

A TRIPLE HELIX MODEL FOR SUSTAINABLE COMMUNITY EMPOWERMENT: A CASE STUDY OF OROBULU VILLAGE

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Abstrak: Pembangunan desa berkelanjutan menjadi isu strategis yang menuntut kolaborasi lintas pemangku kepentingan untuk mengoptimalkan potensi lokal. Namun, sebagian besar penelitian masih berfokus pada intervensi sektoral, sehingga mengabaikan integrasi peran perguruan tinggi, pemerintah desa, dan pelaku usaha lokal secara sinergis. Artikel ini menawarkan penerapan Model Triple Helix sebagai pendekatan kolaboratif untuk memperkuat tata kelola desa, meningkatkan akses terhadap teknologi, serta mendorong pemberdayaan ekonomi lokal. Penelitian ini menggunakan metode studi literatur dan analisis konseptual untuk merumuskan model implementasi bertahap yang relevan dengan konteks pedesaan di Indonesia. Kontribusi utama penelitian ini terletak pada penekanan integrasi pengetahuan akademik, kebijakan desa berbasis bukti, dan inovasi kewirausahaan lokal dalam satu kerangka berkelanjutan. Dengan demikian, artikel ini tidak hanya memperkaya diskursus teoritis mengenai pembangunan desa, tetapi juga menawarkan kerangka praktis yang dapat diadaptasi dalam program pengabdian masyarakat perguruan tinggi dan inisiatif pembangunan antar-desa.

Kata Kunci: Pembangunan pedesaan berkelanjutan, Model Triple Helix, tata kelola desa, kewirausahaan lokal, inovasi, Indonesia

Abstract: Sustainable rural development is a strategic issue that requires cross-stakeholder collaboration to optimize local potential. However, most studies still focus on sectoral interventions, neglecting the integration of universities, village governments, and local enterprises in a synergistic manner. This article proposes the application of the Triple Helix Model as a collaborative approach to strengthen village governance, enhance access to technology, and foster local economic empowerment. The study employs literature review and conceptual analysis to formulate a step-by-step implementation model relevant to rural contexts in Indonesia. The main contribution of this research lies in emphasizing the integration of academic knowledge, evidence-based village policies, and local entrepreneurial innovation within a sustainable framework. Accordingly, this article not only enriches the theoretical discourse on rural development but also

provides a practical framework that can be adapted to university community service programs and broader inter-village development initiatives.

Keywords: Sustainable rural development, Triple Helix Model, village governance, local entrepreneurship, innovation, Indonesia

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INTRODUCTION

In the past five years, innovations in village development have gained significant attention as local communities strive to overcome the complexities of rural life. With the growing need for sustainable development, several villages have adopted new approaches to address issues such as poverty, education, and infrastructure. One notable example is the increase in community-based participatory approaches, which empower villagers to take part in the decision-making process, ensuring that the development programs are aligned with the local needs. For instance, village-driven initiatives like the "Desa Mandiri" (Independent Village) program in Indonesia have provided a blueprint for how rural areas can thrive by utilizing local resources and integrating grassroots knowledge. These initiatives demonstrate how localized and inclusive decision-making can lead to successful rural transformation.¹

A significant trend in village development innovation has been the use of technology to enhance agricultural productivity and economic resilience. Over the past five years, many villages have begun to incorporate digital platforms to support farmers in adopting modern agricultural practices. The introduction of mobile applications for crop monitoring, pest management, and access to market information has been revolutionary. These technologies enable farmers to increase yields, reduce costs, and improve their livelihoods. A case in point is the implementation of the "e-Katalog Desa" in several rural areas of Java, where digital tools connect local farmers directly to buyers, bypassing intermediaries and ensuring better

¹ W. Rasailli, D. F. Suharyanto, A. Andiriyanto, N. S. Fitriyah, Zarnuji, & Puspaningrum, "Inovasi Desa Mandiri: Integrasi Agile Governance dan Pembangunan Berkelanjutan dalam Tata Kelola Pedesaan". *Matra Pembaruan: Jurnal Inovasi Kebijakan*, 8 (1), (2024): 45–60.

market prices for their produce.²

Furthermore, partnerships between universities and rural communities have become a catalyst for innovation in village development. Universities have played a key role by conducting research that addresses specific local challenges³, from water management to education. One example is the collaboration between Gadjah Mada University and the village of Kalibening in Central Java, where students and faculty worked alongside the community to develop sustainable irrigation systems. This collaboration has not only provided technical expertise but also fostered a culture of knowledge exchange between academics and rural populations, ultimately improving the village's agricultural practices and enhancing its economic stability.⁴

In addition to technology and research collaborations, the role of local businesses in village development cannot be understated. Over the last five years, there has been a noticeable increase in the involvement of small and medium enterprises (SMEs) in rural areas, which have become instrumental in driving local economic growth.⁵ The emergence of community-based enterprises, such as cooperatives, has contributed to local job creation and improved access to goods and services.⁶ The village of Cikupa in Banten, for instance, has seen remarkable progress through its eco-tourism initiatives, which combine the expertise of local entrepreneurs with the sustainable use of natural resources. These business models not only create economic opportunities but also help to preserve the environment, making

² Nani Purwati, Tri Wahyudi, Akhmad Syukron, Elly Muningsih, "Digitalisasi Produk BUMDES Berbasis e-Katalog Sebagai Strategi Promosi yang Berdaya Saing". *Jurnal Masyarakat Mandiri*, Vol. 8, No. 5, October, (2024): 5174-5181.

