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A Partnership Framework for Village-Owned Enterprises and Red-and-White Rural/Urban Village Cooperatives in Supporting the Green Village Program toward a Green Village Economy in Siak Regency

Kerangka Kemitraan antara Badan Usaha Milik Kampung dan Koperasi Desa/ Kelurahan Merah Putih dalam Mendukung Program Kampung Hijau Menuju Ekonomi Desa Hijau di Kabupaten Siak

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Abstract

The Green Village program is the primary instrument for implementing Siak Regency Regional Regulation No. 4 of 2022, which emphasizes village development based on a green economy and environmental sustainability. Siak Regency has two dominant types of village-level economic institution: village-owned enterprises (BUMDes, the national designation; or BUMKam, used in regions including Siak Regency) and Red-and-White rural/urban village cooperatives (KDKMPs), the latter launched under Presidential Instruction No. 9 of 2025. Both are mandated to strengthen the village economy, yet no structured partnership model currently exists. Previous studies tend to discuss BUMDes/BUMKam and KDKMPs separately, with limited attention to their institutional relationship in the context of green village governance. This study formulates a partnership framework aligned with the Green Village program, employing a qualitative exploratory design through in-depth interviews, focus group discussions, observation, and document analysis. Data were analyzed thematically using the Global Gotong Royong Tetrapreneur framework—Chainpreneur, Marketpreneur, Qualitypreneur, and Brandpreneur. The findings indicate that the BUMKam–KDKMP partnership is relevant to supporting green village economy development in Siak Regency, although implementation faces challenges including differences in institutional readiness and potential functional overlap. This study proposes a Tetrapreneur-based partnership model intended to clarify the division of roles and reduce functional overlap, offering a potential practical approach to strengthening institutional synergies and supporting the transition to a green village economy.

Keywords

Village-Owned Enterprises; Red-and-White Rural/Urban Village Cooperatives; Green Village Program; Green Village Economy.

Abstrak

Program Kampung Hijau merupakan instrumen utama dalam implementasi Peraturan Daerah Kabupaten Siak Nomor 4 Tahun 2022, yang menekankan pembangunan desa berbasis ekonomi hijau dan keberlanjutan lingkungan. Di Kabupaten Siak, terdapat dua kelembagaan ekonomi desa yang dominan: Badan Usaha Milik Desa (BUMDes, istilah nasional) atau Badan Usaha Milik Kampung (BUMKam, di Kabupaten Siak) dan Koperasi Desa/Kelurahan Merah Putih (KDKMP, dibentuk melalui Instruksi Presiden Nomor 9 Tahun 2025). Keduanya memiliki mandat memperkuat ekonomi desa, namun belum terdapat model kemitraan yang terstruktur. Studi terdahulu cenderung membahas BUMDes/BUMKam dan KDKMP secara terpisah, dengan keterbatasan kajian tentang hubungan kelembagaan keduanya dalam konteks tata kelola kampung hijau. Penelitian ini merumuskan kerangka kemitraan yang selaras dengan program Kampung Hijau menggunakan pendekatan kualitatif eksploratif melalui wawancara mendalam, diskusi kelompok terpimpin, observasi, dan analisis dokumen. Analisis data dilakukan secara tematik menggunakan kerangka Tetrapreneur: Chainpreneur, Marketpreneur, Qualitypreneur, dan Brandpreneur. Hasil penelitian mengindikasikan

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bahwa kemitraan BUMKam–KDKMP relevan dalam mendukung pengembangan ekonomi desa hijau di Kabupaten Siak, meskipun implementasinya menghadapi kendala berupa perbedaan kesiapan kelembagaan dan potensi tumpang-tindih fungsi. Penelitian ini menawarkan model kemitraan berbasis Tetrapreneur yang bertujuan memperjelas pembagian peran dan meminimalkan tumpang-tindih fungsi, sebagai pendekatan praktis yang potensial untuk memperkuat sinergi kelembagaan dan mendukung transisi menuju ekonomi desa hijau.

Kata Kunci
Badan Usaha Milik Kampung; Koperasi Desa/Kelurahan Merah Putih; Program Kampung Hijau; Ekonomi Desa Hijau.

1. Introduction

Village development is one of the key pillars of Indonesia's national development agenda. Villages are no longer positioned merely as administrative entities, but rather as a central socio-economic foundation of community life, playing a strategic role in economic growth, poverty reduction, and environmental sustainability (Febrina et al., 2024). Over the past two decades, development dynamics have shown a paradigm shift toward sustainable development, emphasizing the integration of economic, social, and environmental dimensions (Francis et al., 2025). The concepts of green economy and community-based environmental governance have been increasingly adopted by developing countries to strengthen rural resilience against environmental risks and crises (Sánchez Rodríguez & Fernandez Carril, 2024). Development in rural areas thus requires not only economic improvement but also the safeguarding of socio-ecological systems as the fundamental basis for long-term sustainability.

