



Pentahelix approach in collaborative governance of social services and MSMEs in economic zone: A literature review from perspective of administrative law

Firzhal Arzhi Jiwantara^{1,*}, Bayu Karunia Putra¹

¹ Department of Law, Universitas Muhammadiyah Mataram, Mataram, West Nusa Tenggara 83115, Indonesia.

*Correspondence: firzhal.arzhi@ummat.ac.id

Received Date: November 16, 2025

Revised Date: February 23, 2026

Accepted Date: February 28, 2026

ABSTRACT

Background: The development of the Gresik Regency Special Economic Zone (SEZ) in East Java has highlighted the need for integrated and collaborative governance in managing social services and supporting micro, small, and medium enterprises (MSMEs). Traditional top-down approaches in public administration have often limited stakeholder participation, while complex socio-economic challenges demand a multi-stakeholder strategy. The Pentahelix approach, which engages government, academia, industry, community, and media, offers a framework to enhance collaborative governance within the context of Indonesian administrative law. **Methods:** This study employs a systematic literature review of national and international journals, policy documents, and legal literature relevant to collaborative governance, MSME development, social services, and the Pentahelix model. A qualitative-descriptive approach is applied to identify patterns, opportunities, and constraints in implementing Pentahelix-based governance in SEZ contexts. **Findings:** The literature indicates that the Pentahelix approach facilitates multi-stakeholder coordination, transparency, and accountability in social service delivery and MSME support. In the Gresik Regency SEZ, collaboration among government agencies, local communities, academic institutions, private sectors, and media has shown potential in fostering inclusive economic development. However, challenges persist, including regulatory gaps, limited legal frameworks for stakeholder integration, and disparities in institutional capacities. **Conclusion:** The Pentahelix approach can strengthen collaborative governance in SEZs, aligning with principles of administrative law by promoting participatory decision-making, efficiency, and accountability. Effective implementation requires legal and institutional reforms to ensure sustainable coordination among diverse stakeholders. **Novelty/Originality of this article:** This article contributes conceptually by integrating the Pentahelix model with administrative law perspectives, offering a novel framework for understanding collaborative governance in Indonesian SEZs. It provides an interdisciplinary approach that combines legal, social, and economic considerations, which has been rarely explored in the literature on SEZ management and MSME development.

KEYWORDS: administrative law; collaborative governance; Gresik Regency SEZ; MSMEs; pentahelix.

1. Introduction

The Gresik Special Economic Zone, known as the Java Integrated Industrial and Port Estate (JIPE), was officially designated as a special economic zone through Government Regulation Number 71 of 2021. JIPE is designed as an integrated industrial, port, and residential area with a total area of approximately 2,167 hectares. This area is designated

Cite This Article:

Jiwantara, F. A., & Putra, B. K. (2026). Pentahelix approach in collaborative governance of social services and MSMEs in economic zone: A literature review from perspective of administrative law. *Green Governance: Exploring Politics, Social Justice, and the Environment*, 3(1), 78–97. <https://doi.org/10.61511/gg.v3i1.2026.2549>

Copyright: © 2026 by the authors. This article published under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).



for industrial clusters (metal, electronics, chemicals, energy, logistics), a deep-sea port, and other supporting areas. Due to its integrated infrastructure (port, toll road access, logistics routes, and industrial areas), the Gresik Special Economic Zone (SEZ) has a comparative advantage in attracting investment, industrial activity, and the distribution of export/import goods. With this structural capital and strategic location, the Gresik Special Economic Zone serves as a crucial foundation for the region's economic transformation from a traditional agrarian/coastal economy to a modern industrial, manufacturing, and service economy. However, this potential must be balanced with inclusive policies and governance to ensure its benefits are widely felt (Apriliani et al., 2024).

As of August 2025, investment in the Gresik SEZ reached IDR 11.27 trillion, employing 1,721 people in the first semester. Total investment realization for 2025 has reached approximately 46% of the annual target, demonstrating that the Gresik SEZ is operating effectively and attracting many new investors. Industries within the SEZ area through manufacturing, logistics, and port activities contribute to the local economic structure: the industrial sector plays a significant role in the economic growth of Gresik Regency. Therefore, the Gresik SEZ plays a significant role in providing employment opportunities, driving local economic growth, and acting as an investment magnet. This is crucial in the context of regional economic development and economic diversification away from traditional sectors (BPS Gresik Regency, 2024).

The Gresik SEZ impacts more than just large industries through collaborations with large businesses (e.g., the smelter industry within the JIPE), efforts are being made to support the development of local micro, small, and medium enterprises (MSMEs) as part of the supply chain, as service providers/support services, or as vendors. One initiative is a partnership between a Limited Liability Company/*Perseroan Terbatas* (PT) Freeport Indonesia (which operates in the Special Economic Zone) and the government and local communities in Gresik, supporting MSME empowerment programs through training, market access, digitalization, and local vendor inclusion. Outside the SEZ, local initiatives such as MSME empowerment programs run by community/religious organizations such as Muhammadiyah Zakat, Infak, and Alms Collection Institution/*Lembaga Amil Zakat, Infak, dan Sedekah Muhammadiyah* (LAZISMU) Gresik demonstrate that MSMEs in Gresik continue to be the backbone of the local economy, especially for small communities. However, social impact reports from the SEZ indicate that benefits to local communities especially in the ring-1 villages surrounding the area are not always evenly distributed. There are findings of decreased traditional incomes (e.g., for fishermen or fish farmers), suboptimal access to basic services (healthcare, education), and job insecurity after the construction phase. This suggests that while Special Economic Zones have the potential to boost the economy, there is a risk that local communities especially those not absorbed into the industrial chain could face economic marginalization or social uncertainty (Beatrice & Hertati, 2023).

Given the complexity of actors and interests: government (local and central), industry players, MSMEs, local communities, academics, and the media, governance that involves all stakeholders is needed not just a top-down approach from companies or the state. A pentahelix approach (government, business, academics, community, media) is relevant. Collaboration between industrial companies in SEZs, district governments, local communities (communities, MSMEs, fishermen/fish farmers), and academics can ensure fairer and more sustainable planning, implementation, and impact mitigation. Examples include local community involvement in the supply chain, training, MSME empowerment, and open dialogue on socio-environmental compensation. The media and academics have a role as public watchdogs, information disseminators, and policy critics helping to maintain transparency, accountability, and community support. Without collaborative governance, there is a risk that SEZs will develop as industrial enclaves generating economic growth and investment, but without tangible benefits to the wider local community and without mitigating social/environmental impacts (Rahmawan et al., 2025).

Evaluative studies on the impacts of the Gresik SEZ show mixed results: while there has been increased investment and job opportunities, many local communities particularly fish farmers, fishermen, and those in traditional economies have experienced decreased income

or lost livelihoods due to changes in the economic and environmental landscape caused by industrialization and regional development. Social services (health, education, basic facilities) in the ring 1 area surrounding the SEZ have not shown significant improvements in many cases, so industrial growth has not automatically translated into an improved quality of life for all residents. Furthermore, dependence on large industries and global supply chains can make the local economy vulnerable to global fluctuations, corporate policies, and market dynamics which can threaten the long-term sustainability of MSMEs and local communities. Therefore, the sustainability of SEZs as a development tool requires ongoing evaluation, responsiveness to socio-environmental impacts, and inclusive strategies to ensure that benefits are shared equitably and risks are minimized (Nugroho et al., 2025).

Table 1. Gresik SEZ/MSMEs and relevant local economy

No	Indicators/Year	Value/Statistics	Implications/Explanation
1.	Investment and employment in the Gresik special economic zone (2025, through August)	Inward investment: idr 11.27 trillion; employment absorbed: 1,721 people (74.5% of the target of 2,310 people)	This indicates that the Gresik SEZ is actively attracting investment and absorbing labor: a sign of real economic contribution and opportunities for both local residents and migrants. However, the absorption rate has not yet reached 100% of the target, indicating room for improvement in local labor absorption.
2.	Profile of MSMEs in Gresik Regency (2023)	Official data from the Gresik Regency Central Statistics Agency (<i>Badan Pusat Statistik</i> , BPS) publication shows the dynamics and presence of MSMEs in the Gresik region in 2023 (BPS Gresik Regency, 2024)	The existence of MSMEs outside of large industrial activities is important as a buffer for the local economy, especially for small communities. This demonstrates that MSMEs remain relevant and need to be supported, especially within the context of a large SEZ.

