

Empowering Communities through Social Entrepreneurship and Digital Technology: Case Study of the Kosabangsa Program in Sumberjaya Village, Pandeglang

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ABSTRACT

Climate change and natural disasters that are increasingly occurring have added to the vulnerability of people in disaster-prone areas, such as Sumberjaya Village, Sumur District, Pandeglang Regency. The Kosabangsa 2024 program, implemented by Budi Luhur University and Atma Jaya Catholic University of Indonesia, aims to strengthen the socio-economic resilience of the community through empowerment based on social entrepreneurship and digital technology. The program integrates two main groups: the Sustainable Community Movement (GEMARI), which focuses on disaster preparedness, and the Tourism Awareness Group (Pokdarwis), which aims to develop local tourism potential. This article uses a qualitative approach with field study methods, participatory observations, in-depth interviews, and documentation to analyze the impact of program implementation on community empowerment. The study results show that this program has succeeded in improving community disaster preparedness through risk mitigation training, emergency technology, and disaster data management. In addition, social entrepreneurship training, especially in digital marketing of local tourism products, has succeeded in introducing the potential of village tourism to a broader market. However, challenges such as limited technology infrastructure and digital literacy are obstacles to implementing the program. Nevertheless, the Kosabangsa program has had a positive impact, such as increased tourists and demand for local products. This program has the potential to have a long-term impact on social and economic resilience and become a model of sustainable community empowerment in disaster-prone areas.

Introduction

Climate change and increasingly frequent natural disasters have placed communities in disaster-prone areas in a highly vulnerable position (Benevolenza & DeRigne, 2019; Zaman, 2021). The impacts of these events, such as floods, landslides, and droughts, severely undermine social and economic resilience. Effective disaster management must focus on building communities' economic and social capacities to adapt and recover. Community empowerment through social entrepreneurship and digital technology has emerged as a promising approach to enhancing economic resilience, strengthening social networks, and reducing disaster vulnerability (Latvakoski et al., 2022; Mathbor, 2007; Tim et al., 2021).

An example is the 2024 *Kosabangsa Program*, a collaboration between Universitas Budi Luhur and Universitas Katolik Indonesia Atma Jaya in Sumberjaya Village, Pandeglang. This program, funded by the Ministry of Higher Education, Science, and Technology, is a form of social contribution to needy communities. It addresses socio-economic resilience by combining disaster preparedness with local economic development. It focuses on two main groups: *Gerakan Masyarakat Lestari* (GEMARI) for preparedness, and *Kelompok Sadar Wisata* (Pokdarwis) for community-based tourism.

Community empowerment through social entrepreneurship and digital transformation is critical for enhancing disaster preparedness and resilience. Social entrepreneurship plays a vital role by introducing innovative solutions tailored to local needs. Community participation is essential for effective mitigation and preparedness (Ayuningtyas et al. 2021; Utariningsih 2023). These initiatives are strengthened by developing educational programs relevant to the community context (Al Issa et al., 2024; Aquino et al., 2018; Phillips et al., 2015).

Digital transformation significantly amplifies these efforts by providing advanced tools and platforms that improve communication and coordination among community members. Anshori et al. (2022) highlight the strategic importance of media in disaster communication, emphasizing its role in disseminating timely and accurate information throughout all phases of disaster management. This is complemented by Que et al. (2022), who argue that effective communication strategies influence public participation in disaster mitigation. Such strategies engage communities in governance and preparedness training, ensuring active involvement. Adopting digital platforms further streamlines these communication processes, enabling more efficient organization and participation in disaster preparedness initiatives.

The importance of social capital in fostering community resilience also cannot be overstated. Nurjanah and Apriliani (2021) assert that social capital is a crucial asset in

disaster mitigation strategies, as it facilitates resource mobilization and mutual support during crises. Similarly, Hajar (2024) underscores the need for a comprehensive understanding of community dynamics and the coordination of stakeholders to achieve effective disaster management. Leveraging social capital through digital technologies enhances collective efficacy, enabling communities to respond to and recover from disasters more effectively.