In Indonesia, the mainstreaming of the Sustainable Development Goals (SDGs) into national development policies has strengthened the role of villages in achieving development objectives (Prihatiningtyas, 2023). The Village SDGs developed in Indonesia highlight the importance of villages as development actors that not only enhance economic productivity but also ensure ecosystem sustainability, ecological justice, and community well-being (Hariyoko, 2022; Mujio et al., 2023). Thus, the current direction of village development in Indonesia is no longer merely sectoral but rather emphasizes a holistic approach that places environmental sustainability at the core of development-related decision making.

Siak Regency in Riau Province is one of the regions that have been relatively progressive in integrating environmental dimensions into their development policies. Through Peraturan Daerah Kabupaten Siak Nomor 4 Tahun 2022 tentang Siak Kabupaten Hijau [Siak Regency Regional Regulation No. 4 of 2022 on Siak Green Regency] (Perda Kab. Siak No. 4/2022), the local government reaffirms its commitment to sustainable development. One of the key implementation instruments of this regulation is the Kampung Hijau [Green Village] program, an initiative that emphasizes ecology-based development, community participation, and inclusive governance. This program is designed not only to ensure the equitable management of natural resources but also to enhance rural community welfare through environmentally friendly approaches.

Siak Regency's commitment to sustainable development has been shaped through policies that have evolved gradually. Figure 1 presents an overview of the Siak Kabupaten Hijau policy framework, illustrating key phases from 2014 to 2025.



Figure 1. Timeline of Siak Kabupaten Hijau [Siak Green Regency]

Source: Tim Koordinasi Siak Kabupaten Hijau [Siak Green Regency Coordination Team]. (2025)

The green economy emphasizes resource efficiency as a core principle, aiming to reduce environmental risks and promote sustainable economic development (Yuyang, 2024). The concept of a green village focuses on local initiatives that enhance resource utilization while maintaining environmental considerations, minimizing ecological degradation, and encouraging community involvement in sustainable practices. The green village concept aligns with the principles of the green economy, which emphasize reducing environmental harm and improving resource efficiency, and further contributes to addressing climate change resulting from environmental degradation (Zhu et al., 2023). The implementation of green village programs is not merely a technical policy but represents a paradigm shift in rural development that stresses the integration of ecological and economic dimensions. As a policy framework, the Kampung Hijau program requires the presence of various actors within village-level economic institutions. The relationship between the Kampung Hijau program and these institutions should not be understood as hierarchical—where the program directly dictates how village economic institutions are managed—but rather as a functional one, in which the program provides strategic direction to ensure alignment with the vision of environmental sustainability in Siak Regency.

Since the enactment of Undang-Undang Republik Indonesia Nomor 6 Tahun 2014 tentang Desa [Law of the Republic of Indonesia No. 6 of 2014 on Villages] (UU No. 6/2014), Badan Usaha Milik Desa [village-owned enterprises] (BUMDes)—the nationally used designation—or Badan Usaha Milik Kampung [village-owned enterprises] (BUMKam), used in regions with kampung-based administrative terminology including Siak Regency, have become an important instrument for strengthening rural economies. BUMDes/BUMKam are designed to collectively manage village potential, utilize village assets for productive ventures, and provide services that are not covered by the private sector. They have the capacity to increase village income, create employment opportunities, and strengthen community participation in development (Sutrisno et al., 2024). On the other hand, their management also faces various challenges, including limited managerial capacity, insufficient capital, and weak market access. Based on the BUMKam performance ranking in Siak Regency, there are 122 active BUMKam, with the following distribution:

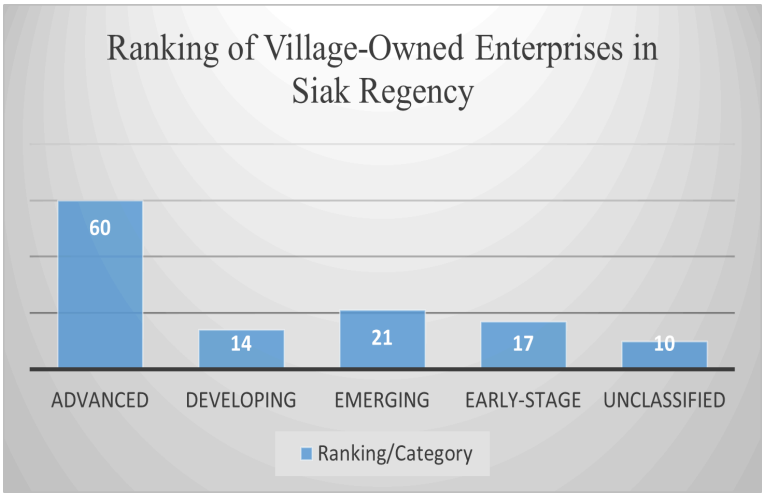


Figure 2. Ranking of Badan Usaha Milik Kampung [Village-Owned Enterprises] (BUMKam) in Siak Regency