Investment and employment data show that the Gresik SEZ makes a significant economic contribution, but is not yet fully optimized in terms of labor absorption; thus, policies are needed to maximize local absorption. MSME data confirms that beyond large industries, the micro and small sectors still exist and play a vital role in the local economy and must be taken into account in SEZ development strategies to ensure a more inclusive distribution of benefits. Analysis: Opportunities & risks of the Gresik Special Economic Zone: why a pentahelix approach is needed. Based on the narrative and data above, several key points emerge: The Gresik SEZ has enormous potential as an economic driver: Large investments, industry, ports, and logistics, all of which can boost regional gross regional domestic product (GRDP), labor absorption, and economic modernization. However, this potential does not automatically guarantee the well-being of local communities, especially traditional communities or small MSMEs without inclusive mechanisms, many residents could be left behind, lose their livelihoods, or otherwise fail to receive tangible benefits. The risks of socioeconomic inequality, environmental degradation, and community marginalization become real if only large industries are favored. Therefore, collaborative governance is needed: the government, business sector, local communities, academia, and the media must work together to ensure that the benefits of Special Economic Zones (SEZs) are widely distributed through MSME empowerment, training, market access, environmental sustainability, and transparency and accountability. The pentahelix approach enables harmony between economic growth, social justice, and environmental sustainability making SEZs not merely industrial projects, but part of inclusive and sustainable development (Deka & Anastuti, 2023).

The Gresik Special Economic Zone has proven itself as a hub for investment, industry, and economic opportunity with trillions of rupiah in investment realized and hundreds of workers absorbed. However, the impact on local communities and MSMEs remains disparate some benefit, but many have not experienced significant improvements in welfare or social access. Without inclusive and collaborative governance, there is a risk that SEZs will reinforce inequality, marginalize traditional communities/MSMEs, and impact the environment making development unsustainable. Therefore, it is crucial to adopt a pentahelix approach: ensuring all stakeholders are involved in the planning, implementation, and evaluation of SEZ development. Fostering and empowering local MSMEs: Utilize industrial corporate social responsibility (CSR) programs in Special Economic Zones (SEZs) to support MSMEs through training, market access, digitalization, and supply chain partnerships (with local vendors). Actively involve local communities and Ring 1 communities in planning, decision-making, and evaluating socio-environmental impacts before, during, and after development. Collaborate with government, businesses, and academia to design inclusive policies: local labor regulations, minimal use of local labor, skills training programs, and environmental and social impact monitoring. Transparency and accountability and the role of the media and academia involve the media for publicizing impacts, academia for independent evaluation, and the community for feedback; preventing industrial enclaves without social responsibility. Economic diversification and an inclusive economy not relying solely on large industries, but also supporting the micro and small sectors (MSMEs, local businesses, and the creative economy), so that the local economy remains resilient and less vulnerable to global dynamics (Ebidor & Ikhida, 2022).

2. Methods

2.1 Type of research: Literature review

A literature review is a research method in which researchers collect, examine, and synthesize previously published literature such as journal articles, books, reports, or academic documents related to a specific topic. This method allows researchers to comprehensively understand the current state of knowledge in a field of study: theories, empirical findings, debates, and research trends. A literature review is more than just a list of references it is a process of critical analysis: comparing, evaluating, and synthesizing the literature to develop a deeper understanding. Through a literature review, researchers can identify research gaps: aspects that have not been widely discussed or are still controversial, thus opening up new research opportunities. A literature review also helps build a theoretical and conceptual framework for the research to be conducted as a foundation for theories and hypotheses (Galluci, 2025).

By analyzing the literature systematically, research becomes more credible because it is based on a broad and in-depth literature review, not just assumptions. The literature review process involves several stages: determining the topic and scope, searching for relevant literature, selecting inclusion and exclusion, critical reading, and synthesizing and writing the literature review. When writing, a literature review must be structured systematically and coherently usually with a structure starting with an introduction, discussion of the main themes, and conclusions/gap identification. Besides serving as a theoretical foundation, a literature review also serves as a critical reflection on the quality of the methodology, assumptions, and findings of previous research. This method is particularly useful when researchers are unable or unwilling to collect primary data for example, due to limited time, cost, or access and when the topic requires extensive theoretical study.

The results of a literature review are often used as the initial chapter (theoretical foundation) in a thesis, dissertation, or scientific article as a basis for argumentation and justification for the research. A good literature review not only summarizes the findings but also shows how the literature relates to each other, where there are consistencies, where there are discrepancies, and how concepts have developed. Research using a literature

review encourages researchers to think critically evaluating the strengths and limitations of previous research, as well as considering the context and relevance to the present. Thus, a literature review plays a crucial role in mapping the academic landscape of a topic: key theories, frequently used methods, consistent and contradictory results, and research gaps. In short, literature review research is a systematic, reflective, and strategic scientific method enabling researchers to build in-depth understanding and a strong theoretical foundation as a basis for further research.

2.2 Data sources: Scientific journals, public administration books, SEZ policy documents, research on the pentahelix and MSMEs

This literature review allows researchers to analyze and synthesize findings from various sources: scientific journals, public administration books, policy documents, and research reports related to MSMEs and economic policy. By reviewing the complete literature, researchers can map how the pentahelix model is used as a collaborative framework between government, academics, business actors, the community, and the media in MSME development efforts. Recent literature shows that multi-actor collaboration through the pentahelix effectively increases the capacity of MSMEs in aspects of digitalization, legality, and business competitiveness. Furthermore, the literature review allows for analysis of public policies for example, SEZ policies and their implications for MSMEs within the region. A review of various documents and articles reveals that SEZs are often promoted as a means of attracting investment and promoting development, but their impact on local MSMEs requires regular collaboration and attention to small business protection (Hidayat, 2025).

By combining policy literature and empirical studies, researchers can evaluate whether the regulatory and governance structures within SEZs provide space for MSME involvement or whether they discriminate against small businesses. The literature review also allows for the identification of research gaps, for example, the lack of research on how the pentahelix model is applied in SEZs to support creative MSMEs. Beyond economic and regulatory aspects, public administration literature helps understand how public policy and governance can support (or hinder) MSME development within a collaborative framework. For example, an article on MSME digitalization suggests that local government support and joint academic publications can increase digital adoption among MSMEs. Through the literature review, it is also important to examine power dynamics, profit distribution, and social justice: whether collaboration and policies are truly pro-MSME, not just pro-large investors.

Critical literature on SEZ policies reminds us that area-based development needs to consider the welfare of local communities and microeconomic sustainability, rather than solely focusing on foreign investment. Thus, the research review allows for the formulation of more inclusive policy recommendations: for example, SEZ designs that involve local MSMEs and creative industries through the pentahelix mechanism. The literature review also helps build a conceptual framework that integrates public governance, the creative economy, regional policy, and community engagement, which can serve as the basis for subsequent empirical research. The results of the literature review can be used as the basis for theoretical arguments and policy development, particularly to support MSMEs so they are not marginalized in the industrialization or regional development process. In short, the literature review of journals, books, and policy documents allows for a holistic understanding of the opportunities and challenges for MSMEs in the context of SEZ policies and pentahelix collaboration while also opening new discourse for equitable research and policy formulation.

