Unlocking The Potential of Village-Owned Enterprises (BUMDes) in The Digital Era: A Case Study on Optimizing E-Commerce Application Development in Sumberarum Village, Moyudan, Sleman

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Abstract. This case study explores the potential of Village-Owned Enterprises (BUMDes) in the digital era, focusing on optimizing e-commerce application development in Sumberarum Village, Moyudan, Sleman. BUMDes have emerged as a powerful tool for empowering rural communities and driving local economic development. By leveraging e-commerce applications, BUMDes in Sumberarum Village have overcome challenges such as limited market access, a lack of infrastructure, and financial constraints. This has created a thriving digital ecosystem that promotes entrepreneurship, employment generation, and community development. The study highlights the role of BUMDes in supporting and supervising Micro, Small, and Medium Enterprises (MSMEs) and tourist destinations, facilitating access to capital, training, and market opportunities. Developing appealing e-commerce applications with optimal performance, customer data security, and responsive technical support is crucial. The study suggests promoting awareness, conducting training programs, establishing partnerships, improving digital infrastructure, and prioritizing data security to unlock the potential of BUMDes and leverage e-commerce for local economic development.

Keywords: Village-Owned Enterprises (BUMDes), E-commerce application development, Empowering rural communities, Local economic development

1 Introduction

In recent years, the digital era has revolutionized various aspects of society, including the way businesses operate and reach their customers. Small-scale enterprises and rural communities, once isolated by geographical barriers, are now presented with unprecedented opportunities to participate in the global economy. Village-Owned Enterprises (BUMDes) have emerged as a powerful instrument for empowering rural communities and fostering local economic development [1–3].

This case study focuses on the village of Sumberarum, located in Moyudan, Sleman, and delves into the potential of BUMDes in the digital era, specifically by optimizing e-commerce application development. Sumberarum Village serves as an exemplary model where BUMDes have been harnessed to bring about socio-economic transformation and
improve the livelihoods of its residents [4–6]. The development of BUMDs includes efforts owned by BUMDes themselves, MSMEs, and tourist destinations [7–11].

The digital landscape offers immense possibilities for BUMDes to tap into global markets, expand its customer base, and generate sustainable income streams. Through the development of e-commerce applications, BUMDes can bridge the gap between traditional village-based businesses and the digital marketplace, enabling them to compete on a broader scale and gain a competitive advantage [12–13].

By leveraging the digital era's tools and technologies, BUMDes in Sumberarum Village have the potential to overcome challenges such as limited market access, a lack of infrastructure, and financial constraints. The case study explores how the village's BUMDes have capitalized on these opportunities to create a thriving digital ecosystem that promotes entrepreneurship, employment generation, and community development.

This case study aims to shed light on the transformative power of BUMDes in the digital era and provide valuable insights into the strategies and best practices that can be replicated in other rural communities. By unlocking the potential of BUMDes through e-commerce application development, Sumberarum Village serves as an inspiring example of how technology can empower local economies and foster sustainable development, ultimately leading to improved living standards and a brighter future for rural communities.

2 Methodology

The primary objective of this community service program is to strengthen the human resource capacity in Sumberarum village, specifically in the effective management of the Arum Sejahtera Village-Owned Enterprises (BUMDes). The program aims to unlock the region's potential and foster a prosperous economic environment for the community. The goal is to empower previously marginalized and disadvantaged communities, enabling them to achieve self-sufficiency and empowerment. Central to this initiative is the recognition that local assets and the BUMDes institution are valuable resources that can drive community empowerment.

Table 1. Steps of Asset-Based Community Development

| Phase I: IDENTIFICATION OF PARTNER PROBLEMS, including: |
| 1) incompetent management of the Village-Owned Enterprises (BUMDes); |
| 2) lack of skills among BUMDes managers in carrying out administration, such as proposal writing and fundraising; and |
| 3) lack of efforts to digitize the economy, particularly in terms of marketing. |

| Phase II: FORMULATE PROGRAM OBJECTIVES, including: |
| 1) increasing the capacity of BUMDes institutional management; |
| 2) improving the understanding of BUMDes managers in administration; and |
| 3) creating a process for digitizing the economy through the development of a digital marketing strategy. |

| Phase III: IMPLEMENTATION METHODS, including: |
| 1) socialization of business unit development; and |
| 2) training in e-commerce application skills and digital marketing management strategies. |

| Phase IV: OUTPUT, including: |
| 1) the development of business units owned by the village; and |
| 2) the establishment of an e-commerce application as a marketing medium owned by the village. |