Source: Siak Regency Government. (2025)

Based on the data above, drawn from the BUMDes/BUMKam ranking as stipulated in Keputusan Menteri Desa, Pembangunan Daerah Tertinggal, dan Transmigrasi Republik Indonesia Nomor 177 Tahun 2024 tentang Hasil Pemeringkatan Badan Usaha Milik Desa/Badan Usaha Milik Desa Bersama [Decree of the Minister of Villages, Development of Disadvantaged Regions, and Transmigration of the Republic of Indonesia No. 177 of 2024 on the Results of Village-Owned Enterprise/Jointly Owned Village Enterprise Ranking], there are indications of capacity gaps among BUMKam, which have implications for their ability to adopt green economy models uniformly. The sizeable proportion of beginner and pioneering categories reflects challenges in governance, capital availability, and innovation capacity. If these gaps are not further addressed or supported through partnership mechanisms, the transformation toward green villages will be hindered. Therefore, developing a partnership model between BUMKam and Koperasi Desa/Kelurahan Merah Putih [Red-and-White rural/urban village cooperatives] (KDKMPs) in Siak Regency becomes crucial for advancing village development strategies oriented toward environmental sustainability.

Within the framework of the latest national policy, the Government of Indonesia has launched the KDKMP program through Instruksi Presiden Republik Indonesia Nomor 9 Tahun 2025 tentang Percepatan Pembentukan Koperasi Desa/Kelurahan Merah Putih [Presidential Instruction of the Republic of Indonesia No. 9 of 2025 on the Acceleration of Red-and-White Rural/Urban Village Cooperative Formation] (Inpres No. 9/2025). KDKMPs are designed to strengthen the spirit of mutual-help-based rural economies, consolidate small-scale enterprises, and create broader access to capital and markets for local communities (Koperasi Desa/Kelurahan Merah Putih, n.d.; Wijayanto et al., 2025). Institutionally, cooperatives provide space for member participation in decision-making, and the economic benefits are distributed to all members (Michaud & Audebrand, 2019).

The presence of these two types of village-level economic institution, BUMDes/BUMKam and KDKMPs, creates opportunities to build a more integrated partnership model to support village development. BUMDes/BUMKam can function as business incubators and managers of village assets, as well as drivers for developing productive business units within the village (Hilmawan et al., 2023). On the other hand, KDKMPs mobilize community participation, expand market networks, and strengthen their membership base through a mutual-help economic foundation. The synergy between these two types of institution is not only a practical necessity for implementing the Kampung Hijau program but also a sustainable development strategy aligned with the SDGs, particularly in relation to poverty

reduction, economic inclusion, and sustainable environmental management (Halisçelik & Soytas, 2019; Yazid et al., 2024).

As a newly established type of village-level economic institution in 2025, KDKMPs are still in the early stages of development, with a national target of establishing up to 80,000 units. It is therefore reasonable that partnership patterns with BUMDes/BUMKam have not yet formed in a structured manner, given that organizational consolidation, the establishment of business units, and the formulation of operational mechanisms are still ongoing. However, if this situation continues, it may lead to functional overlap. Therefore, it is important to conduct a study to design a clear and complementary partnership model oriented toward socio-economic and ecological sustainability, in line with Siak Regency's policy direction through the Kampung Hijau program.

The formation of KDKMPs in Siak Regency has been accelerated through Keputusan Bupati Siak Nomor 100.3.3.2/598/HK/KPTS/2025 tentang Satuan Tugas Percepatan Pembentukan Koperasi Desa/Kelurahan Merah Putih [Regent Decree of Siak No. 100.3.3.2/598/HK/KPTS/2025 on the Task Force for the Acceleration of Red-and-White Rural/Urban Village Cooperative Formation]. Currently, 131 legally registered KDKMPs have been established, consisting of 122 units at the rural village level and 9 units at the urban village level. Partnerships between BUMKam and KDKMPs can open collaborative opportunities across various sectors. For instance, in supply chain management, BUMKam can play a role in managing production, while KDKMPs distribute the products to broader markets. Collaboration may also occur through financing mechanisms for BUMKam under Siak Regency's Kampung Hijau program.