2.3 Analysis: A thematic review of the role of each element of pentahelix and legal/administrative framework that governs them

The pentahelix model assumes that development or empowerment for example, of MSMEs, the creative economy, or tourism is more effective when five actors are involved: government, academia, business, communities/societies, and the media. The government's role in this model is as a regulator and facilitator: providing policies, regulations, permits, and administrative support to ensure the formal conditions for MSMEs or collaborative projects are met. Academia serves as a conceptual and knowledge facilitator assisting with research, program design, training, product validation, and technology/knowledge transfer to businesses or communities. The business sector (entrepreneurs, investors, and the private sector) provides capital, market networks, supply chain access, and production capabilities to realize ideas or innovations in the form of goods/services. Local communities (community-based actors) are crucial as a social substrate: they provide local wisdom, human resources, culture, social networks, and social legitimacy for economic activities or development projects (Ibrahim, 2023).

Media elements including mass media and social media play a role in publication, promotion, information dissemination, product/service branding, and increasing the visibility of businesses or programs; they help build public awareness and social support. When these five elements are active and synergize effectively for example, in MSME empowerment projects or tourism villages the results tend to be more sustainable, inclusive, and adaptive to socioeconomic changes. However, in practice, literature shows that pentahelix collaboration is often hampered by weak coordination, misaligned visions, or the lack of support from some actors especially when regular or administrative roles are weak. This is where the legal framework and public administration are crucial: regulations, permits, bureaucratic procedures, and local/national policies serve as the formal foundation for uniting the pentahelix elements. Public administration regulations provide legal certainty and control mechanisms for collaborative activities, for example, in business permits, product legality, consumer protection, and stakeholder rights and obligations.

Without a clear legal framework, pentahelix-based collaborative ventures are vulnerable to conflict: for example, unfair competition, community marginalization, or unprotected informal businesses. Empirical studies show that pentahelix-based collaboration, supported by regulations and policies especially from the government can help MSMEs survive and thrive, especially during crises like the pandemic. This collaborative approach goes beyond mere economic partnerships: it also requires public governance, transparency, community participation, and accountability the hallmarks of modern public administration. Therefore, the pentahelix model is ideally integrated into public policy and administrative regulatory frameworks: for example, in development planning, creative economy development, MSME regulations, and village/community policies. In short, the synergy between the five elements of the pentahelix and a strong legal/administrative framework forms the foundation for inclusive, equitable, and sustainable collaboration with the potential to generate social and economic innovations that bring broad benefits.

3. Result and Discussion

3.1 Role of pentahelix in governance

In the pentahelix model, the government pillar plays the role of regulator, facilitator, and coordinator among stakeholders providing policies, regulations, and public services that enable collaboration to thrive. The government can facilitate access to capital, ease of business permits, infrastructure, spatial planning policies, training, and subsidies forms of structural support often needed by small/medium-sized businesses and creative communities. A concrete example: when local governments open up spaces for dialogue and collaboration with academia, businesses, communities, and the media, regulations and

public services can be more responsive to local needs not simply top-down, but adaptive to conditions on the ground. Thus, without the active role of the government as a facilitator, collaborative models are difficult to implement regulations and public services provide the foundation for other stakeholders to contribute effectively (Karunia et al., 2024).

Academics (universities, colleges, research institutions) in the penthelix play a role in knowledge generation, empirical research, needs analysis, and capacity development: market research, technology, management, human resource training, public education, and program evaluation. Through research and training, the business community and the public can gain technical and managerial knowledge for example, in business management, marketing, technology use, and product innovation thus strengthening local capacity and competitiveness. Academics can also serve as intellectual mediators in collaboration: helping design policies, conducting program evaluations, providing data-based recommendations, and assisting in the development or expansion of businesses with the government and other sectors. Therefore, the role of academics is crucial in ensuring that collaboration is based on evidence, local relevance, and adaptation to global developments, resulting in more appropriate and sustainable solutions (Winarna & Wasistiono, 2025).

The business/industry sector brings practical aspects: capital, market access, distribution networks, product or service innovation, partnerships, and commercialization capabilities all necessary to translate ideas or potential from communities/academia into tangible economic outcomes. Through collaboration with the business sector, MSMEs, local communities, and the government can gain access to financial resources, production technology, marketing channels, and investment opportunities strengthening the local economic ecosystem. Business partnerships can also bridge the gap between small-scale (community, MSME) and large-scale (e.g., supply chain partnerships, outsourcing, and brand collaboration) so that small businesses can grow and sustain, and participate in economic development. Therefore, without the involvement of the business sector, collaboration can stagnate as capital, markets, and commercialization are often the biggest obstacles to transforming potential into tangible results (Kurniawan et al., 2024).

Local communities or communities are a crucial pillar in the pentahelix they are both the subjects and objects of development. They possess local knowledge, real needs, aspirations, culture, and strong social networks. Community involvement ensures that policies or programs are aligned with local needs and contexts. Social participation can strengthen legitimacy: when communities participate in planning, implementation, and evaluation, projects or programs gain broad support, minimize resistance, and enhance a sense of ownership. Communities can also provide ideas, creativity, energy, and social work for example, in the management of tourism villages, local products, and cultural activities that cannot be replaced by government or business alone. Therefore, top-down development or business/institutional development is likely to fail without empathy for the community. The community pillar ensures that collaboration is inclusive, equitable, and relevant (Widowati et al., 2023).

The media both mainstream and social/community media serves as a channel for information, communication, education, publication of activities, dissemination of research results, product promotion, policy outreach, and public oversight. This pillar helps inform various parties about programs, opportunities, regulations, and collaborative outcomes. The media's function as a "bridge" and "public communication bridge" is crucial for transparency, accountability, and participation so that collaborative programs are not closed, elitist, or exclusive, but rather open and open to public scrutiny. The media can also build a positive image of joint initiatives for example, branding local products, creative economy campaigns, publicizing successful collaborations which helps attract investors, partners, or the public to get involved. Thus, without media as a pillar, collaborations can lack social legitimacy, visibility, or accountability and the potential for conflict or miscommunication increases (Kuswandi et al., 2024).

Table 2. Relevance and potential for implementing the pentahelix model in the local context (MSMEs/small industries/local economy) in Gresik Regency

No	Indicators/Year	Value/Description
1.	Number of micro & small industries (MSMEs) in Gresik Regency (2023)	The 2023 MSME Profile data shows a number of micro and small businesses registered in the district.
2.	Economic growth of Gresik Regency 2024	4.79% indicating that the local economy is vibrant and growing, and the potential for MSMEs/small industries remains open.
3.	The role of digitalization & partnerships in MSMEs/MSMEs	The MSME Profile Report lists aspects of "internet use, innovation, business partnership patterns, financial access, guidance, and marketing" as assessment elements indicating that the success of MSMEs/MSMEs is highly dependent on collaboration and multi-stakeholder support.
4.	Economic structure between sectors in Gresik economic diversity (industry, MSMEs, services, etc.)	Gresik Regency is known as a major industrial area and also has a significant MSME/MSME sector demonstrating the need for coordination between large and small sectors, the government, and the community, ensuring a collaborative model is relevant.

(BPS Gresik Regency, 2024)

The large number of MSMEs in Gresik demonstrates the fundamental potential of the people's economy but this potential will be maximized with combined support from the government (policies, regulations), businesses (capital, markets), academia (training, innovation), communities (needs & networks), and the media (promotion, information). This is where the pentahelix plays a role. Positive economic growth indicates a relatively conducive economic environment so multi-stakeholder collaboration can help strengthen this growth, expand inclusiveness, and improve local economic sustainability. The pentahelix offers a comprehensive collaborative framework: when the five pillars (government, academia, business, community, media) work together, they can leverage their respective strengths regulation, knowledge, capital, social participation, and information to achieve shared goals such as economic development, MSMEs, local development, innovation, and sustainability. Data from Gresik Regency shows that the economic potential of the people and MSMEs is enormous, so implementing the pentahelix can strengthen the local economic ecosystem and increase competitiveness.