³ L. Leydesdorff, *The Knowledge-Based Economy and The Triple Helix Model*. *Annual Review of Information Science and Technology*, Vol. 44, 2010: 367-417.

⁴ Sandra Šumane, Karlheinz Knickel, Agnes Strauss, Talis Tisenkopfs, Ignacio des Ios Rios, Maria Rivera, Tzruya Chebach, Amit Ashkenazy, I. Kunda. "Local and farmers' knowledge matters! How integrating informal and formal knowledge enhances sustainable and resilient agriculture". *Journal of Rural Studies*. 59. (2018): 232-241. 10.1016/j.jrurstud.2017.01.020.

⁵ Arinta Kusumawardhani, dkk, "Penguatan Ekonomi Lokal Melalui Pendirian Koperasi Petani", *Jurnal SEMAR (Jurnal Ilmu Pengetahuan, Teknologi, dan Seni bagi Masyarakat)*, 14 (1), (2025): 186-192, DOI: <https://doi.org/10.20961/semar.v14i1.98005>.

⁶ Kusuma, "Koperasi Di Amerika, Australia Dan Eropa", *Management and Sustainable Development Journal*, 4(1), 2022, <https://doi.org/10.46229/msdj.v4i1.428>.

them crucial for sustainable village development.⁷

The role of policy frameworks supporting village innovation has become a cornerstone in recent years. The Indonesian government's focus on "Pembangunan Desa Berkelanjutan" (Sustainable Village Development) has led to the establishment of various funding mechanisms and policy initiatives aimed at fostering innovation. The introduction of the Village Fund program has provided direct financial support to villages for implementing their own development plans. These funds, combined with technical assistance from local governments and academic institutions, have empowered villages to design and implement projects that address their unique challenges. As highlighted by Suryani, the integration of governmental policy, local knowledge, and external expertise has been a key factor in driving successful innovations in rural areas.⁸

The Triple Helix Model has gained recognition as an effective approach to fostering sustainable village development, integrating the roles of academia, government, and local businesses. The pilot project conducted by the UINSA community service team in Desa Orobulu, Kecamatan Rembang, Kabupaten Pasuruan, serves as a prime example of this model in action. By collaborating with local government bodies, academic institutions, and the village's small businesses, the project has shown how such partnerships can effectively address pressing issues such as economic empowerment, local infrastructure development, and educational advancement.⁹ This model emphasizes the sharing of knowledge and resources to create a more holistic and resilient village ecosystem.

One of the key outcomes of the Triple Helix approach in Desa Orobulu has been the development of a knowledge-sharing platform between

⁷ Dinda Fitria Ningrum, Sugiyanto. "Empowerment of A Community of Bamboo Hat Craftsmanships Based on Creative Economics on Community Productivity in Cikupa Village, Tangerang District", *HUMANIS, Humanities, Management, and Science Proceedings*. Vol.4 No.1, (December 2023)

⁸ A.C.D. Loor, T.W. Moss, dan S. Han, "Rural and Urban Place Renewal in Cross-Sector Partnerships" *Journal of Business Ethics*, Vol. 184 (2023): 793–812.

⁹ Hamidah, Sandra dan Ika Ruhana, "Pemberdayaan Masyarakat dengan Pendekatan Triple Helix untuk Pengembangan Kompetensi Wirausaha Masyarakat Desa Mandiri Energi", *Jurnal Ilmiah Administrasi Publik (JIAP)*, 294-302. DOI: <https://doi.org/10.21776/ub.jiap.2019.005.03.5>

UINSA and the village community. The partnership has enabled the transfer of academic expertise into practical applications for the village.¹⁰ For example, the UINSA team conducted training sessions on sustainable agricultural practices, providing farmers with the knowledge to improve crop yields while preserving local biodiversity. These initiatives have not only enhanced agricultural productivity but have also played a crucial role in the Triple Helix model, which has played a crucial role in the economic development of Desa Orobulu. Through collaboration with university researchers, local entrepreneurs have been introduced to innovative business models and sustainable practices, particularly in the areas of eco-tourism and agribusiness. By leveraging both local knowledge and academic research, businesses in the village have been able to diversify their offerings and expand their market reach. This has led to an increase in local employment opportunities and a stronger local economy, demonstrating the significant impact that cross-sector partnerships can have on rural development.¹¹

The governmental component of the Triple Helix model has also been instrumental in supporting the project's success. The local government of Rembang has provided both financial support and regulatory facilitation, ensuring that the initiatives are aligned with the village's broader development goals. The collaboration between government officials, academia, and local businesses has resulted in the creation of policies that promote sustainable development, such as incentives for eco-friendly business practices and support for smallholder farmers. This synergy has demonstrated how government, when working in tandem with academia and local businesses, can create an enabling environment for sustainable growth.¹²

¹⁰ Sheffield, E. C., & Sheffield, E. C., "Toward Radicalizing Community Service Learning", *American Educational Studies Association*, Vol. 51. No. 1. 2015. DOI: <https://doi.org/10.1080/00131946.2014.983637>.