Several previous studies have applied the Global Gotong Royong Tetrapreneur framework in various analyses of village and community-based economies. Therefore, in this study, the framework is considered relevant as it provides a comprehensive perspective to examine the complementary roles between BUMKam and KDKMPs in supporting the implementation of the Kampung Hijau program in Siak Regency.

To understand the dynamics and design a partnership model between BUMKam and KDKMPs in Siak Regency, this study draws on the Tetrapreneur framework developed by P. L. Rika Fatimah and colleagues (Makhasi et al., 2025). This concept emphasizes four pillars of rural enterprise development:

1. Chainpreneur, strengthening the supply chain from production to distribution;
2. Marketpreneur, expanding market access through marketing innovations;
3. Qualitypreneur, improving product quality and human resource capacity; and
4. Brandpreneur, building the identity and branding of village products.

This study therefore addresses the need to prevent institutional overlap between BUMDes/BUMKam and KDKMPs, both of which are oriented toward strengthening village economic independence. Such overlap has the potential to create conflict, inefficiency, and even program failure. Conversely, with a clearly defined partnership model, these two types of institution can complement each other—BUMDes/BUMKam focusing on managing local assets and potential while KDKMPs strengthen member networks and market access. The Kampung Hijau program in Siak Regency requires collaboration across multiple actors. Without a clear partnership model, it may be difficult for villages to achieve the goals of green development, namely economic welfare, social equity, and environmental sustainability. Therefore, this study seeks to formulate a partnership development model between BUMDes/BUMKam and KDKMPs that is applicable, adaptive, and aligned with the principles of Siak Hijau.

This study aims to examine and formulate a partnership model between BUMKam and KDKMPs in supporting the implementation of the Kampung Hijau program in Siak Regency. Specifically, this study seeks to identify the institutional roles and characteristics of BUMKam and KDKMPs, analyze the potential and challenges of their collaboration within the context of green village economy development, and develop a Tetrapreneur-based partnership model that is adaptive, complementary, and aligned with the principles of sustainable development.

2. Methods

This study employs a qualitative approach with an exploratory design aimed at gaining an in-depth understanding of the partnership dynamics between BUMKam and KDKMPs in supporting the Kampung Hijau program in Siak Regency. The exploratory design was chosen because this partnership phenomenon is still emerging, particularly following the launch of the KDKMP program in 2025, thus requiring an in-depth examination of the context, actor dynamics, and institutional practices that are not yet well established (Creswell, 2015). This approach enables the researchers to capture the meanings, perspectives, and social processes that emerge within both types of village-level economic institution.

The research was carried out in Siak Regency, Riau Province, an area known for its relatively strong commitment to green policy initiatives. Informants were selected purposively to capture perspectives from key institutional actors, including BUMKam administrators, KDKMP administrators, village government officials, members of the Satuan Tugas Percepatan Pembentukan Koperasi Desa/Kelurahan Merah Putih [Task Force for the Acceleration of Red-and-White Rural/Urban Village Cooperative Formation] (Satgas KDKMP), and representatives from relevant local government agencies and nongovernmental organizations. Data collection involved in-depth interviews, focus group discussions, observation, and document analysis. The focus group discussions were used not only to validate initial findings but also to provide a space for stakeholders to share and compare their perspectives in a collective discussion setting (Shabina et al., 2024). In addition, secondary data were drawn from policy documents related to the Kampung Hijau program, BUMDes/BUMKam, KDKMPs, and relevant literature on village-level economic institutions and the green economy. The data analysis proceeded through several stages, beginning with transcription and data organization, followed by initial coding to identify emerging themes. These themes were further grouped based on the four dimensions of the Tetrapreneur framework (Chainpreneur, Marketpreneur, Qualitypreneur, and Brandpreneur) and then interpreted to develop a conceptual partnership model that reflects the field findings and is consistent with the principles of the Kampung Hijau program.

3. Results and Discussion

The village-level economic institutions in Siak Regency comprise at least two main actors: BUMKam and KDKMPs. The presence of these two types of village-level economic institution signifies a transformation in village economic governance in support of the green development agenda promoted through the Siak Kabupaten Hijau policy. BUMKam in Siak Regency have evolved into a strategic instrument since being mandated under regional autonomy policies, a role further reinforced by UU No. 6/2014, which positions villages as economic entities capable of managing local assets and potential independently. Currently, there are 122 BUMKam in Siak Regency, as illustrated in Figure 3.