Additionally, integrating digital technologies into disaster management processes improves decision-making and resource allocation (Fan et al., 2021; Kirpalani, 2024; Vermiglio et al., 2022). For example, Geographic Information Systems (GIS) have proven instrumental in flood hazard risk assessments, offering valuable insights for spatial planning and enhancing community preparedness (Wahyu et al., 2023). Technological advancements are vital for fostering resilient communities, adapting to evolving environmental conditions, and mitigating disaster impacts. The synergistic relationship between social entrepreneurship, community empowerment, and digital transformation is pivotal in strengthening disaster preparedness and resilience.

Integrating community participation, social capital, and digital tools is a cornerstone for developing comprehensive strategies to mitigate disaster risks and enhance adaptive capacities. By actively involving community members, fostering strong social networks, and utilizing innovative digital technologies, communities are better positioned to anticipate, respond to, and recover from disasters. This approach builds long-term resilience by empowering communities to take ownership of their preparedness efforts.

Digital transformation is crucial to the Kosabangsa Program, especially in social entrepreneurship. Digital technology is a critical enabler, accelerating entrepreneurial growth, improving market access, and strengthening communication networks essential for disaster mitigation (George et al., 2021; Otegui, 2024). For instance, online platforms enable local communities to market tourism products (Casais et al., 2020), enhancing their competitiveness and generating sustainable income. These digital innovations foster community resilience by equipping them with tools to address economic vulnerabilities and prepare for disasters.

Digital technology has become vital for entrepreneurial growth, market access, and communication networks, particularly in disaster mitigation. Research by Pergelova et al. (2019) highlights that digital infrastructures influence the internationalization of SMEs. Chan's (2023) study emphasizes that digital technologies enhance the resilience of SMEs, and

Masato Abe (2016) discusses how the digital economy reshapes them. In disaster mitigation, technology plays a pivotal role in communication. Kaur and Sood (2019) state that ICT advancements have significantly improved disaster management systems. Widyastuti (2021) illustrates how new media and social media can be used in disaster communication. The findings of Park and Johnston (2017), also highlight the emergence of digital volunteer networks that contribute to practical crisis response efforts. Integrating these technologies fosters business resilience and enhances communities' capacity to respond to and recover from disasters.

Technology-based social entrepreneurship has proven to be an effective model for addressing the socio-economic challenges faced by disaster-prone communities. This model integrates social and economic activities, not merely for profit but also for promoting social and environmental sustainability (Dzombak et al., 2016; Ray & Shaw, 2022). With advancements in digital technology, social entrepreneurship initiatives increasingly leverage online platforms, mobile applications, and information technology to improve market access, enhance communication, and strengthen community networks during crises. However, implementing technology-based social entrepreneurship in rural, disaster-prone areas presents challenges, including limited infrastructure, low digital literacy, and restricted access to training (Ghauri et al., 2022; Jati et al., 2024; Neumeyer et al., 2020). A holistic approach is therefore required to integrate business skills with comprehensive disaster risk mitigation knowledge.

This study aims to analyze the impact of the Kosabangsa Program on community empowerment in Sumberjaya Village. The analysis will focus on identifying the challenges and opportunities of applying technology-based social entrepreneurship and measuring the program's contribution to community resilience and local economic competitiveness. This research seeks to fill critical gaps in understanding the role of digital transformation in social entrepreneurship within disaster-prone areas. It provides actionable insights for designing more inclusive and sustainable empowerment programs. Theoretically, it enhances understanding of this integration and offers recommendations for developing adaptive community empowerment models that can be replicated in other vulnerable regions.

Method

This research adopts a qualitative approach, employing multiple methods to collect data comprehensively and nuancedly. The field study involved direct visits to Sumberjaya

Village, allowing researchers to engage closely with the community. These visits were essential for mapping the potential and needs of the local population. During this process, training sessions were conducted to enhance disaster preparedness and to develop skills related to creating digital content for tourism promotion, aligning with the village's aspirations for growth and resilience.

Participatory observation further enriched the study. By actively participating in various community-driven activities organized by GEMARI and Pokdarwis, the researchers gained valuable insights into the dynamics of community engagement. This approach allowed them to observe, in real-time, the effects of the implemented programs on local participation and the broader involvement of residents in these initiatives.