¹¹ H. Etzkowitz & L. Leydesdorff, *The Dynamics of Innovation: From National Systems and 'Mode 2' to a Triple Helix of University-Industry-Government Relations Policy*, Vol. 29, No. 22, pp. 100-123, 2000.

¹² A. Jaelani, "Triple Helix sebagai Model bagi Inovasi Pendidikan Tinggi: Analisis Logika Kelembagaan dalam Pengembangan Kewirausahaan dan Ekonomi", *AL-AMWAL: Jurnal Ekonomi Dan Perbankan Syari'ah*, Vol 11 (1), (2019): 121-138.

Lastly, the success of the Triple Helix model in Desa Orobulu serves as a potential blueprint for other villages seeking sustainable development solutions. The combination of academic expertise, governmental support, and local entrepreneurship has proven to be a powerful tool in overcoming the challenges faced by rural communities. By scaling up these efforts and adapting them to other local contexts, the model has the potential to transform villages across Indonesia. As highlighted by the UINSA community service team, the integration of these three sectors is essential for creating a sustainable and resilient future for rural communities.

RESEARCH METHODOLOGY

The Asset-Based Community Development (ABCD) approach has emerged as a powerful method for community empowerment, focusing on local assets and strengths rather than deficiencies. Unlike traditional needs-based development models that emphasize the gaps and challenges of a community, ABCD shifts the perspective toward identifying and leveraging the existing resources, skills, and capacities within a community. The comparison between the asset-based community development (ABCD) approach and traditional needs-based methods, finding that while both lead to change at personal, organizational, and community levels, the ABCD approach fosters deeper, more sustainable community engagement by empowering members to lead their own development through asset co-investment, whereas needs-based approaches, while more effective in the short term, often result in less sustainable outcomes due to a reliance on external support and problem-driven initiatives.¹³ In the case of Orobulu Village, Rembang, Pasuruan, this approach has been integrated with the Triple Helix model of collaboration, bringing together universities, local government, and the business sector to enhance local development efforts. By using ABCD, Orobulu Village can empower its residents, fostering a more sustainable and self-reliant community.

¹³ Hanna Nel, "A Comparison between the Asset-oriented and Needs-based Community Development Approaches in Terms of Systems Changes". *Practice*. 30. (2017): 1-20. 10.1080/09503153.2017.1360474.

The first phase of the ABCD process, Discovery, involves mapping out the existing strengths and resources within the community.¹⁴ This includes identifying human resources, physical assets, local organizations, and social networks that can be mobilized for development. In Orobulu, community members, including women, youth groups, and local businesses, have valuable skills and knowledge that can serve as the foundation for broader development initiatives. By engaging with these local actors through participatory methods such as focus group discussions (FGDs), the village can create a comprehensive inventory of resources that will inform the next stages of the process.

Once the community's assets have been identified, the next phase is Dream, where community members collectively envision the future they want to create. This phase is critical in fostering a shared vision for the village's development, and it provides a sense of direction for the community. In Orobulu, this step has involved a series of workshops and community meetings facilitated by local leaders, academics from UINSA, and business partners. The Dream phase encourages participants to think big about their village's potential, whether in terms of economic growth, social cohesion, or environmental sustainability.¹⁵ This vision will become the guiding light for all subsequent actions, ensuring that development is aligned with the community's aspirations.

The Design phase focuses on translating the Dream into concrete strategies and actions.¹⁶ This is where the Triple Helix model comes into play, as it provides a platform for collaboration between universities, government, and businesses to co-create solutions tailored to the community's needs. In Orobulu, this has meant developing programs that integrate local knowledge with academic expertise and business innovation. For example, local farmers may work with university researchers to improve agricultural techniques, while local businesses collaborate with universities to develop new products or services. The Design phase ensures

¹⁴ Dani Wahyu Munggoro dan Budhita Kasmadi, *Panduan Fasilitator*, (Indonesia Australia Partnership: IDSS Acces Phase II, 2008).

¹⁵ Ibid.

¹⁶ Ibid.

that the solutions developed are not only aspirational but also practical, feasible, and grounded in local reality.

In the Define phase, the community solidifies the specific goals, roles, and responsibilities needed to achieve the desired outcomes.¹⁷ This phase involves a more formalized approach, setting clear timelines, defining roles, and allocating resources. In Orobulu, this has included establishing a steering committee composed of representatives from the village government, UINSA, and local business leaders. This committee is responsible for coordinating the implementation of the agreed-upon projects and ensuring that the resources identified in the Discovery phase are effectively utilized. By clearly defining roles and responsibilities, the community ensures that everyone is aligned and accountable in the pursuit of their shared goals.