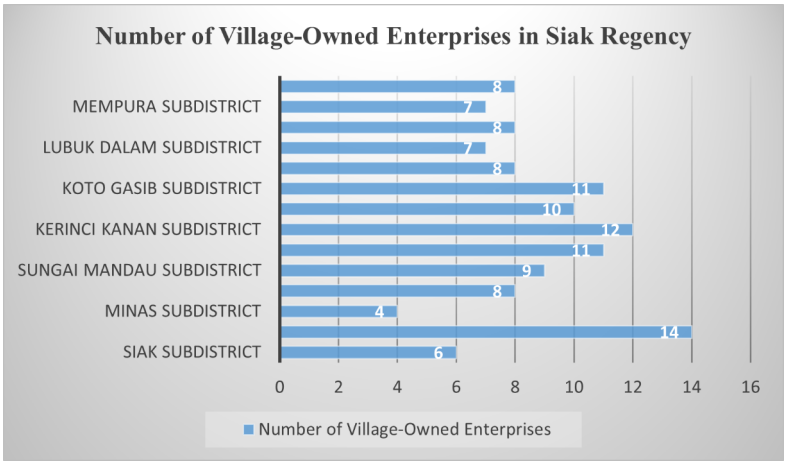


Figure 3. Distribution of Badan Usaha Milik Kampung [Village-Owned Enterprises] (BUMKam) by Subdistrict in Siak Regency

Source: Siak Regency Government. (2025)

The distribution of BUMKam also varies in terms of their classification: 60 are categorized as advanced, 14 as developing, 21 as emerging, 17 as early-stage, and 10 remain unclassified. This indicates that although the number of BUMKam is relatively evenly spread across villages, their capacity levels differ significantly. Such conditions affect their ability to participate actively in green development initiatives. The uneven capacity of BUMKam reflects structural challenges related to institutional disparities within village economic governance in Siak Regency.

To strengthen village-level economic institutions, KDKMPs have emerged as a new type of institution established under Inpres No. 9/2025, and in Siak Regency further reinforced through Keputusan Bupati Siak Nomor 100.3.3.2/598/HK/KPTS/2025 tentang Satuan Tugas Percepatan Pembentukan Koperasi Desa/Kelurahan Merah Putih. In its initial phase, the KDKMP program in Siak Regency has demonstrated rapid institutional adoption covering all 122 rural villages and 9 urban villages, consistent with the national formation target. Based on data compiled from the Koperasi Desa/Kelurahan Merah Putih dashboard (Koperasi Desa/Kelurahan Merah Putih, n.d.), a total of 131 legally registered KDKMPs have been established across the regency, consisting of 122 units at the rural village level and 9 units at the urban village level, with 109 active service outlets already in operation. Table 1 presents the types and number of active service outlets.

Table 1. Types of Koperasi Desa/Kelurahan Merah Putih [Red-and-White Rural/Urban Village Cooperative] (KDKMP) Service Outlets in Siak Regency

No.	Type of Service Outlet	Number of Active Service Outlets
1	Basic Goods Outlet	14
2	Village Pharmacy	4
3	Cooperative Office Outlet	67
4	Savings and Loan Unit Outlet	8
5	Village Clinic Outlet	4
6	Cold Storage/Cold Chain Outlet	8
7	Other Businesses	2
8	Fertilizer Outlet	2

Source: Koperasi Desa/Kelurahan Merah Putih. (Retrieved September 12, 2025)

The current condition of active KDKMP service outlets presents opportunities for integration with green development objectives at the village level. However, interview findings indicate that KDKMPs formed in this initial phase also face challenges, as they are still in the early stages of development, including the establishment of service outlets and adjustments to regulations that restrict their business activities to those mandated by the Inpres. This is consistent with the

literature, which suggests that newly formed institutions generally require time for organizational stabilization before they can build effective inter-institutional collaboration (Laila & Habibi, 2023). This difference in institutional maturity becomes a key context for understanding the partnership dynamics between BUMKam and KDKMPs in Siak Regency.

Several areas of potential arise from the establishment of KDKMPs: they can build a broad membership base, mobilize community participation, and receive central government support enabling partnerships with state-owned banks or suppliers of consumer goods and necessities. However, field findings also reveal several institutional challenges:

1. a limited variety of business units, as KDKMPs must comply with the provisions of the Inpres;
2. concerns about functional overlap with BUMKam business units; and
3. the absence of partnership guidelines governing collaboration with BUMKam.

3.1. Green Policy Framework

The Siak Kabupaten Hijau policy framework serves as the key foundation for promoting ecology-based rural development, defining the Siak Hijau vision as a development approach that emphasizes the balance among economic growth, environmental conservation, and social well-being (Febrina et al., 2025). Through Perda Kab. Siak No. 4/2022, four main directions of green development are outlined as guiding principles, namely:

1. halting the degradation of natural resources, particularly peatlands and river basins (watersheds);
2. promoting economic growth based on sustainability principles;
3. utilizing natural resources without damaging their functions or long-term viability; and
4. reducing greenhouse gas emissions.