Local governments need to adopt a pentahelix approach to development planning: creating collaborative regulations and policies that involve academics, businesses, communities, and the media from the planning stage not only after the policies are established. Local universities and academics should actively conduct research on local needs, provide training, and mentorship to MSMEs/communities, and act as bridges between the private sector, communities, and the government. The business and industry sectors need to establish partnerships with local MSMEs/SMIs as suppliers, subcontractors, and distributors and support product innovation, market access, and training, so that the local economy grows inclusively. Local communities and civil society must be empowered involved in policy design, decision-making processes, and program implementation: social participation is crucial for legitimacy and sustainability. The media including local, community, and social media should function as channels for transparency, public communication, local product promotion, and public oversight so that collaboration is open, accountable, and widely recognized. Thus, the pentahelix is not just a theory, but can be a practical tool to strengthen local governance and an inclusive economy provided there is real commitment and synergy between actors.

3.2 Collaborative governance: Synergy between actors in social services and MSME empowerment in special economic zones

Collaborative governance refers to a model of public governance/management in which decision-making, policy implementation, and program implementation are carried out jointly by various actors (multistakeholders): the government, the private sector, the public/community, academia, and in modern contexts the media or other relevant actors. This model emphasizes participation, transparency, interdependence, and shared responsibility. In the context of MSME empowerment, particularly in special economic zones (SEZs), collaborative governance allows for the utilization of the different strengths and capabilities of each actor; for example, capital and markets from business/industry, regulation and facilitation from the government, research and capacity from academia, local community support, and information dissemination from the media. This model can be an answer to the dilemma: how to encourage MSME growth and competitiveness while maintaining inclusivity, equity, and sustainability. Literature shows that such collaboration is effective, for example, in post-pandemic MSME empowerment programs, where cross-sector collaboration helps restore the economy and spread positive multiplier effects more widely. Core narrative: Collaborative governance is a relevant and pragmatic framework for MSME development and empowerment in complex environments like special economic zones because it combines the strengths of each actor in a synergistic approach (Loc et al., 2023).

The government particularly local governments in local cases like Gresik Regency plays a key role as regulator and facilitator. The government provides regulations, policies, public services, training, institutional access, and infrastructure that underpin successful collaboration. For example, through the relevant agency in Gresik, such as the Department of Cooperatives, Industry, and Trade (*Dinas Koperasi, Perindustrian, dan Perdagangan*, Diskoperindag), entrepreneurship training has been conducted for dozens of MSMEs, in collaboration with national agencies and companies in SEZ. The government can also create space for partnerships between the private sector, communities, and academics as well as facilitate empowerment programs, market digitization, access to capital, and regulatory streamlining. In Gresik, market digitalization efforts for MSMEs demonstrate the local government's commitment to supporting MSME transformation to keep pace with current developments. Through this regulation and support, structural barriers for MSMEs such as limited market access, technology, training, and networks can be minimized, enabling them to be competitive and sustainable. The core narrative: The government is the primary driver of facilitation in collaborative governance; without an active government role in regulation and public services, optimal synergy and empowerment of the MSME sector are difficult to achieve (Wardana & Mulyaningtyas, 2025).

The private sector and businesses especially large companies or industries in special economic zones can be catalysts for MSME empowerment through partnerships, access to capital, market access, outsourcing, technical assistance, and the adoption of innovation. In Gresik, for example, large companies participate in MSME training, providing opportunities for MSMEs to partner with companies in SEZs. Furthermore, the private sector can support MSME digitalization for example, by supporting training in digital marketing, distribution, supply chain management, and access to broader markets, both domestic and export. For example, companies in Gresik, through social responsibility programs or partnerships, support digital marketing training for MSMEs. With private/industry involvement, MSMEs not only survive but also thrive upgrade, access broader markets, utilize technology, and achieve economic stability. The core narrative: Business/industry brings economic capacity and market networks critical aspects for realizing MSME potential in the form of real business success and this synergy is ideal within a collaborative framework (Mamengko, 2023).

Academics and research institutions contribute by providing data, analysis, training in managerial skills, production techniques, innovation, and evaluation of empowerment programs. They provide the intellectual and technical foundation for building professional

and adaptive MSMEs. The literature supports the idea that collaboration with academics strengthens the resilience and capacity of MSMEs. In many empowerment programs, the involvement of academics helps design training and mentoring programs tailored to local needs, not top-down, but contextual. This increases the program's relevance to the conditions of communities and businesses. Studies on collaboration for MSME development show that success is higher when mentoring is provided by academics/research institutions. Academics can also facilitate the evaluation of outcomes, provide policy recommendations, and act as scientific mediators between government, businesses, and communities, ensuring that collaboration is transparent, accountable, and evidence-based. Core narrative: The role of academics is crucial in ensuring that collaboration and empowerment of MSMEs are based on knowledge, data, and real capacity not just rhetoric thus ensuring sustainability and improving business quality (Utami & Syafri, 2025).

Local communities including MSMEs, workers, and surrounding communities, have an understanding of real needs, the local context, business culture, and social networks. Their participation in collaborative processes ensures that policies and empowerment programs are relevant, accepted, and aligned with social realities. The ideal collaborative governance model involves communities not merely as beneficiaries, but as active, participatory actors in planning and evaluation. Media (both conventional and digital), although not explicitly mentioned in all literature, plays a crucial role in information dissemination, transparency, public control, and publication of collaborative outcomes. Media helps expand program reach, attract public interest, and maintain accountability. In the digital era, the role of media becomes even more vital, ensuring that information regarding opportunities, training, programs, partnerships, and regulations reaches a wide audience of MSMEs. When communities and media are active, collaborative programs gain social legitimacy, thus facilitating support, participation, and sustainability, while minimizing resistance or inequality in implementation. Narrative core: Communities and media bridge between policies/programs and social realities ensuring that collaboration is inclusive, transparent, and responsive to the needs of the people and the public (Mitra, 2023).

Table 3. Current conditions related to MSMEs/IMKs and collaborative efforts in Gresik Regency

No	Indicators/Year	Value/Information
1.	Number of micro and small industries in Gresik Regency (2022 publication, 2024 release)	Recorded in the "2022 Profile of Micro and Small Industries in Gresik Regency" as the basic framework for MSME/SME data
2.	Number of MSMEs participating in basic entrepreneurship training through collaboration between the Government, SEZs, and Industry (2025)	A total of 360 MSMEs participated in entrepreneurship training facilitated by the Gresik Trade and Industry Office, in collaboration with companies in the SEZ, the Standardization Center, and related agencies

(BPS Gresik Regency, 2024)

Data on the number of small and medium enterprises (SMEs) indicates that the MSME/MSE base in Gresik is quite large this represents a local economic potential that can be developed through systemic empowerment, not just sporadic interventions. Therefore, multi-actor collaboration is relevant and necessary. The 2025 training program for 360 MSMEs demonstrates a concrete example of collaborative governance: government, industry, and external institutions synergizing to provide training, capacity building, and partnership opportunities to small business owners as a collective intervention for economic empowerment. Collaborative governance offers an effective model for empowering MSMEs in special economic zones by combining the roles and capabilities of government, business/industry, academia, communities, and the media. This model can overcome the limitations of each actor when implemented collaboratively: regulation and facilitation from the government, capital and markets from the private sector, research and capacity from academia, participation and social legitimacy from the community, and transparency and dissemination from the media. Data from Gresik Regency shows that this

model has begun to be implemented, although there is still significant potential for expansion.

Local governments (e.g., Gresik) need to strengthen formal collaborative structures for example, establishing regular multi-stakeholder forums (government, private sector, community, and academics) to coordinate MSME empowerment and the development of special economic zones. Industry and the private sector in SEZ areas should be actively involved in partnership programs with MSMEs for example, supply chain, training, marketing, and technical guidance not only as corporate social responsibility, but as long-term economic partners. Academics and research institutions should be involved in designing training programs, market research, impact evaluations, and MSME capacity development strategies to align with market dynamics and regulations. Local MSME communities and actors need to be empowered in a participatory manner involved in program planning, decision-making, and implementation so that programs are relevant, tailored to needs, and gain social legitimacy. Media and information platforms both local and digital should be utilized to disseminate information about opportunities, regulations, collaborative programs, success stories, and transparency regarding resource utilization and collaboration outcomes, to increase public accountability and participation.