The final phase of ABCD is Destiny, where the community begins to implement the plans developed in the previous stages and ensures long-term sustainability.¹⁸ In Orobulu, this phase involves the actual rollout of initiatives such as community-run enterprises, educational programs, and local health campaigns. It also emphasizes the importance of continuous engagement, monitoring, and evaluation to ensure the initiatives remain relevant and effective. The involvement of UINSA, as a knowledge partner, provides ongoing support in terms of technical expertise, research, and innovation. Local businesses, meanwhile, play a critical role in ensuring the financial viability and market integration of these initiatives. Sustainability is achieved through a combination of local ownership, continuous collaboration, and a strong commitment to shared goals.

The integration of the ABCD approach with the Triple Helix model in Orobulu Village exemplifies a synergistic approach to sustainable community development. By leveraging the strengths of local assets, fostering a shared vision, and co-designing solutions through collaboration between academia, government, and business, the village is positioned to

¹⁷ Ibid.

¹⁸ Ibid.

achieve meaningful and lasting change.¹⁹ This model not only addresses immediate developmental challenges but also builds the capacity of the community to drive its own growth and resilience in the future. Orobulu's experience demonstrates that by focusing on assets, engaging all stakeholders, and implementing a clear, shared plan, rural communities can successfully navigate the complexities of sustainable development.

RESULTS AND DISCUSSION

Triple Helix as a Framework for Rural Development

The community service process in Orobulu Village has been a transformative journey underpinned by the Triple Helix Model of innovation, which fosters collaboration between academia, local government, and the business sector. This model guided the development of the village by leveraging the unique resources, expertise, and support of each of these three pillars. By engaging with UINSA (the university), the local government of Rembang, and local entrepreneurs, the community service program was able to design a tailored approach to address Orobulu's most pressing challenges. These activities were not only aimed at solving immediate issues but were also intended to catalyze long-term social change and institutional strengthening. The Triple Helix Model ensured that solutions were not only practical but also sustainable, rooted in the strengths of each stakeholder group working together.

A central feature of the community service process was the application of the Asset-Based Community Development (ABCD) methodology, which complements the Triple Helix Model by focusing on the strengths and capacities already present within the community. This approach involved conducting asset-mapping exercises to identify local resources such as skills, leadership, and entrepreneurial initiatives. The role of UINSA as an academic institution was crucial in providing research and educational support during this phase. Meanwhile, the local government facilitated access to resources and policy guidance, while businesses played

¹⁹ Abd Razak, Azley, dan Gareth White, "The Triple Helix Model for Innovation: A Holistic Exploration of Barriers and Enablers," *International Journal of Business Performance and Supply Chain Modelling*, Vol. 7 (2015): 278–291, <https://doi.org/10.1504/IJBPSM.2015.071600>.

a key role in identifying market opportunities and providing technical assistance. The process encouraged the community to recognize and harness its own assets, building a sense of pride, ownership, and collaboration that has led to a deeper commitment to the ongoing development process.²⁰

Through the implementation of the Triple Helix Model, new social institutions emerged within the community that are set to drive future development. One of the most prominent outcomes was the formation of the Karang Taruna (youth organization), which was established as part of the efforts to foster youth leadership and participation. In line with the Triple Helix framework, this organization was designed to bridge the generational gap and create a space for the younger population to take an active role in the decision-making processes. The university's involvement provided knowledge and technical training to the youth, while the government supported the institutionalization of Karang Taruna by integrating it into local governance structures. Local businesses, on the other hand, offered mentorship and resources to help the youth develop entrepreneurial initiatives. This combination of academic, governmental, and entrepreneurial support has laid the foundation for a sustainable and vibrant institution capable of contributing to the village's long-term development.²¹

A key success of the Triple Helix Model was the rise of local leaders who emerged as key drivers of social change within Orobulu. These leaders, empowered by the collaboration of university researchers, government officials, and local business figures, have begun to take ownership of community initiatives. Many of these new leaders were women and youth who had previously been marginalized in local governance and development efforts. The university's role in providing leadership training,

²⁰ S. Ward, "Using theory-based evaluation to understand what works in asset-based community development", *Community Development Journal*, Vol. 58, No.2 (2023): 206-224, DOI: <https://doi.org/10.1093/cdj/bsab046>.

²¹ Regan Vaughan, "Strategi Sumber Daya Aparatur Pemerintah Desa Dalam Meningkatkan Pengembangan Pariwisata Desa Cintaratu Kabupaten Pangandaran", *Kebijakan: Jurnal Ilmu Administrasi*, Volume 14, Nomor 2 (2023), DOI: <https://doi.org/10.23969/kebijakan.v14i2.8649>.

while the government offered policy frameworks for local governance, and the business sector provided opportunities for practical involvement, allowed these individuals to develop their leadership skills in a holistic manner. As a result, the village now has a new generation of leaders who are not only taking active roles in local governance but also spearheading social and economic initiatives aimed at improving the village's wellbeing.

The Triple Helix Model has also brought about significant shifts in social behavior and community engagement. Before the intervention, many community members were accustomed to external assistance, relying on outside help to address local challenges. However, through the ABCD approach and the collaborative efforts of the university, government, and business sectors, the community began to recognize the importance of self-reliance and local problem-solving. This cultural shift was reflected in the growing willingness of local entrepreneurs, particularly women in the UMKM (micro, small, and medium enterprises) sector, to take ownership of their economic future. University research on market trends and business development, government support through infrastructure and policy, and business expertise in product development and marketing were crucial in encouraging this transformation. As a result, there is now a stronger sense of community responsibility and a greater inclination to engage in collective action.