These policy directions are further reinforced by Peraturan Bupati Siak Nomor 25 Tahun 2025 tentang Rencana Aksi Daerah Siak Kabupaten Hijau Tahun 2025–2029 [Regent Regulation of Siak No. 25 of 2025 on the Siak Green Regency Regional Action Plan 2025–2029] (Perbup Siak No. 25/2025), which serves as the implementing document of Perda Kab. Siak No. 4/2022. Perbup Siak No. 25/2025 outlines programs, strategic issues, problems, and strategies that will guide villages in designing activities to support the achievement of the Siak Hijau vision. Moreover, this policy framework receives operational support through Peraturan Bupati Siak Nomor 88 Tahun 2024 tentang Perubahan atas Peraturan Bupati Siak Nomor 114 Tahun 2022 tentang Pedoman Pengelolaan Bantuan Keuangan Khusus kepada Kampung untuk Mendukung Pencapaian Tujuan Siak Kabupaten Hijau [Regent Regulation of Siak No. 88 of 2024 on the Amendment to Regent Regulation of Siak No. 114 of 2022 on Guidelines for the Management of Special Financial Assistance to Villages in Support of Achieving Siak Green Regency Goals], which provides operational guidelines for the use of the Bantuan Keuangan Khusus [special financial assistance to villages] (BKK) to support the realization of Siak Kabupaten Hijau. Article 14, paragraphs (1) and (2) of the regent regulation stipulate that the BKK must be used exclusively to finance village development activities aligned with the Siak Hijau policy directions and meeting the following eligibility criteria:

1. waste management;
2. environmental and settlement sanitation;
3. wastewater management and treatment;

4. prevention and mitigation of forest and land fires;
5. sustainable agriculture and fisheries development;
6. social forestry management;
7. peatland restoration;
8. watershed reforestation;
9. mangrove management;
10. village greening; and
11. community economic empowerment based on sustainable agriculture, fisheries, and livestock.

These criteria provide a clear picture of the types of activities that can be supported through this financial assistance and directly shape the partnership opportunities between BUMKam and KDKMPs. For instance, in areas such as waste management, wastewater treatment, and village greening, BUMKam can take on the role of operators, while KDKMPs can serve as distribution channels for related products, including compost, recycled materials, and environmentally friendly agricultural goods. The BKK may also provide initial funding for green business units, allowing partnership models to be developed in line with village needs and priorities. However, field findings suggest that, although the policy creates room for collaboration, the absence of clear technical guidelines on how these partnerships should be structured has limited the full integration of these two types of institution.

3.2. Tetrapreneur Framework

The Tetrapreneur framework offers four main pillars—Chainpreneur, Marketpreneur, Qualitypreneur, and Brandpreneur (Makhasi et al., 2025). This framework is relevant to the context of Siak Regency because the green development orientation requires a green economic value chain spanning from production and distribution to the development of an environmentally friendly identity (green branding).

3.2.1. Chainpreneur

The Chainpreneur dimension emphasizes the importance of integrating the supply chain from upstream to downstream to ensure sustainability. BUMKam hold a strategic position because, according to UU No. 6/2014, village assets and potential may be managed by them. Field findings indicate that BUMKam can optimize this role across sectors aligned with the Siak Hijau agenda, including waste management, organic waste processing, sustainable agriculture, and aquaculture. KDKMPs can play a complementary role by supporting distribution channels, such as through fertilizer outlets or logistics services. This integration of roles enables the establishment of a green supply chain; for instance, BUMKam could produce compost from village organic waste, while KDKMPs distribute it to agricultural markets or to other networks within their membership.

3.2.2. Marketpreneur

The Marketpreneur dimension focuses on institutional capacity to expand market networks and strengthen product accessibility—essentially, how village products can reach markets beyond the village itself. Unlike Chainpreneur, which emphasizes internal supply chain processes within the village, Marketpreneur highlights efforts to widen market reach. KDKMPs' broader cooperative network can be utilized as a strategic advantage, enabling village products to connect with markets at the subdistrict and even regency levels. Market expansion is crucial because green business units often struggle not because of low production capacity but because their market share remains limited. For BUMKam, the Marketpreneur role of KDKMPs provides room to focus on strengthening production, while marketing

responsibilities can be delegated to them. Such a partnership is well aligned with on-the-ground conditions and helps prevent functional overlap that is often a concern for village governments.

3.2.3. Qualitypreneur

The Qualitypreneur dimension emphasizes standardization, training, and human resource capacity building for both types of village-level economic institution. The local government, through regional agencies and the Satgas KDKMP, plays an important role as a facilitator for various capacity-building efforts. Activities supported by the BKK, such as waste management and organic agriculture, require standardized procedures so that the resulting products can meet market requirements. For example, compost produced by BUMKam must meet specific moisture and composition standards to be marketed by KDKMPs. Similarly, organic agricultural products require mentoring and training to ensure they are genuinely free from chemical inputs and suitable for market distribution. In this dimension, the resulting partnership constitutes an ecosystem of quality assurance: BUMKam maintain product quality at the production level, while KDKMPs disseminate knowledge to members and consumers.