Figure 1. Steps of Asset-Based Community Development
To achieve these objectives, this program adopts the Asset-Based Community Development (ABCD) approach, which prioritizes community empowerment through the utilization of local assets. By empowering the community to leverage their own resources, the program aims to enhance their independence and that of their partners. The program will be implemented through several stages, including the discovery and assessment of community potential, identification of community dreams, aspirations, and hopes, planning for change, and defining and consolidating the goals to be achieved. These stages will provide a comprehensive framework for the program's development and execution. By following the ABCD approach and utilizing the various program stages, this initiative seeks to create a sustainable and transformative impact in Sumberarum village. Through community empowerment, the program aims to cultivate a sense of ownership and agency among the residents, enabling them to drive their own development and contribute to the overall growth and prosperity of the village.

3 Results and Discussion

It is important to highlight that BUMDes plays a pivotal role in overseeing both Micro, Small, and Medium Enterprises (MSMEs) as well as tourist destinations. BUMDes, which stands for Badan Usaha Milik Desa (Village-Owned Enterprise), is an establishment designed to support and empower rural communities in Indonesia. Its primary objective is to stimulate economic growth and development within villages by creating employment opportunities, enhancing income generation, and improving the overall welfare of the villagers. BUMDes typically operates across diverse sectors, including agriculture, handicrafts, tourism, and various service industries.

One of the key responsibilities of BUMDes is to supervise MSMEs within the village. MSMEs play a vital role in the economic development of Indonesia, operating in sectors such as agriculture, manufacturing, trade, and services. By overseeing these enterprises, BUMDes provides valuable support by facilitating access to capital, offering training programs, and identifying market opportunities. Moreover, BUMDes assists MSMEs in enhancing their productivity, quality standards, and competitiveness, thereby contributing to their long-term success.

Additionally, BUMDes assumes the responsibility of overseeing the management of tourist destinations within the village. Tourism serves as a significant sector in Indonesia, driving economic growth and generating employment opportunities. Rural areas often encompass natural attractions, cultural heritage sites, and traditional villages that are potential tourist destinations. BUMDes plays a crucial role in supporting and promoting these destinations by developing the necessary infrastructure and facilitating facilities and services tailored to tourists' needs. Moreover, BUMDes collaborates with travel agencies, local governments, and other stakeholders to implement effective marketing strategies. By overseeing tourist destinations, BUMDes contributes to the growth of the local economy by creating employment opportunities and generating income for the local community.

Based on observations and discussions with stakeholders, there are various types of business units located in Sumberarum Village. According to the conducted data collection, there are approximately 59 business units, including businesses involved in the sales of goods, services, culinary ventures, and grocery stores. These businesses encompass a wide range of sectors, reflecting the diverse economic activities present in Kalurahan Sumberarum. The sale of goods includes retail shops offering various products, while services may encompass a variety of professional and specialized services. Culinary ventures involve food
establishments, such as restaurants or food stalls, catering to the local community and visitors. Additionally, the presence of grocery stores provides essential goods and daily necessities to meet the needs of the residents.

The existence of such a varied array of business units highlights the entrepreneurial spirit and economic potential within Sumberarum Village. These businesses not only contribute to the local economy but also create employment opportunities for community members. By offering a range of goods and services, they cater to the diverse needs and preferences of both residents and potential customers from neighboring areas.

**Figure 2. Business Unit Data Collection Process**

During the initial phase of implementing the project, the community service team engaged in discussions with the local government of Sumberrum village and the management of Arum Sejahtera BUMDes. These discussions revealed a promising opportunity to develop digital marketing through the creation of an e-commerce application.

In the subsequent phase, the community service team focused on raising awareness and conducting discussions about the utilization of e-commerce applications as a means for BUMDes to enhance and grow their businesses. E-commerce applications offer numerous advantages, including improved business visibility, streamlined customer transactions, enhanced customer engagement, effective marketing through notifications, and enhanced business analysis capabilities.

Several crucial factors come into play when developing an e-commerce application. These include an appealing design and aesthetic, optimal application speed and performance, robust customer data security and privacy measures, as well as responsive and efficient technical support.