In-depth interviews constituted another critical data collection method. Conversations were held with members of GEMARI, Pokdarwis, and the facilitators responsible for delivering the training. These discussions provided critical data on the participants' evolving skills, enhanced knowledge, and shifting perceptions of the empowerment programs. The interviews offered a platform for capturing individual experiences and reflections, adding depth and richness to the findings.

Finally, documentation played a significant role in the research. Data were gathered from various sources, including detailed records of activities, training implementation reports, and materials related to the village's website development. This documentation underscored the digital transformation efforts and the impact of these initiatives in supporting Sumberjaya Village's aspirations for sustainable tourism and improved disaster readiness.

Through these methods, the research delivers a holistic understanding of the empowerment processes in Sumberjaya Village, shedding light on both their implementation and their profound impact on the community. The research informants were carefully selected from crucial partner organizations involved in the Kosabangsa activities directed at the target community. These included GEMARI, which specializes in organizing disaster resilience training, and POKDARWIS, a group dedicated to tourism development initiatives. Key informants, such as the respective group leaders, were chosen to provide strategic insights into the planning and execution of the programs. Their leadership roles and active involvement offered valuable perspectives on the outcomes and challenges of the community empowerment efforts.

The study was conducted over four months, from August to November 2024. Data analysis employed the Atlas.TI software utilizes qualitative analysis principles to systematically organize and interpret the collected data. This analytical approach enabled the researchers to identify patterns, themes, and relationships within the data, offering a nuanced understanding of the impacts of the initiatives. The combination of diverse data sources, participatory observation, and advanced analytical tools ensured a robust and comprehensive examination of the empowerment processes in Sumberjaya Village.

Results and Discussion

Results

The Kosabangsa program in Sumberjaya Village empowers two main groups: the Sustainable Community Movement (GEMARI) and the Tourism Awareness Group (Pokdarwis). The program has two pillars critical to the village's progress: increasing community preparedness against natural disasters and developing tourism-based social entrepreneurship and local products.

Improving disaster preparedness is the first focus of this program, considering that Sumberjaya Village is located in a disaster-prone area, such as earthquakes and tsunamis. The training provided to GEMARI includes disaster risk reduction, the use of emergency response equipment, and emergency response simulations. One of the innovations introduced is a microcontroller dispenser for emergency sanitation at evacuation posts, preventing disease transmission in disaster situations. In addition, GEMARI is also trained in coordination between agencies, disaster data management, and strengthening communication networks to facilitate disaster management. Through this training, GEMARI is expected to become an agent of change that can educate the surrounding community about the importance of disaster preparedness. A disaster management training activities is shown in Figure 1 below:



Figure 1. Disaster Management Training Activities

However, the main challenge faced is the limited disaster management infrastructure in the village. Access to adequate emergency response equipment is still limited, and managing disaster-related data, such as disaster-prone maps or victim data, still needs to be improved. For this reason, infrastructure development and the application of digital technology, such as GIS-based mapping systems, are essential steps that can strengthen the effectiveness of disaster management.

In addition, this program also focuses on developing social entrepreneurship through Pokdarwis to improve the community's ability to manage local tourism potential. Sumberjaya Village has extraordinary natural potential but still needs to be appropriately managed. This program trains Pokdarwis members on local culinary production, product packaging, and how to market these products using digital technology. This digital marketing training is carried out by developing websites such as desasumberjaya.com and serambiujungkulon.com, which allow people to promote their tourism and culinary products to a broader market. Through this training, Pokdarwis learned how to build a website, manage social media, and attract the attention of tourists and consumers in the larger market. The tourism promotion content production training activities participated in by Pokdarwis members can be seen in Figure 2 below.



Figure 2. Tourism Promotion Content Production Training Activities

However, digital marketing in Sumberjaya Village faces challenges, especially related to limited internet access, which hinders the optimal marketing process. In addition, the difference in the level of digital skills among Pokdarwis members also affects the effectiveness of the implementation of marketing strategies. However, the positive impact of this program has been seen, namely the increasing number of visitors and the demand for local culinary products that were previously only known among residents.