3.2.4. Brandpreneur

The Brandpreneur dimension requires strong product identity and branding. The overarching narrative of Siak Hijau provides a strategic opportunity for village products in Siak Regency to be more easily distinguished from those produced in other regions. Strengthening this identity goes beyond naming—it reflects a commitment to environmental sustainability, which can enhance local pride and attract consumer interest. Branding may also enhance product competitiveness, as labels such as "Siak Hijau" or "Sustainable" could serve as a long-term competitive advantage. Thus, developing a shared identity or brand is not merely a business strategy but also a way to build legitimacy and consumer trust.

3.3. BUMKam and KDKMP Partnership Model

The findings suggest that the role of the local government is particularly important in bridging the relationship between BUMKam and KDKMPs. In practice, the absence of clear guidance has made the interaction between these two types of village-level economic institution less than optimal, with some indications of functional overlap. This points to the need for a more deliberate effort from the Siak Regency Government to provide clearer direction, whether through practical partnership guidelines, better alignment with existing green development policies, or more consistent capacity-building support. With these efforts in place, the collaboration between these two types of institution can develop in a more coordinated way and better support the implementation of the Kampung Hijau program. Before proposing the partnership model, it is important to understand the



Figure 4. Existing Conditions of Badan Usaha Milik Kampung [Village-Owned Enterprises] (BUMKam) and Koperasi Desa/Kelurahan Merah Putih [Red-and-White Rural/Urban Village Cooperatives] (KDKMPs) Based on the Tetrapreneur Framework

Source: Constructed by the authors. (2025)

existing conditions of BUMKam and KDKMPs through the lens of the Tetrapreneur framework.

Although several challenges have been outlined in the previous section, the partnership opportunities between BUMKam and KDKMPs are in fact substantial. These opportunities arise not only from the operational needs of both types of institution but also from the regional policy design that promotes green economic development through collaboration. The first opportunity comes from the Siak Kabupaten Hijau policy framework: Perda Kab. Siak No. 4/2022 and Perbup Siak No. 25/2025 provide clear direction that villages are key actors in natural resource management and green economic development. With the BKK, which can only be used for environmentally oriented activities—from waste management to ecosystem restoration—villages have fiscal space that can serve as a catalyst for establishing green business units. Furthermore, within the Tetrapreneur framework, both institutions possess strengths that complement one another, allowing partnerships to create efficient, sustainable, and community-based supply chains. Additional opportunities arise from village needs aligned with the Kampung Hijau program: the 11 types of activities eligible for BKK funding correspond to sectors that can create opportunities for green economic partnerships. For example, in waste management, BUMKam can process organic waste into compost while KDKMPs distribute it; in sustainable agriculture, BUMKam can manage farming operations while KDKMPs supply fertilizers and seeds.

The proposed partnership model outlines a clear division of roles between BUMKam and KDKMPs at each stage of the green economy value chain. In the production phase, BUMKam serve as the primary actor because they hold the mandate to manage village assets and potential. In the distribution and marketing phases, the primary role shifts to KDKMPs, which leverage their networks and business outlets, giving them stronger capacity for market expansion and product distribution. However, an equally important role is held by the local government. Through the Badan Perencanaan Pembangunan, Riset, dan Inovasi Daerah [Regional Development Planning, Research, and Innovation Agency], the Satgas KDKMP, the Dinas Pemberdayaan Masyarakat dan Desa [Village and Community Empowerment Office], the Dinas Lingkungan Hidup [Environmental Agency], and the Dinas Koperasi dan Usaha Mikro Kecil dan Menengah [Office of Cooperatives and Micro, Small, and Medium Enterprises], the government acts as a facilitator to ensure that BUMKam and KDKMP business units apply proper standards in implementing green initiatives across villages.

Institutionally, the proposed partnership model is designed around the "Three Pillars of the Kampung Hijau Economy" framework. This scheme integrates the three critical points of the green economy value chain in Siak Regency—production, markets, and human resource capacity—which collectively determine the success of the Kampung Hijau program. BUMKam serve as the production actor, KDKMPs function as the distribution actor, and the local government acts as the facilitator. This scheme is illustrated in Figure 5.