One of the most profound outcomes of the community service program was the increase in social awareness among community members about the need for social transformation. Activities designed to tackle critical social issues such as child marriage, gender inequality, and health challenges have spurred conversations about the future of the community. This shift in awareness was facilitated by the combined efforts of the Triple Helix stakeholders, with the university providing research-based evidence, the government offering policy frameworks, and businesses supporting initiatives that provided tangible solutions to these issues. Through workshops, educational programs, and local campaigns, community members are now more attuned to the social challenges they face and are actively working to address them. The creation of programs aimed at promoting family resilience, improving health literacy, and empowering

women has sparked a collective movement toward a more equitable and sustainable community.

As a result of the community service process, Orobulu is now on a path toward sustainable development, driven by the collaborative framework of the Triple Helix Model. The long-term impact of the program is already visible in the way the community is structuring itself to address future challenges. The integration of academic research from UINSA, policy support from the government, and economic opportunities provided by the business sector has created a self-sustaining ecosystem that empowers local leaders, fosters economic growth, and supports social transformation. The key institutions established during the project, including the Karang Taruna and the growing network of local UMKM businesses, are now driving the village's development initiatives. Additionally, the community has developed a deep sense of ownership, with residents taking on active roles in shaping the future of Orobulu. By continuing to collaborate across sectors, the Triple Helix framework ensures that the development process remains dynamic and resilient, capable of evolving to meet new challenges as they arise.

Collaborative Approaches to Rural Development

The community service process in Orobulu Village has provided valuable insights into the transformative power of collaborative models like Triple Helix and Asset-Based Community Development (ABCD). From the beginning, the program was designed to address the village's specific challenges, leveraging the strengths of academic institutions, local government, and businesses to create a sustainable path forward. The early stages of the program focused on understanding the local context, mapping community assets, and building relationships across these three sectors. As a result, the service process not only tackled immediate issues but also paved the way for significant social changes in the community. The process mirrors key theories of social change, particularly community-driven development and participatory action research, which emphasize the agency of local communities in shaping their own futures. This special issue explores studies on grassroots community organizing in North America, Bulgaria, and South Africa, demonstrating how these efforts

address socioeconomic inequalities and advocate for justice in areas such as housing, safety, education, and health, while offering insights and recommendations to advance collective understanding and support the goals of grassroots movements toward more equitable cities and regions, a model that can also be applied to communities in Southeast Asia.²²

The community's engagement with the Triple Helix Model – the synergy between academia, government, and business – facilitated a shift in both perspective and practice. According to Etzkowitz and Leydesdorff²³, this model fosters innovation through multi-stakeholder partnerships²⁴, which was evident in Orobulu's development. In particular, UINSA's involvement in providing research expertise, training programs, and technical support helped shape local knowledge, while the local government provided the policy framework and infrastructure needed to support these initiatives. Local businesses, especially in the UMKM sector, contributed by offering mentorship and market insights, reinforcing the model's emphasis on collaboration to drive regional innovation.

The Asset-Based Community Development (ABCD) approach was another key element that influenced the process. By focusing on the community's strengths rather than deficits, the program built a foundation of self-reliance and local ownership.²⁵ This shift aligns with theories of empowerment and social capital, which suggest that communities can only thrive when they actively engage in their own development by utilizing internal resources and building on existing strengths. In Orobulu, this meant identifying and nurturing local leadership, entrepreneurial initiatives, and community networks. The active involvement of women, youth, and

²² Brian Christens, Jyoti Gupta, dan Paul Speer, "Community Organizing: Studying the Development and Exercise of Grassroots Power," *Journal of Community Psychology*, Vol. 49 (2021), <https://doi.org/10.1002/jcop.22700>.

²³ L. Leydesdorff, "The Mutual Information of University-Industry-Government Relations: An Indicator of the Triple Helix Dynamics," *Scientometrics*, Vol. 58 (2003): 445–467, <https://doi.org/10.1023/A:1026253130577>.

²⁴ Henry Etzkowitz dan Loet Leydesdorff, "The Dynamics of Innovation: From National Systems and 'Mode 2' to a Triple Helix of University-Industry-Government Relations," *Research Policy*, Vol. 29, No. 2 (2000): 109–123, [https://doi.org/10.1016/S0048-7333\(99\)00055-4](https://doi.org/10.1016/S0048-7333(99)00055-4).

²⁵ Michael Shuman, *Going Local: Creating Self-Reliant Communities in a Global Age*, ed. ke-1 (Routledge, 2001), <https://doi.org/10.4324/9780203824856>.

marginalized groups was particularly transformative, shifting power dynamics and providing the community with the tools and confidence to tackle challenges together.

Throughout the process, leadership development emerged as a critical factor in the community's transformation. The involvement of local youth in the formation of Karang Taruna (the youth organization) is a prime example of how the Triple Helix Model can cultivate new leaders. Drawing on the theory of social capital, leadership that emerges through such collaborative processes strengthens the social fabric of the community. In Orobulu, youth who were once passive participants in village life are now active agents of change, demonstrating the ripple effect of a well-structured community development program. This is further evidenced by the rise of local leaders, particularly women and young entrepreneurs, who have become central to the village's social and economic fabric. These new leaders are empowered by the knowledge and networks they gained through the program, demonstrating that leadership is not just about holding positions but about inspiring action and collaboration.