3.3 Administrative law perspective

Administrative law (or state administration) serves as a normative framework that establishes how public governance and interactions between actors (government, private sector, and community) must be carried out legally, structured, and accountably. These norms include provisions on permits, authority, procedures, documentation, the rights and obligations of citizens/business actors, oversight mechanisms, and administrative sanctions. With regulations such as Law Number 30 of 2014 concerning State Administration (the State Administration Law), administrative actions and decisions must meet the principles of legality, transparency, participation, and accountability to be valid and testable. Administrative law also provides legal certainty: every actor (especially the government/public) may not act arbitrarily; there are standard procedures, clear authority, documentation, and complaint or oversight mechanisms. This is crucial to maintaining fairness for citizens, companies, and business actors especially MSMEs in administrative relations with the state. The core narrative: administrative law is a "structural pillar" for interactions between actors to be fair, transparent, and accountable; without this framework, public administration and business regulation are vulnerable to uncertainty, abuse, and injustice (Muklis et al., 2024).

The licensing process for example, business permits, environmental permits, location permits, administrative certification is the gateway for businesses, investors, and the public to interact legally with the government. When procedures are clear, transparent, easily accessible, and understood, legal certainty and justice are assured. Conversely, if procedures are lengthy, bureaucratic, and opaque, there is ample room for abuse, corruption, or collusion. As part of bureaucratic reform, a number of efforts have been proposed: digitalization of public services, e-government systems, information transparency, regulatory simplification, and administrative oversight to ensure faster, more accountable licensing processes, and minimize the potential for maladministration. Fair and efficient licensing is crucial, especially for small businesses/MSMEs, so they are not hampered by regulatory complexity, high costs, or legal uncertainty, which can hinder growth and competitiveness. The core narrative: administrative licensing procedures and mechanisms must be well-designed clear, transparent, and efficient so that regulations support, rather than hinder, social and economic activities (Suryawati et al., 2025).

One of the main challenges in public administration practice in Indonesia is overlapping authority between the central government, provinces, and regions, between sectoral agencies, and between the technical bureaucracy and regulations. Inconsistencies in sectoral regulations and decentralization lead to confusion about who is responsible, who issues permits, and who oversees them, leading to conflicting administrative decisions.

Empirical studies show that despite decentralized government structures, regulatory harmonization and authority mapping are not yet optimal: many sectoral laws/regulations are not aligned, making institutional reorganization difficult and hindering the effectiveness of public administration. As a result, cross-agency coordination is difficult, accountability is blurred, decision-making is delayed, and in some cases, administrative conflicts, delays in development or public services, and legal uncertainty for citizens and businesses. The crux of the narrative: without a clear division of authority and effective coordination between institutions, public administration is prone to inconsistency, conflict, and inefficiency which are detrimental to both businesses and the public (Prajanti et al., 2023).

The modern era brings rapid changes in society: the digitalization of public services, the need for more transparent, responsive, and participatory governance. Administrative law must adapt: through bureaucratic reform, the use of e-government technology, digital service mechanisms, and modern administrative systems. However, this transformation presents new challenges: personal data protection, access gaps (the digital divide), and the risk of digital abuse of authority. Furthermore, existing regulations are sometimes sectoral and out of sync with one another (regulatory fragmentation). This makes it difficult to adapt to local contexts and new needs, for example in the environmental, investment, spatial permit, and regional policy sectors resulting in regulations no longer being relevant or effective on the ground. Regulatory uncertainty and the slow pace of administrative reform mean that public services and business regulations often lag behind socio-economic changes, creating legal uncertainty, resistance, and doubt among the public and business actors. The core narrative: administrative law must be dynamic and adaptive regulations need to be updated, bureaucracy reformed, and service mechanisms adapted to the times to remain relevant, efficient, and equitable (Susyanti & Pardiman, 2022).

Many academics advocate for state administrative reform through regulatory harmonization simplifying and synchronizing sectoral regulations and legislation, reducing duplication of authority, and clarifying duties/authorities between levels of government. Reform also includes increasing public administration capacity: bureaucrat training, bureaucratic reform, the implementation of digital systems, and improving accountability and transparency mechanisms so that public services and business regulations can be carried out efficiently, professionally, and equitably. Consistent enforcement of administrative sanctions, public oversight mechanisms, and access to public information are part of efforts to strengthen public trust, prevent maladministration or corruption, and ensure the protection of the rights of citizens and business actors. The core narrative: administrative reform, regulatory harmonization, increased bureaucratic capacity, transparency & accountability are urgently needed so that administrative law is not only normative on paper, but effective in practice.

Economic growth demonstrates that Gresik Regency is relatively dynamic economically this provides space for sound administrative regulations to ensure inclusive, sustainable, and equitable growth for many small business owners. The large number of MSMEs demonstrates the importance of a supportive administrative system permits, regulations, access to public services, and transparency for MSMEs/MSMEs to thrive, remain legal, productive, and resilient to economic dynamics. An administrative law perspective is crucial in ensuring that interactions between actors (government, business, and the community) occur according to fair, transparent, and accountable norms. However, practice still faces many challenges: overlapping authority, fragmented sectoral regulations, weak agency coordination, and regulations that are less adaptable to changing times. Without administrative reform and regulatory harmonization, public rights and legal certainty for business owners, including MSMEs, are difficult to guarantee (Prasetyo et al., 2025).

Harmonize and simplify regulations synchronize national, sectoral, and local regulations to avoid overlapping authority. Promote bureaucratic reform and public administration capabilities training, digital mechanisms (e-government), service transparency, and accountability systems to make public services and licensing more efficient and accountable. Strengthen administrative oversight mechanisms and sanctions

against abuse of authority including consistent administrative sanctions, public control, and public access to information. Develop a licensing system and public services that are friendly to MSMEs/SMEs simple regulations and procedures, low costs, and easy access to ensure the small business sector receives legal certainty and structural support. Facilitate coordination across institutions and levels of government with formal mechanisms for the division of authority, horizontal and vertical coordination, to minimize conflicts of authority and bureaucracy.

Table 4. Economic growth of Gresik Regency

No	Indicators/Year	Data/Information
1.	Economic growth of Gresik Regency (2024)	Economic growth was recorded at 4.79% in 2024.
2.	Number of micro and small industries (MSMEs) in Gresik Regency, 2023	There were approximately 40,198 micro, small, and medium enterprises (SMEs) operating in Gresik Regency in 2023.

(BPS Gresik Regency, 2024)

3.4 Analysis: Pentahelix approach can operate optimally if administrative legal framework supports coordination, policy integration, and participatory mechanisms

Administrative law provides a normative and procedural framework for interactions between public and non-governmental actors: establishing who has authority, what procedures, standards of transparency and accountability, and mechanisms for public decision-making. Without this legal framework, multi-actor collaboration is prone to arbitrariness, conflicts of authority, and legal uncertainty. In the context of regional planning and development, studies show that the implementation of the pentahelix model is integrated into the regional medium-term development plan (*Rencana Pembangunan Jangka Menengah Daerah/Rencana Kerja Pemerintah Daerah*, RPJMD/RKPD) through a legal framework so that collaboration becomes an official part of regional governance, not just a voluntary initiative. Therefore, administrative law serves as the foundation that ensures that collaboration between actors has legitimacy, legal certainty, and sustainability enabling pentahelix to become not just rhetoric, but an institutional mechanism (Putra & Raharjo, 2023).

Pentahelix involves government, academia, business, civil society/communities, and the media, which often operate in different regulatory and policy domains. For synergy to occur, policy and regulatory integration is necessary: harmonization of authority, simplified procedures, and regulations that enable cross-sectoral participation. Without regulatory harmonization, various actors can face bureaucratic hurdles, overlapping permits, or conflicting rules that hinder collaboration. Administrative law must be the arena for harmonizing sectoral regulations to legally open paths for partnership and collaboration. For example, in the application of Pentahelix to the development of public spaces or urban policy, collaboration is successful when all actors government, community, business, and academia are accommodated in spatial planning regulations, permits, and public participation. Adaptive and integrative administrative regulations are required (Supriyanto & Iskandar, 2022).