The Design and Concept Development of e-commerce for BUMDes, MSMEs, and Tourist Destinations in Villages specifically focuses on creating an attractive application design. This design not only entices visitors but also strengthens the reputation and trust of customers. The website is tailored with a theme that reflects the unique characteristics of a particular village or region, thus attracting visitors interested in exploring local tourist destinations and products. The products and services offered must provide added value, such as uniqueness, quality, and competitive pricing. Moreover, the services should be comprehensive and offer additional benefits to visitors.
Figure 3. The Process of Socialization for the Formation and Introduction of E-commerce Applications

Furthermore, the e-commerce applications are equipped with user-friendly and secure payment and shipping systems. Customers can conveniently make online payments through various methods available within the application, such as Slado, bank transfers, or other suitable options. It is crucial to ensure fast and secure product delivery to guarantee customer satisfaction with the service provided.

Figure 4. User Interface of the "SIKADES" Application

The objective of this initiative is to enhance the marketing of products or services for BUMDes management, MSMEs, and tourism awareness groups (Pokdarwis) in Sumberarum Village through socialization and training on the utilization of e-commerce applications. The process involves several steps, including identifying the needs and target audience, designing the materials for socialization and training, conducting offline sessions to deliver the materials, introducing relevant e-commerce applications, providing hands-on practice with the applications, and evaluating the outcomes of the activity.

One crucial component is the training material for utilizing e-commerce applications. The training covers the fundamentals of e-commerce, which include introducing various e-commerce applications, discussing the types of available e-commerce platforms, providing guidance on how to effectively use these applications, and optimizing their usage to enhance
product or service sales and marketing. Practical training sessions involve assigning tasks or exercises that directly relate to using e-commerce applications, reinforcing the participants' understanding. The training also focuses on showcasing relevant e-commerce platforms, social media channels, and digital payment applications, along with real-life examples demonstrating how these applications can significantly contribute to improving the marketing and sales of products or services. To evaluate the effectiveness of the training, a survey or interview is conducted to assess the participants' comprehension of the training materials and their proficiency in utilizing e-commerce applications. Additionally, the success of the training in enhancing the marketing and sales of the participants' products or services is evaluated.

Figure 5. The Process of Mentoring and Training for Operating SIKADES

The information provided highlights the role of BUMDes in supporting and empowering rural communities in Indonesia, specifically in the management of MSMEs and tourist destinations. MSMEs are crucial for the economic development of Indonesia, and BUMDes offer support to these small businesses by providing access to capital, training programs, and market opportunities. BUMDes also assist MSMEs in enhancing their productivity, quality, and competitiveness. Furthermore, BUMDes play a significant role in supporting tourist destinations by developing infrastructure, facilities, and services tailored to meet the needs of tourists. By overseeing these destinations, BUMDes contribute to the local economy by creating employment opportunities and generating income for the community.

The data also emphasizes the potential for digital marketing through the creation of an e-commerce application. Such an application can significantly improve business visibility, streamline customer transactions, increase customer engagement, utilize notifications for marketing purposes, and enhance business analysis capabilities. Key factors in developing an effective e-commerce application include an appealing design, fast performance, robust customer data security and privacy measures, as well as responsive and efficient technical support.

4 Conclusions

Village-Owned Enterprises (BUMDes) have emerged as a powerful instrument for empowering rural communities and fostering local economic development in the digital era. BUMDes in Sumberarum Village have capitalized on the opportunities presented by the
digital landscape to bridge the gap between traditional village-based businesses and the global marketplace. By leveraging e-commerce application development, BUMDes in Sumberarum Village have been able to overcome challenges such as limited market access, a lack of infrastructure, and financial constraints. This has resulted in the creation of a thriving digital ecosystem that promotes entrepreneurship, employment generation, and community development.

BUMDes play a crucial role in overseeing and supporting Micro, Small, and Medium Enterprises (MSMEs) and tourist destinations. By facilitating access to capital, offering training programs, identifying market opportunities, and enhancing productivity, BUMDes contribute to the long-term success of MSMEs and the growth of the local economy.

The development of e-commerce applications for BUMDes, MSMEs, and tourist destinations in villages has the potential to enhance marketing efforts, improve business visibility, streamline customer transactions, and provide effective marketing tools. Key considerations in e-commerce application development include appealing design, optimal performance, customer data security, and responsive technical support.

The practical suggestions are that BUMDes should actively promote awareness, conduct training programs, establish partnerships, provide technical support, improve digital infrastructure, facilitate networking opportunities, explore partnerships with e-commerce platforms, prioritize data security, evaluate and improve initiatives, share success stories, and encourage knowledge sharing for rural communities to leverage e-commerce for local economic development.

References