Moreover, the social changes witnessed in Orobulu—such as shifts in social behavior, increased community engagement, and the growing sense of self-reliance—align with theories of community resilience and social transformation. As residents started recognizing the value of their own assets and contributions, the community moved away from a reliance on external aid, fostering a culture of collective action. This transformation also reflects the Theory of Social Change by Gaventa (2006), which argues that social change is most effective when driven by local actors who can influence both their environment and the institutions that govern them. In Orobulu, this shift is evident in the way residents now take the initiative to tackle local issues such as child marriage, gender inequality, and health challenges, using the tools and frameworks developed during the community service process.

Furthermore, the growing awareness of social issues like gender equality and family resilience has been a key outcome of the community service project, reinforcing theories of gendered social change and family systems theory. The integration of health education, family programs, and

gender sensitivity training has created a new discourse around these issues, particularly among women and youth. The active involvement of women in entrepreneurship through UMKM initiatives has shifted their roles from traditional homemakers to key contributors to the village's economy, while the focus on family resilience has empowered parents to take more proactive roles in their children's education and well-being. For example, the synthesis case studies from NGOs involved in the Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED) projects, examining how gender is integrated into project theories of change, and the operational challenges faced in addressing these inequalities. It highlights the need for resilience projects to recognize social diversities, inequalities, and their intersectionality to avoid marginalizing vulnerable groups, particularly women and girls. The paper also offers recommendations for making resilience efforts more inclusive and equitable, while identifying areas for further research that can better support efforts to build community resilience.²⁶

Finally, the overall sustainability of the changes brought about by this community service project can be framed through theories of institutionalization and sustainability. The formation of new institutions, such as the Karang Taruna and local business networks, coupled with the ongoing collaboration between the Triple Helix partners, has ensured that the momentum of the program is not only maintained but is likely to continue. The program's success demonstrates that when local communities, businesses, and academic institutions work together to build on each other's strengths, they create systems that can adapt to changing circumstances and continue to thrive in the long term.

In conclusion, the community service process in Orobulu Village has proven to be a model of collaborative development, grounded in the theoretical frameworks of the Triple Helix Model, ABCD, and social capital. The significant social changes that have taken place—such as the emergence of new institutions, leaders, and a culture of self-reliance—highlight the power of community-driven initiatives in fostering sustainable

²⁶ Virginie Le Masson, *Gender and Resilience: From Theory to Practice* (London: Braced Knowledge Manager, 2016), 1.

social transformation. The findings from this community service process align with established theories and underscore the importance of multi-sectoral collaboration in achieving long-term, inclusive development.

The main point of the successful application of the Triple Helix Model in Orobulu Village is that the collaboration between academia (UINSA), the local government, and businesses has led to institutional innovation and community empowerment. This model has not only helped address immediate challenges in the village but has also catalyzed long-term social and institutional change by fostering self-reliance, leadership development, and sustainable community-driven initiatives. The great novelty of the approach lies in the integration of academic resources, government policy, and business expertise to create an ecosystem of development that is both innovative and sustainable. The institutionalization of community leadership through the formation of Karang Taruna (youth organization) and the empowerment of local UMKM (micro, small, and medium enterprises), particularly by integrating them into the development process, is a noteworthy innovation.

Relating this to the innovation of institutionalization from the university's role in community empowerment, the university's involvement is central in:

1. **Providing Research and Knowledge Transfer:** UINSA's role in conducting research and offering technical training has been instrumental in shaping local business practices, leadership training, and market opportunities for the community. The university's academic knowledge, particularly in market trends, health literacy, and entrepreneurship, contributed to informing decisions and guiding practical solutions.
2. **Building Local Institutions and Leadership:** The university has supported the institutionalization of new community structures, such as Karang Taruna. This organization not only helps empower youth but also integrates them into local governance and development decision-making. The university's role in leadership training and capacity building has played a key part in shaping the next generation of local leaders who are now taking ownership of

the development process.

3. **Shifting Cultural Norms and Encouraging Self-Reliance:** Through its educational and research programs, the university has been pivotal in fostering a cultural shift towards self-reliance within the community. Previously, the village relied on external assistance for development, but with the university's research-based insights and community-based programs, local actors began to understand the value of self-driven problem-solving. This has empowered local entrepreneurs, especially women in the UMKM sector, to take control of their economic futures.
4. **Creating a Sustainable Ecosystem:** The Triple Helix Model's success in Orobulu highlights the university's role as a key catalyst in creating a self-sustaining development model. The collaborative framework has established a feedback loop where academic research informs policy (government), which, in turn, drives business activities (entrepreneurship), while businesses provide practical implementation and market access. This innovation in institutional collaboration ensures that the community can continue its development without over-reliance on external aid.