One of the strengths of Pentahelix is the broad participation civil society/communities, academia, and businesses in program planning and implementation. However, for this participation to be effective and legitimate, clear administrative procedures are needed: public consultation mechanisms, data and decision transparency, the establishment of multi-actor forums, and reporting and evaluation procedures. Administrative law can establish these participatory mechanisms as part of regulations for example, mandating public participation, stakeholder consultation, and accountability in public policies or development programs. This minimizes the risk that collaboration is merely symbolic or a mere instrument of legitimacy. Several empirical studies report that Pentahelix implementation in public services (e.g., healthcare, product oversight, or environmental

projects) is successful when formal participatory mechanisms and transparency are managed through administrative regulations rather than relying solely on goodwill (Sumarni, 2024).

Administrative law is not only about written regulations, but also about institutional capacity a bureaucracy capable of implementing regulations, inter-agency coordination, and leadership that facilitates collaboration. Without institutional capacity and will, regulations can stagnate and collaboration fails. Studies on pentahelix implementation in local government show that success depends heavily on facilitative leadership that is, leaders who are able to bridge actors, initiate collaboration, and ensure administrative processes run according to procedure. Therefore, administrative regulations must be accompanied by capacity building of the apparatus, internal coordination mechanisms, and adequate institutional structures to accommodate sustainable multi-actor collaboration (Safitri & Hanifah, 2022).

If administrative law is weak for example, due to outdated regulations, lengthy bureaucratic procedures, overlapping authority, or a lack of transparency Pentahelix collaboration is prone to failure, conflict, or power imbalances (large actors dominate, while small communities are marginalized). Empirical studies show that in some cases, even when the Pentahelix concept is adopted, implementation is suboptimal due to poorly structured administrative procedures, such as in the preparation of environmental documents, permits, or public policies, resulting in only partial synergy. This risk suggests that the success of Pentahelix depends heavily on the maturity of the administrative legal framework and bureaucratic practices, without which collaboration can be sporadic, ultimately disintegrating, or benefiting only a few actors (Rachman & Thalib, 2025).

Table 5. Data comparison of micro and small industries/*industri mikro kecil* (IMK) and small and medium-sized enterprises (SMEs) in Gresik Regency

No	Indicator/Year	Data/Information
1.	Number of micro and small industries in Gresik 2023	Approximately 40,198 small and medium-sized enterprises (SMEs) were registered in Gresik Regency.
2.	Economic Growth in Gresik 2024	Regional economic growth was recorded at 4.79% in 2024.

(BPS Gresik Regency, 2024)

The high number of micro, small, and medium enterprises (MSMEs) indicates a significant micro and small economic base in Gresik. This indicates substantial economic potential for the people and MSMEs, thus necessitating the urgent need for supportive regulations (licensing, ease of doing business, access to capital) and multi-stakeholder collaboration. Positive economic growth indicates that Gresik is developing, increasing profits for investment, industry, and MSMEs. However, for this growth to be inclusive and sustainable, good governance is required: policy integration, coordination, and transparency aspects supported by administrative law. The Pentahelix approach has significant potential to empower communities, support MSMEs, and strengthen local development but it can only be optimally supported by a mature administrative legal framework: harmonized regulations, clear procedures, participatory mechanisms, institutional capacity, and transparency and accountability. Administrative law is not merely an add-on it is a structural foundation that ensures multi-actor collaboration is legitimate, sustainable, and equitable.

Local governments such as in Gresik need to strengthen administrative regulations that support pentahelix collaboration: creating regulations that accommodate multi-stakeholder partnerships, public consultation, community participation, and streamlined licensing procedures. A formal institutional coordination system is needed: a multi-stakeholder forum, a collaboration management body, and an evaluation and accountability mechanism so that the roles of all actors can be structured, organized, and accounted for. Build the capacity of public officials to support collaboration—training, a modern

bureaucracy, and e-government so that regulations and administration can be implemented effectively and efficiently. Ensure participatory and transparent mechanisms involving the public/communities/MSMEs in planning, implementation, and program evaluation, and regulations so that collaboration is not merely top-down or symbolic. Engage academics and the media to support collaboration through research, evaluation, information dissemination, and public oversight so that collaboration remains dynamic, adaptive, and accountable.

3.5 Pentahelix approach operates within collaborative governance of social services and MSMEs, and how an administrative law perspective influences its working mechanisms

The Pentahelix model involves various actors government, academia, businesses, communities, and the media collaborating for a common goal (public services, MSME empowerment, and socioeconomic development). For such collaboration to be more than just an ad hoc social initiative, it requires formal rules and clear administrative procedures: regulations that define authority, cooperation mechanisms, transparency, accountability, and legal certainty. This is where the administrative law perspective comes into play it provides the legal basis for Pentahelix so that the collaboration is considered legitimate, accountable, and sustainable. Without the support of administrative law (e.g., official regulations, decrees, standard procedures), multi-actor collaboration can face doubts about legitimacy, conflicts of authority, or be vulnerable to abuse. Therefore, the success of Pentahelix depends heavily on a robust public administration framework (Rahadian et al., 2024).

There are numerous empirical examples of Pentahelix implementation: for example, local health service programs (minimum service standards for hypertension) have successfully used the Pentahelix model with formal regulations in the form of regional decrees, task assignments, service procedures, and collaboration frameworks. Similarly, in the MSME sector, programs such as "UMKM Jawa" in Jakarta demonstrate that when there is integration between stakeholders (government, academics, businesses, communities, media) plus regulations/legal establishments, official assistance, and administrative documentation, the result is increased product legality, competitiveness, and business satisfaction. Administrative mechanisms permits, official assistance, product regulations, standard operating procedures (SOPs), documentation, and reporting serve as operational pathways that enable collaboration to be systematic, structured, and independent of individual initiative (Ridley, 2022).

Pentahelix requires cross-sector synergy. However, in the reality of bureaucracy, various regulations and administrative authorities can differ (district, city, province, sector agencies). Without regular coordination, fragmentation, overlap, and inconsistent policies emerge, which hinder collaboration. An administrative law perspective mandates formal coordination mechanisms: for example, establishing regulations for collaborative program management, clarifying authority, establishing common standard operating procedures (SOPs), delegating tasks, and establishing oversight and accountability mechanisms. When regulations are harmonized, the Pentahelix can operate effectively as a structured collective institution. Empirical studies of MSME/tourism collaborations show that success is greater when local regulations support expedited permitting, business licensing, legal support, and coordination between actors rather than when regulations are weak or fragmented (Rochmatin et al., 2024).

Participation by communities, MSMEs, and the wider public is at the heart of the Pentahelix model but for this participation to be real and not symbolic, administrative mechanisms are needed: consultative meetings, decision documentation, reporting mechanisms, periodic evaluations, and complaint/feedback mechanisms. Administrative law establishes these procedures. For example, in public services (e.g., in sub-districts), Pentahelix collaboration has successfully improved service quality by creating standard operating procedures, simplifying service procedures, and involving the community and media in outreach and evaluation, provided that public administration and participation can

go hand in hand. This increases social legitimacy and public trust, and makes collaboration more sustainable because there are mechanisms for public accountability and oversight, rather than just ad hoc procedures (Rosalina et al., 2025).

While pentahelix offers great potential, its success depends heavily on how well administrative regulations and institutions support it. Without adaptive regulations, well-organized procedures, and institutional/actor capacity, collaboration is difficult to sustain. Many studies point to barriers such as lack of budget, limited human resources, weak coordination, and bureaucratic resistance. If administrative law is not responsive to changes (e.g., in digitalization, innovation, local needs), regulations can become outdated, rendering the Pentahelix model stagnant or irrelevant. Actor commitment is also crucial: without facilitative leadership from the government or collaboration coordinator, without transparency and the media as oversight, or without community participation, the Pentahelix model can fail, remaining a temporary project or even mere rhetoric.

