, the positive feedback loop suggests that strengthening organizational capabilities through technology upgrading, managerial improvement, digital marketing, innovation, and collaborative governance enhances operational performance and market competitiveness, creating a virtuous cycle of continuous capability development.

Another important contribution of the framework is the inclusion of cluster ecosystem constraints as enabling and constraining conditions. Institutional support, access to resources, market and value chain integration, and knowledge-sharing mechanisms influence the effectiveness of organizational capability development. The findings indicate that ecosystem support alone is insufficient to improve competitiveness unless SMEs possess adequate internal capabilities to absorb and utilize external resources effectively. This result supports recent studies emphasizing that sustainable SME competitiveness emerges from the interaction between organizational capabilities and ecosystem conditions rather than from individual organizational resources alone (Casais & Caldas, 2025; Kerti Yasa et al., 2024; Saputra et al., 2024).

Therefore, the proposed capability-based diagnostic framework extends previous competitiveness studies by demonstrating that capability gaps should be understood as an integrated system rather than as independent organizational weaknesses. This perspective provides both theoretical and practical contributions by offering a comprehensive diagnostic tool that can assist policymakers, industry associations, and SME managers in designing integrated capability-development strategies for strengthening the long-term competitiveness of traditional industrial clusters.

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CONCLUSION

Theoretically, this study contributes by developing a Capability-Based Diagnostic Framework that conceptualizes competitiveness decline as a systemic interaction among organizational capabilities and cluster ecosystem constraints rather than isolated capability deficiencies. These capability deficiencies collectively reduce operational performance, weaken market positioning, and ultimately diminish long-term competitiveness. This study contributes to the competitiveness literature by proposing a capability-based diagnostic framework that explains competitiveness decline as a dynamic interaction among multiple organizational capabilities and cluster ecosystem conditions, thereby extending previous studies that primarily examined these dimensions independently. Managerially, the findings suggest that SME competitiveness cannot be strengthened through fragmented interventions; instead, integrated capability development involving production standardization, technology upgrading, managerial improvement, innovation enhancement, digital marketing capability, and continuous stakeholder collaboration is required. From a policy perspective, the proposed framework provides practical guidance for government agencies, industry associations, universities, financial institutions, and other supporting organizations in designing coordinated cluster-development programs that strengthen both internal organizational capabilities and external ecosystem support. Future research is encouraged to validate the proposed framework quantitatively across different industrial clusters, examine causal relationships among capability dimensions using structural modeling approaches, and evaluate the long-term effectiveness of integrated capability-development interventions in improving SME competitiveness.

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