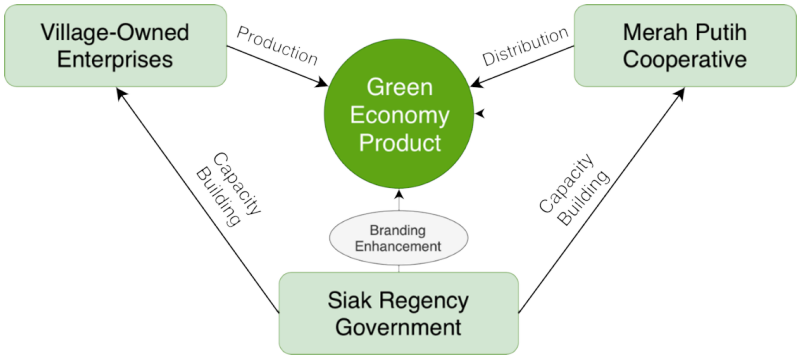


Figure 5. "Three Pillars of the Kampung Hijau [Green Village] Economy" Partnership Scheme

Source: Constructed by the authors. (2025)

This model is consistent with the characteristics of the Siak Hijau policy, as it has the potential to optimize the roles of these two types of institution, each possessing different socio-economic foundations and institutional capacities. For villages receiving the BKK, this partnership model provides a framework for how green business units can be managed collaboratively. Thus, the BUMKam–KDKMP partnership model has the potential to maximize opportunities for collaboration in supporting the implementation of the Siak Hijau policy.

4. Conclusion

The findings of this study indicate that both Badan Usaha Milik Kampung [village-owned enterprises] (BUMKam) and Koperasi Desa/Kelurahan Merah Putih [Red-and-White rural/urban village cooperatives] (KDKMPs) in Siak Regency play important roles in supporting village-level economic development, particularly within the context of the Kampung Hijau [Green Village] program. However, field findings reveal not only institutional potential but also a noticeable gap in readiness. BUMKam tend to be more established, as evidenced by their longer experience in managing village-based economic activities and engaging with local communities. In contrast, KDKMPs, launched in 2025, are still undergoing internal consolidation in terms of both their organizational structure and operational direction. This difference helps explain why, despite the available opportunities for collaboration, a structured partnership has not yet fully developed in practice.

From a policy standpoint, Siak Regency already provides a relatively strong foundation for green economic development. Regulatory instruments such as the Siak Kabupaten Hijau [Siak Green Regency] policy framework, the Rencana Aksi Daerah Siak Kabupaten Hijau Tahun 2025–2029 [Siak Green Regency Regional Action Plan 2025–2029], and the Bantuan Keuangan Khusus [special financial assistance to villages] have created both direction and fiscal space for environmentally oriented economic activities. However, field findings suggest that this enabling environment has not yet been fully translated into collaborative institutional practices at the village level. In several cases, uncertainties regarding institutional roles, as well as concerns about functional overlap in business activities, were still evident, particularly in relation to the types of business units mandated for KDKMPs. This situation indicates that policy support alone is not sufficient without clearer operational alignment at the local level.

This study also contributes to discussion of the Global Gotong Royong (G2R) Tetrapreneur framework's applicability beyond the analysis of rural entrepreneurship. The findings suggest that the framework can be used to better understand and map institutional relationships between village-level economic actors. The four dimensions—Chainpreneur, Marketpreneur, Qualitypreneur, and Brandpreneur—offer a conceptual way to understand how roles can be shared in a complementary manner. In the context of Siak Regency, this perspective suggests that collaboration between BUMKam and KDKMPs is not only possible but can be structured in a way that reduces functional overlap while strengthening the role of each type of institution within the green economy ecosystem.

In terms of practical implications, the role of the local government is particularly crucial. The findings indicate that the BUMKam–KDKMP partnership is unlikely to develop organically without facilitation, especially given that KDKMPs are still in their early stages of development. Therefore, efforts such as formulating clear partnership guidelines, strengthening institutional capacity, and aligning green policy instruments with village-level economic practices are needed. The "Three Pillars of the Kampung Hijau Economy" model proposed in this study offers a more grounded reference for structuring such collaboration, particularly in linking production, distribution, and institutional support in a coherent manner.

At the same time, this study recognizes several limitations. KDKMPs are still in their early stages of development, which makes it difficult to observe stable patterns of collaboration or assess long-term institutional performance. In addition, although interviews and focus group discussions offered valuable insights, the depth of information was at times limited, as many informants were still trying to understand the role of KDKMPs within the village economy. Furthermore, this study is based on a single regional context, so the findings need to be interpreted with caution when applied to other regions that may have different institutional settings. Given these limitations, further research is needed to better understand how the BUMKam–KDKMP partnership develops over time, particularly as KDKMPs become more institutionally established. Comparative studies across regions could also help provide a broader perspective on how different policy environments and local conditions shape village-level economic collaboration.

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