All of the findings above can be explained in the following projection table:

Key Area	Findings	Follow-up Strategies
Providing Research and Knowledge Transfer	UINSA's research and technical training shaped local business practices, leadership, and market opportunities. Contributed to market trends, health literacy, and entrepreneurship insights.	<ul style="list-style-type: none"> - Continue conducting market research and training tailored to local needs. - Develop more specialized programs focused on emerging local industries. - Expand collaboration with local businesses for tailored technical assistance.
Building	UINSA supported the	- Strengthen leadership programs

<p>Local Institutions and Leadership</p>	<p>establishment of Karang Taruna, empowering youth and integrating them into local governance and development. Leadership training helped develop local leaders.</p>	<p>within Karang Taruna for further capacity building.</p> <ul style="list-style-type: none"> - Facilitate mentorship programs where seasoned leaders mentor younger ones. - Create platforms for youth-led initiatives in local governance.
<p>Shifting Cultural Norms and Encouraging Self-Reliance</p>	<p>The university promoted a shift towards self-reliance, empowering local entrepreneurs, especially women in the UMKM sector, to drive their own economic futures.</p>	<ul style="list-style-type: none"> - Organize workshops on financial literacy, business planning, and sustainability for local entrepreneurs, especially women. - Facilitate access to microfinancing and business incubators. - Develop community-driven problem-solving initiatives and encourage self-initiative.
<p>Creating a Sustainable Ecosystem</p>	<p>The Triple Helix model fostered a self-sustaining development cycle with the university, government, and businesses working together for continuous local development.</p>	<ul style="list-style-type: none"> - Strengthen the feedback loop between academic research, government policy, and business activity. - Formalize collaborations in policy-making processes to ensure continued local impact. - Monitor and evaluate the ecosystem's sustainability and adjust strategies as needed.

In conclusion, the community service experience in Orobulu demonstrates how the university's role, when embedded within the Triple Helix Model, extends beyond knowledge transfer into the institutionalization of sustainable community practices. By fostering new leadership, strengthening local institutions, and encouraging a cultural shift

toward self-reliance, the university has become a pivotal driver of long-term transformation. Its integration of academic insights with governance frameworks and business initiatives has created a dynamic ecosystem where research, policy, and entrepreneurship continuously reinforce one another. This innovation not only empowers the community to take ownership of its development but also offers a replicable model for rural empowerment that is resilient, inclusive, and adaptable to broader contexts in Indonesia and beyond.

CONCLUSION

The community service process in Orobulu Village demonstrates that the application of the Triple Helix Model, combined with the Asset-Based Community Development (ABCD) approach, can generate significant and sustainable social change in rural areas. Active collaboration between universities, village governments, and local entrepreneurs not only addressed urgent challenges—such as limited infrastructure, access to knowledge, and economic opportunities—but also laid the foundation for more inclusive and participatory village governance. The outcomes are evident in community empowerment, the emergence of new leadership, and the establishment of social institutions and local entrepreneurial networks that strengthen community capacity. By engaging women, youth, and vulnerable groups, this project proves that asset-based development and cross-sector collaboration can foster independence, solidarity, and the socioeconomic resilience of rural communities.

The novelty of this project lies in the practical application of the Triple Helix Model in rural Indonesian contexts, where it has traditionally been applied in urban or industrial sectors. The findings reveal how the integration of academic knowledge, evidence-based village policies, and local entrepreneurial innovation can be synergized to promote inclusive growth. The main recommendations of this research emphasize the importance of sustaining multi-sector collaboration, building community capacity through leadership and entrepreneurship training, and maintaining an asset-based approach as the foundation for every development intervention. Furthermore, strengthening social networks, promoting social entrepreneurship, and integrating gender-sensitive

programs are essential to ensuring sustainable change. Thus, the Orobulu experience contributes both theoretically and practically to the discourse on rural development, demonstrating that participatory, collaborative, and innovation-driven models are capable of creating long-lasting socioeconomic transformation that can be replicated in other rural areas.

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REFERENCES

- Christens, Brian, Gupta, Jyoti, and Speer, Paul. "Community Organizing: Studying the Development and Exercise of Grassroots Power." *Journal of Community Psychology*. Vol. 49, 2021. <https://doi.org/10.1002/jcop.22700>.
- Munggoro, Dani Wahyu dan Budhita Kasmadi. 2008. *Panduan Fasilitator. Indonesia Australia Partnership: IDSS Access Phase II*.
- Etzkowitz, Henry, dan Leydesdorff, Loet. "The Dynamics of Innovation: From National Systems and 'Mode 2' to a Triple Helix of University–Industry–Government Relations." *Research Policy*. Vol. 29, No. 2, 2000, 109–123. [https://doi.org/10.1016/S0048-7333\(99\)00055-4](https://doi.org/10.1016/S0048-7333(99)00055-4).
- Hamidah, Sandra dan Ika Ruhana, "Pemberdayaan Masyarakat dengan Pendekatan Triple Helix untuk Pengembangan Kompetensi Wirausaha Masyarakat Desa Mandiri Energi", *Jurnal Ilmiah Administrasi Publik (JIAP)*, 294-302. DOI: <https://doi.org/10.21776/ub.jiap.2019.005.03.5>
- Hanafi, Mohammad, Naili, Nabiela, Salahudin, Nadhir, dan Riza, A. Kemal. *Community-Based Research: Sebuah Pengantar*. Edisi ke-1. Surabaya: LP2M UIN Sunan Ampel Surabaya, 2015.
- Shuman, Michael. *Going Local: Creating Self-Reliant Communities in a Global Age*. Edisi ke-1. Routledge, 2001. <https://doi.org/10.4324/9780203824856>.
- Jaelani, A. "Triple Helix sebagai Model bagi Inovasi Pendidikan Tinggi: Analisis Logika Kelembagaan dalam Pengembangan Kewirausahaan dan Ekonomi." *AL-AMWAL: Jurnal Ekonomi Dan Perbankan Syari'ah*. Vol 11 (1) (2019): 121-138.
- Kusuma, "Koperasi Di Amerika, Australia Dan Eropa", *Management and Sustainable Development Journal*, Vol. 4, No. 1 2022, <https://doi.org/10.46229/msdj.v4i1.428>.
- Kusumawardhani, Arinta. "Penguatan Ekonomi Lokal melalui Pendirian