Table 6. The number of IMK units and economic growth in Gresik Regency

No	Indicators/Year	Value/Description
1.	Number of IMK units in Gresik Regency, 2023	40,198 small and medium-sized business units were recorded in Gresik Regency.
2.	Economic growth in Gresik Regency, 2024	4.79% indicating relatively positive local economic dynamics.

(BPS Gresik Regency, 2024)

The large number of micro, small, and medium enterprises (SMEs) demonstrates the significant micro/small economic infrastructure in Gresik; this provides a crucial foundation upon which the Pentahelix model can be applied for empowerment, mentoring, market access, and legal regulation. Positive economic growth creates space for multi-actor collaboration: the government can provide regulations and public services, businesses can invest/partner, academics can conduct research/training, and communities and the media can actively monitor and support all of which together promote inclusive and sustainable development. The pentahelix approach can be an effective framework for collaborative governance in public services and MSME empowerment, provided it is supported by a strong administrative law perspective. Administrative law provides the legal foundation, mechanisms, procedures, and legitimacy for multi-actor collaboration; without it, Pentahelix risks becoming an informal, unsustainable, or conflict-prone initiative. The combination of multi-stakeholder collaboration, regulation, and sound public administration enable effective, inclusive, and sustainable social services and economic empowerment.

Local governments for example, in Gresik need to establish formal regulations/policies that support Pentahelix collaboration: establishing authority, procedures, stakeholder engagement mechanisms, standard operating procedures, accountability and transparency mechanisms. Establish an official multi-actor coordination forum or body (multi-stakeholder council) that accommodates government, academics, businesses, communities, and the media as an institutional mechanism for long-term collaboration. Ensure regulations for business permits, licensing, public services, and MSME assistance are user-friendly for MSMEs/small MSMEs simple, fast, and easily accessible so that the MSME base can be optimally utilized. Encourage active community and media participation in the collaboration process including monitoring, evaluation, and advocacy to ensure collaboration is inclusive, accountable, and responsive to local needs. Strengthen the capacity of institutions: local bureaucracies, academics, and businesses to work together through training, service digitization, data transparency, and a shared commitment to effective and sustainable collaboration.

4. Conclusion

Pentahelix-based collaboration in the Gresik SEZ can strengthen social services and MSME development if supported by a clear, responsive, and adaptive administrative legal framework. This article finds that pentahelix-based collaboration involving government, academics, the business world, communities, and the media has begun to shape a more inclusive pattern of cooperation in the Gresik SEZ. Social services and MSME development improve when communication between actors is structured and roles are shared consistently. The research indicates obstacles such as overlapping authority and a lack of clarity in administrative procedures, which slow down empowerment programs. It also found that MSMEs adapt more quickly when they receive simultaneous support from academic training and government regulatory facilitation. The article concludes that pentahelix-based collaboration will be effective if supported by a clear, responsive, and adaptive administrative legal framework. A strong legal framework serves as a foundation for inter-institutional coordination, enabling optimal social services and MSME development. This article offers an integrative analysis linking the pentahelix approach with administrative law theory, a practice rarely employed in SEZ studies. This study introduces a collaborative evaluation model that assesses the effectiveness of pentahelix through legal and governance indicators. The article provides a new perspective on how media and communities become social legal actors in strengthening policies in Special Economic Zones (SEZs). These findings provide an original contribution to formulating a more adaptive institutional collaboration design for special economic zones in Indonesia.

This article recommends strengthening regulations on multi-actor coordination and participation, developing collaborative public service standards, optimizing the role of academics and the media in governance monitoring, and further research on the pentahelix implementation model in other SEZ contexts. This article emphasizes that strengthening regulations related to multi-actor coordination and participation is the main foundation for successful pentahelix collaboration in SEZs. Developing collaborative public service standards is necessary so that all actors have a uniform and measurable work reference. Optimizing the roles of academics and the media has proven crucial in ensuring transparency and ongoing governance monitoring. The study emphasizes that an adaptive administrative legal framework is key to effective collaboration between actors. The article concludes that further research is needed to test the application of the pentahelix model in other SEZs to obtain a more comprehensive implementation pattern. The article's originality lies in the systematic integration of the pentahelix concept with an analysis of administrative law in the context of SEZs. This article proposes collaborative public service standards as a governance instrument that has not been widely discussed in similar studies. The research presents a novel approach to the role of academics and the media as oversight actors that contribute to shaping policy legitimacy. The multi-actor evaluation model formulated in this article provides an original contribution to SEZ governance design. These findings open up space for the development of a theory of institutional collaboration that is more adaptive to the economic and social dynamics of special zones.

Acknowledgement

The authors express their gratitude to the reviewers for their valuable and constructive feedback on this article.

Author Contribution

All authors contributed equally to the conceptualization, methodology, analysis, and writing of this review. They collaboratively reviewed and approved the final manuscript for submission.

Funding

This research did not use external funding.

Ethical Review Board Statement

Not available.

Informed Consent Statement

Not available.

Data Availability Statement

Not available.

Conflicts of Interest

The authors declare no conflict of interest.

Open Access

©2026. The authors. This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The images or other third-party material in this article are included in the article's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit: <http://creativecommons.org/licenses/by/4.0/>

References

- Apriliani, A., Wahyudin, C., Hastuti, A., Tri Ramdani, F., Andani, H., & Sonia Irli, S. (2024). Collaborative Governance dalam Pengembangan Usaha Mikro Kecil dan Menengah Melalui Pelatihan dan Pendampingan. *Qardhul Hasan: Media Pengabdian Kepada Masyarakat*, 10(3), 275–286. <https://doi.org/10.30997/qh.v10i3.15865>
- BPS Gresik Regency. (2024). *Profil industri mikro dan kecil Kabupaten Gresik 2023*.
- Beatrice, C., & Hertati, D. (2023). Model pentahelix dalam pengembangan usaha mikro, kecil dan menengah (UMKM) Manggarsari. *Jurnal Manajemen Publik dan Kebijakan Sosial*, 7(2). <https://doi.org/10.25139/jmnegara.v7i2.6261>
- Rahmawan, A. B., Nariswari, A. A., & Sholihah, A. Z. (2025). Administrative sanction governance reform: Optimising the application of administrative sanctions in Indonesia. *Arena Hukum*. <https://doi.org/10.21776/ub.arenahukum2025.01801.4>
- Nugroho, T. C., Khan, A. S. A., & Jaya, K. (n.d.). Peran hukum administrasi negara sebagai ilmu pengetahuan dalam membangun transparansi dan akuntabilitas sektor publik. *Jurnal Ilmiah Kutei*, 24(2), 258–280. <https://doi.org/10.33369/jik.v24i2.45000>
- Deka, R. E., & Anastuti, K. U. (2023). Membangkitkan bisnis UMKM melalui pentahelix sebagai ekonomi progresif. *JIMMU: Jurnal Ilmu Manajemen*, 8(2). <https://doi.org/10.33474/jimmu.v8i2.20190>
- Ebidor, L.-L., & Ikhida, I. G. (2022). Literature review in scientific research: An overview. *East African Journal of Education Studies*, 7(2). <https://doi.org/10.37284/eajes.7.2.1909>
- Galluci, A. (2025). The dynamics of state administrative law and the role of government in upholding social justice: A case study of public policy management in the era of digital technology. *Media Hukum Indonesia (MHI)*.
- Hidayat, W. (2025). Collaborative governance dalam pengembangan digitalisasi UMKM pada era Industri 4.0 di Bangka Belitung. *TheJournalish: Social and Government*. <https://doi.org/10.55314/tsg.v3i3.317>
- Ibrahim, H. R. (2023). Pemberdayaan usaha mikro kecil menengah melalui pendekatan inovasi sosial dan collaborative governance. *Jurnal Ilmu dan Budaya*. <https://doi.org/10.47313/jib.v43i1.1532>

