

Feasibility Study of Giriloyo Batik MSMEs in Wukirsari Village

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Abstract.

The development potential of Batik Giriloyo Micro, Small, and Medium Enterprises (MSMEs) in Wukirsari Village, Bantul Regency is quite significant, but there are still several obstacles and weaknesses faced. The village SMEs have not implemented a well-documented bookkeeping system, face limited business capital, and lack variety and motivation to develop their business. Business decision-making is still based on intuition or imagination without the support of valid calculations and analysis. The existence of both potentials and obstacles shows the importance of preparing a business feasibility study of the Giriloyo Batik Village MSMEs. The implementation of the service was carried out using question and answer, discussion, and mentoring methods. The implementation of community service activities is divided into 3 stages. The first stage of the service team made direct observations to the Giriloyo Batik MSMEs. The second stage is a discussion between the service team and partners regarding business feasibility studies including market analysis, production analysis, human resource analysis, business development plans and loan needs plans and business risks. The goal is to share experiences and solve problems faced. The third stage is evaluation where service activities will be evaluated based on responses from partners. The result of this service activity is that MSME players in Kampung Batik Giriloyo can gain knowledge about business feasibility for their business development.

Keywords: Feasibility Study, MSMEs, Giriloyo Batik

I. INTRODUCTION

Bantul Regency is one of the regencies in the Special Region of Yogyakarta. As part of the Special Region of Yogyakarta, Bantul has a rich culture, natural resources and great economic potential. However, there are still various development challenges, such as poverty, limited access to education and health, and environmental damage. In line with the global Sustainable Development Goals (SDGs) agenda initiated by the United Nations (UN), this international community service program aims to improve the welfare of the people of Bantul through a multidisciplinary approach and global collaboration. By involving various parties, including

universities, international organizations, and local communities, this program will become a model of sustainable and inclusive community service.

The main problems faced by Bantul Regency in relation to the SDGs are Poverty and Economic Inequality (SDGs 1 & 10); There are still low-income community groups, identified as limited access to capital for small and medium enterprises (SMEs).

MSMEs are useful for reducing inequality caused by uneven development processes in urban and rural areas and are resistant to crisis shocks (Sulistiyastuti, 2013; Komara, et.al, 2020). MSMEs have a strategic role in national development such as labor absorption, income distribution, rural economic development, increasing non-oil and gas exports, and increasing Gross Domestic Product (Setiawan, 2015; Yunus et.al, 2023; Dhyana *et.al*, 2020).

One of the MSMEs in Wukisari Village, Bantul Regency, is the Batik MSME in Giriloyo Batik Village. Giriloyo Batik is a relic of the Mataram Kingdom that entered Giriloyo Village in the 17th century as a result of the transfer of batik craft knowledge to local residents. Giriloyo batik became the mainstay batik used by the Mataram Kingdom. Currently, Giriloyo batik is also used by the Yogyakarta Palace family.

In 1997, Giriloyo Batik was hit by the monetary crisis. There was a sluggishness in batik sales during the monetary crisis. After the crisis, the business began to revive. But in 2006, the earthquake that occurred in Yogyakarta also hit the Giriloyo batik business. On May 27, 2007, Giriloyo residents began to revive their batik business. Currently there are 12 showrooms, 640 batik makers who are members of 12 batik groups and one batik cooperative. Sales in the batik cooperative per month are around 120 million Rupiah (Kumparan Bisnis, 2023).

Most of the established MSMEs do not have business licenses and lack market reach. The existence of MSMEs will also affect the activities of business units in the future. The existence of Giriloyo Batik MSMEs in Wukirsari Village is expected to be able to develop and continue to grow. There are many MSME problems that occur including non-existent financial records, lack of capital 74% due to not having access to financing, and no business license (Purwanti et.al., 2021).

The existence of these potentials and weaknesses, for the development of MSMEs in Giriloyo Batik Village, it is necessary to conduct a business feasibility study because so far MSME actors only rely on instincts in making decisions in the business world. A comprehensive calculation effort is needed both qualitatively and quantitatively (Waits, 2000; Sugiyanto et.al, 2020). Feasibility study (FS) which aims to analyze the condition of MSME businesses whether they are in a state of profit or loss in their business (Saputri, et.al, 2021). In addition, the FS is to facilitate implementation in business and make business planning and make it easier to supervise (Khotimah, 2015). This can make business ideas more controllable to identify problems, opportunities, goals, and a description of the situation, costs and benefits associated (Sugiyanto et.al, 2020). From all aspects related to the business that we will create, so that MSMEs can be more competitive and have good development prospects, it is necessary to have a feasibility study for MSMEs.

II. METHODS

The location of community service was carried out at UMKM Batik Giriloyo, Wukirsari Village, Bantul Regency. The stages of this community service program are carried out in a structured manner in order to solve the problems faced by partners. The data collection technique uses in-depth interviews with key persons, observation and literature study. The stages carried out

by the service team consisted of 3 stages. The first stage of the service team made direct observations to UMKM Batik Giriloyo and studied literature studies. The second stage was a discussion between the service team and partners regarding business feasibility studies including market analysis, production analysis, sustainable environmental analysis, and business risks. The aim is to share experiences and solve the problems faced. The third stage is evaluation where service activities will be evaluated based on responses from partners.