The Kosabangsa program not only provides direct benefits but has great potential to have a long-term impact on the people of Sumberjaya Village. Focusing on developing tourism-based social entrepreneurship and local products, this program opens up opportunities for villages to develop into sustainable tourism villages, which are economically, socially, and environmentally beneficial. In addition, improving disaster preparedness and community skills in disaster management will strengthen the social and economic resilience of the village. The sustainability of this program will depend heavily on sustainable assistance to the community in both aspects, namely, social entrepreneurship and disaster preparedness. With continuous assistance, this program is expected to be a model that can be applied in other villages with similar potential and provide a broader positive impact on rural communities in Indonesia.

Discussion

The implementation of the Kosabangsa program in Sumberjaya Village shows that community empowerment integrated with strengthening social entrepreneurship and the use of digital technology can have a significant impact on increasing disaster resistance and the economic welfare of the village community. Two main groups, namely Gemari and Pokdarwis, have become strategic places to facilitate the transfer of Knowledge and a cross-sectoral mobilization.

Disaster training to Gemari shows that local capacity building can be achieved through participatory and cooperative communication. Cooperative communication built into this program creates a dialogue space for exchanging information, equalizing perceptions, and preparing joint solutions. This is the key to integrating interests between the government, universities, and village communities. This is where communication is a means of delivering messages and shaping shared understanding.

Meanwhile, the involvement of Pokdarwis in developing tourism and local products shows that cooperative communication helped strengthen social networks and accelerate the

digital learning process at the community level (Jati, 2023; Jati et al., 2025). Although there are still challenges, such as limited internet access and digital literacy gaps, the collaborative atmosphere built in this program has encouraged the spirit of cooperation and mutual support among group members. Overall, the approach taken by the Kosabangsa program confirms that the integration between education, technology, and community participation can only be successful if based on open, equal, and cooperative communication. Through this process, the integration of the interests of various stakeholders can be realized, creating sustainable synergy in forming a resilient, adaptive, and independent village.

The Kosabangsa program holds great significance for Sumberjaya Village, as it successfully addresses two critical areas:

1. **Increased Disaster Resilience:** Through training provided to the GEMARI group, the program successfully built local capacity and improved community readiness for disasters. This training not only provided knowledge but also created a collective awareness of the importance of disaster mitigation.
2. **Improved Economic Welfare:** By empowering Pokdarwis, the program helped the community manage their tourism potential and local products professionally. The digital marketing training opened up a wider market and boosted their income.

The program's success is rooted in its integrative approach, which combines education, technology, and community participation. This approach is supported by open and cooperative communication, successfully bringing together the interests of various stakeholders government, universities, and the community to create a sustainable synergy that has made the village more independent, adaptive, and resilient.

Conclusion

Implementation of the Kosabangsa program in Sumberjaya Village demonstrates that a holistic approach integrating community empowerment, social entrepreneurship, and digital technology simultaneously can create significant synergy that enhances the village's resilience to disasters and its economic welfare. The program has contributed significantly to community empowerment, particularly in improving disaster preparedness and developing social entrepreneurship based on tourism and local products. Disaster preparedness training for members of the Sustainable Society Movement (GEMARI) has enhanced the community's ability to deal with disasters, such as earthquakes and tsunamis, using simple technology to maintain cleanliness and manage disaster data. However, limitations in adequate

infrastructure and information systems still need to be addressed to improve the program's effectiveness.

In addition, developing social entrepreneurship through digital marketing training in the tourism and local culinary sectors also showed positive results. The people of Sumberjaya Village can now take advantage of digital platforms, such as websites and social media, to introduce their tourism and culinary products to a broader market. This digital transformation has opened new market opportunities and improved the village economy. However, challenges in internet access and differences in digital skill levels among Pokdarwis members require more intensive assistance to utilize technology fully.

Overall, the Kosabangsa Program has the potential to be sustainable, with further development in social entrepreneurship and improved disaster preparedness. With increased internet access, continuous training, and better infrastructure development, Sumberjaya Village can continue to develop its tourism potential and become a successful village model in digital-based empowerment and social entrepreneurship. This program positively impacts the village and can be replicated in other villages in Indonesia to increase social and economic resilience in rural areas.

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