- Karunia, R. L., Yanto, E., & Prasetyo, J. H. (2024). Digital collaboration models for empowering SMEs: Enhancing public organization performance. *Emerging Science Journal*, 8(4). <https://doi.org/10.28991/ESJ-2024-08-04-015>
- Kurniawan, D. A., Zarkasyi, M. R., & Setyanta, B. (2024). Economic recovery strategy for the SMEs post Covid-19 pandemic in Ponorogo: The role of the pentahelix model. *Sentralisasi*, 12(1). <https://doi.org/10.33506/sl.v12i1.2024>
- Kuswandi, A., Al Rasyid, M. H., Nuraini, S., & Nurul Sa'diyyah, Z. (2024). Pendekatan pentahelix dalam tata kelola desa wisata berkelanjutan di Desa Bantaragung, Kabupaten Majalengka. *Jurnal Pemerintahan dan Politik*, 10(2). <https://doi.org/10.36982/jpp.v10i2.5290>
- Loc, H. P., Dung, N. T., & Huy, L. T. (2023). A systematic guideline process for writing a review article and literature review for scientific publications. *VNU Journal of Science: Education Research*, 39(3).
- Mamengko, R. P. (2023). Peran keterlibatan multi-stakeholder penta-helix dalam pengembangan bisnis UMKM di sektor pariwisata. *Jurnal Ekonomi dan Pendidikan*, 20(1). <https://doi.org/10.21831/jep.v20i1.55524>
- Mitra, S. (2023). Performing a literature review: An overview. *Galaxy International Interdisciplinary Research Journal*, 11(3), 184–190.
- Muklis, A., Taufik Hidayat, M., & Nariyah, H. (2024). Collaborative governance pentahelix dalam proses analisis mengenai dampak lingkungan hidup (AMDAL) di Kabupaten Cirebon. *Reformasi: Jurnal Ilmiah Administrasi*. <https://doi.org/10.33603/reformasi.v8i2.10969>
- Prajanti, S. D. W. P., Daud, D., Amin, S., Subiyanto, & Adzim, F. (2023). A sustainable creative economy development model using a penta helix approach based on local wisdom in Magelang City, Indonesia. *Visions for Sustainability*, (20). <https://doi.org/10.13135/2384-8677/7917>
- Prasetyo, N. D., Arrsa, R. C., & Haq, C. A. (2025). The juridical framework of the pentahelix model in the preparation of regional medium-term development planning. *Jurnal IUS Kajian Hukum dan Keadilan*, 11(3). <https://doi.org/10.29303/ius.v11i3.1286>
- Putra, M. D. R. E., & Raharjo, S. T. (2023). Keterlibatan pentahelix dalam pengelolaan bank sampah: Kolaborasi stakeholder dalam program CSR. *EMPATI: Jurnal Ilmu Kesejahteraan Sosial*, 12(1). <https://doi.org/10.15408/empati.v12i1.29577>
- Rachman, E., & Thalib, T. (2025). The role of multi-stakeholder collaboration in advancing MSMEs and creative economy: Insights from Gorontalo's pentahelix policy model. *Otoritas: Jurnal Ilmu Pemerintahan*, 15(2). <https://doi.org/10.26618/ojip.v15i2.18927>
- Rahadian, M. E., Sanafiah, A. A., & Basseng, B. (2024). Implementation of the pentahelix collaborative governance model minimum service standards (SPM) for health with hypertension in local governments. *Politik Indonesia: Indonesian Political Science Review*, 9(1). <https://doi.org/10.15294/jpi.v9i1.3606>
- Ridley, D. (2022). *The literature review: A step-by-step guide for students*. SAGE Publications.
- Rochmatin, L., Muchsin, S., & Sunariyanto. (2024). Collaborative governance dalam tata kelola pariwisata berkelanjutan di Desa Wisata Kertosari. *Kebijakan: Jurnal Ilmu Administrasi*. <https://doi.org/10.23969/kebijakan.v16i02.16741>
- Rosalina, A., Asri, R., Satiti, R., & Nindita, A. (2025). UMKM Jawa: Model pendampingan terintegrasi pentahelix dalam peningkatan kapasitas legalitas dan daya saing UMKM pangan, kosmetik, dan obat tradisional di DKI Jakarta. *Journal of Research Applications in Community Service*, 4(3), 131–142. <https://doi.org/10.32665/jarcoms.v4i3.5191>
- Safitri, E. C., & Hanifah, L. (2022). Pemberdayaan UMKM untuk meningkatkan kesejahteraan masyarakat di Kabupaten Gresik melalui program Pilar Ekonomi LAZISMU Gresik. *Jurnal JIE*, 8(1). <https://doi.org/10.29040/jie.v8i1.11958>
- Sumarni, S. (2024). Implementasi pentahelix dalam pengembangan desa wisata di Kabupaten Gunungkidul. *Jurnal Paradigma*. <https://doi.org/10.22146/jpmmmpi.v1i2.71359>
- Supriyanto, & Iskandar, F. (2022). Implementasi kolaborasi model pentahelix dalam rangka meningkatkan pemberdayaan UMKM ex lokalisasi Dolly pada masa pandemi Covid-19.

- Governance: Jurnal Kebijakan dan Manajemen Publik*, 12(1). <https://doi.org/10.38156/gjkmp.v12i1.64>
- Susyanti, J., & Pardiman. (2022). Pentahelix “Rembuk Nyekrup”: Pemberdayaan ekonomi kreatif dan UMKM di Jawa Timur. *JIPEMAS: Jurnal Inovasi Hasil Pengabdian Masyarakat*, 6(2). <https://doi.org/10.33474/jipemas.v6i2.19567>
- Suryawati, D., Anwar, A., Suharsono, A., Rohman, H., & Firdaus, A. (2025). How penta-helix can foster institutional capacity and commitment (Studi kasus pengembangan kopi). *Jurnal Ilmiah Ilmu Administrasi*. <https://doi.org/10.26858/jiap.v14i1.59050>
- Utami, L. T., & Syafri, W. (2025). Tata kelola pemerintahan kolaboratif dalam pelayanan izin usaha mikro kecil di Kota Jakarta Selatan. *Management Studies and Entrepreneurship Journal*. <https://doi.org/10.37385/msej.v3i6.1186>
- Wardana, D., & Mulyaningtyas. (2025). Sinergitas pentahelix dalam meningkatkan kinerja dan keberlanjutan UMKM di Kota Malang. *JIAL: Jurnal Ilmiah Akuntansi Indonesia*.
- Widowati, L., Setyowati, K., & Suharto, D. G. (2023). Dynamic governance as perspective in Indonesian bureaucracy reform. *Jurnal Bina Praja*, 15, 403–415. <https://doi.org/10.21787/jbp.15.2023.403-415>
- Winarna, A., & Wasistiono, S. (2025). Synergy of sovereignty and society: The penta-helix model for integrated governance on the RI-RDTL border. *Jurnal Bina Praja*. <https://doi.org/10.21787/jbp.17.2025.2686>

Biographies of Author

Firzhal Arzhi Jiwantara, Department of Law, Universitas Muhammadiyah Mataram, Mataram, West Nusa Tenggara 83115, Indonesia.

- Email: firzhal.arzhi@ummat.ac.id
- ORCID: N/A
- Web of Science ResearcherID: N/A
- Scopus Author ID: N/A
- Homepage: <https://scholar.google.com/citations?user=HlEv9lAAAAAJ&hl=id>

Bayu Karunia Putra, Department of Law, Universitas Muhammadiyah Mataram, Mataram, West Nusa Tenggara 83115, Indonesia.

- Email: bayukaruniaputra242@gmail.com
- ORCID: 0009-0009-5080-7391
- Web of Science ResearcherID: N/A
- Scopus Author ID: N/A
- Homepage: <https://scholar.google.com/citations?user=Z8HtHEIAAAA&hl=id>