- Koperasi Petani", *Jurnal SEMAR (Jurnal Ilmu Pengetahuan, Teknologi, dan Seni bagi Masyarakat)*. Vol. 14, No. 1. 2025. 186-192. DOI: <https://doi.org/10.20961/semar.v14i1.98005>.
- Le Masson, Virginie. *Gender and Resilience: From Theory to Practice*. London: Braced Knowledge Manager, 2016.
- Leydesdorff, L. "The Knowledge-Based Economy and The Triple Helix Model." *Annual Review of Information Science and Technology*. Vol. 44, 2010: 367-417.
- Leydesdorff, L. "The Mutual Information of University-Industry-Government Relations: An Indicator of the Triple Helix Dynamics." *Scientometrics*. Vol. 58, 2003, hlm. 445–467. <https://doi.org/10.1023/A:1026253130577>.
- Loor, A.C.D., Moss, T.W., and Han, S. "Rural and Urban Place Renewal in Cross-Sector Partnerships." *Journal of Business Ethics*. Vol. 184, 2023, hlm. 793–812.
- Ningrum, Dinda Fitria, dan Sugiyanto. "Empowerment of A Community of Bamboo Hat Craftsmen Based on Creative Economics on Community Productivity in Cikupa Village, Tangerang District." *HUMANIS, Humanities, Management, and Science Proceedings*. Vol. 4, No. 1, Desember 2023.
- Nel, Hanna. "A Comparison between the Asset-oriented and Needs-based Community Development Approaches in Terms of Systems Changes." *Practice* 30 (2017): 1-20. <https://doi.org/10.1080/09503153-2017.1360474>.
- Purwati, Nani, Wahyudi, Tri, Syukron, Akhmad, Muningsih, Elly. "Digitalisasi Produk BUMDES Berbasis e-Katalog Sebagai Strategi Promosi yang Berdaya Saing." *Jurnal Masyarakat Mandiri*. Vol. 8, No. 5, Oktober 2024, hlm. 5174–5181.
- Razak, Abd Azley, dan White, Gareth. "The Triple Helix Model for Innovation: A Holistic Exploration of Barriers and Enablers." *International Journal of Business Performance and Supply Chain Modelling*. Vol. 7, 2015, hlm. 278–291. <https://doi.org/10.1504/IJBPSM.2015.071600>.
- Rasaili, W., Suharyanto, D. F., Andiriyanto, A., Fitriyah, N. S., Zarnuji, & Puspaningrum, I. I. "Inovasi Desa Mandiri: Integrasi Agile

Governance dan Pembangunan Berkelanjutan dalam Tata Kelola Pedesaan." *Matra Pembaruan: Jurnal Inovasi Kebijakan* 8, no. 1 (2024): 45–60.

Sheffield, E. C., & Sheffield, E. C. "Toward Radicalizing Community Service Learning". *American Educational Studies Association*, Vol. 51. No. 1. 2015. DOI: <https://doi.org/10.1080/0-0131946.2014.983637>.

Šūmane, Sandra, Kunda, Ilona, Knickel, Karlheinz, Strauss, Agnes, Tisenkopfs, Talis, Rios, Ignacio, Rivera, Maria, Calvão Chebach, Tzruya, Ashkenazy, Amit, De Los Rios, Ignacio. "Local and Farmers' Knowledge Matters! How Integrating Informal and Formal Knowledge Enhances Sustainable and Resilient Agriculture." *Journal of Rural Studies* 59 (2018): 232–241. <https://doi.org/10.1016/j.jrurstud.2017.01.020>.

Vaughan, Regan "Strategi Sumber Daya Aparatur Pemerintah Desa Dalam Meningkatkan Pengembangan Pariwisata Desa Cintaratu Kabupaten Pangandaran", *Kebijakan: Jurnal Ilmu Administrasi*, Volume 14, Nomor 2, (2023), DOI: <https://doi.org/10.23969/kebijakan.v14i2.8649>.

Ward, S. "Using theory-based evaluation to understand what works in asset-based community development", *Community Development Journal*, Vol. 58, No.2 (2023): 206-224, DOI: <https://doi.org/10.1093/cdj/bsab046>.