III. RESULT AND DISCUSSION

Batik Giriloyo, located in Wukirsari Village, Imogiri District, Bantul Regency, Yogyakarta, is one of the oldest handmade batik craft centers in the region. Its long history dates back to around 1654, coinciding with the construction of the tombs of the Mataram kings in Imogiri. Initially, the batik tradition in this area developed from the needs of the Mataram palace, where courtiers were ordered by Sultan Agung to make batik for royal use. The involvement of Giriloyo residents in the batik process began when they were brought to Pajimatan to help fulfill the palace's growing orders, a process known in Javanese tradition as "ngangsu kaweruh" or gaining knowledge. This skill was then passed down through generations among the villagers, especially the women, becoming an integral part of their identity and livelihood.

The uniqueness of Giriloyo Batik lies in its intricate back and forth batik technique, a method that requires high precision and expertise, setting it apart from other batik techniques. Despite its rich history, the batik industry in Giriloyo has faced various challenges, including the economic crisis and natural disasters such as the Yogyakarta earthquake in 2006, which halted production for several months. However, the community's passion for preserving this heritage sparked a revival in 2004. This revival was facilitated by guidance and training from the Center for Handicrafts and Batik in Yogyakarta, as well as support from various Non- Governmental Organizations (NGOs), which helped the artisans learn dyeing techniques and achieve self-reliance in production. The culmination of the formalization of this revival occurred in 2008 with the inauguration of the joglo-joglo as Giriloyo Batik Village, which is now managed by a local hand-written batik association.

One of the most prominent characteristics of Giriloyo Batik is its highly community- based and women-led production structure. The entire batik-making process in the village is carried out by women, both young and old, with expertise passed down from one generation to the next. This tradition not only maintains the continuity of the batik technique, but also creates strong social ties within the community.

The artisans are organized into business groups which are then under the auspices of the Paguyuban Batik Giriloyo. Currently, the association includes around 640 housewives who are active as artisans, spread across three main hamlets: Giriloyo, Cengkehan, and Karang Kulon. This model has proven to be very effective in creating jobs, not only for housewives but also for out-of-school children, while contributing to the preservation of the nation's culture.

In addition to the sale of batik products, Giriloyo Batik Village has also developed the concept of educational tourism, where visitors can learn the batik process directly from the craftsmen. This activity has a direct and significant economic impact on the women artisans. They can earn around Rp30,000 per two hours of tourist assistance, which cumulatively can reach Rp1 million to Rp1.2 million per month. This income from tourist assistance is often larger and more stable than the

direct income from batik making itself, demonstrating how this business model provides substantial and sustainable economic contributions to individuals in the community.

The strong emphasis on community engagement, particularly the empowerment of 640 local women, positions Batik Giriloyo as a highly impactful social enterprise. This model not only encourages economic independence for women, but also preserves traditional skills and strengthens community ties, contributing directly to local socio-economic development. For investors, it represents a strong alignment with ESG (Environmental, Social, and Governance) principles, making the business attractive to impact investors or those seeking ventures with measurable social returns. The dual revenue streams of product sales and educational tours further strengthen the model, demonstrating a sustainable approach to generating livelihoods that is less vulnerable to single market fluctuations.

The traditional batik market in Indonesia is showing a positive growth trend, driven by several key factors. First, there is an increasing public awareness and pride in local products, which drives the demand for batik as part of the national cultural identity. Second, government support through various Micro, Small, and Medium Enterprises (MSMEs) development programs also contributes to the growth of the batik industry. Third, the growth of the tourism sector in Indonesia, both domestic and international, significantly increases the demand for batik products as souvenirs and cultural experiences. Fourth, contemporary fashion trends increasingly appreciate and integrate traditional elements, making batik relevant in the modern market.

In addition, digitalization has been a key driver in expanding batik's market reach. E-commerce platforms and social media allow batik artisans to reach a wider range of consumers and improve trade efficiency. Even amidst the COVID-19 pandemic, batik's market share in the country remains high, characterized by the high search for batik fashion. Globally, batik has been recognized by UNESCO as Indonesia's Intangible Cultural Heritage, further strengthening its position and appeal in the international market. The export potential of batik and batik products is also very promising, with export values reaching USD 17.5 million throughout 2023, and USD 9.45 million in the first semester of 2023 alone. This shows that the batik industry not only survives but also has the potential to develop further in the face of global competition (UMKM Indonesia, 2022).

Batik Giriloyo has adopted a dual distribution strategy to reach its market, combining conventional and digital methods. Conventionally, sales are conducted directly at Gazebo Wisata Giriloyo, which serves as a workshop center and batik gallery. In addition, Batik Giriloyo also collaborates with batik sellers in downtown Yogyakarta, expanding its reach to a wider market.

In the digital era, Batik Giriloyo utilizes internet technology for online sales. This includes the use of websites, Instagram, and other social media platforms to promote and sell their products. This approach allows them to reach consumers beyond their physical territory, including foreign tourists who are interested in traditional hand-written batik.

Integration with educational tourism is also an important distribution channel. Kampung Batik Giriloyo offers educational tour packages where visitors can learn the batik process firsthand. This package not only attracts domestic and foreign tourists, but also creates opportunities for direct sales of batik products to those who have experienced first-hand and understand the value behind each piece. In 2019, a total of 29,000 people purchased the batik learning package, and by 2022, this figure recovered to 24,000, showing the significant potential of this model.

The current market reach of Giriloyo Batik includes the city center of Yogyakarta and visiting foreign tourists. Although historically batik from Yogyakarta has reached international markets in the Americas, Asia, Africa, and Europe, research shows that the current marketing reach is dominated by markets in Java. This indicates an opportunity to expand the market reach, especially to international markets, through more aggressive digital marketing strategies and strategic partnerships.

A hybrid distribution strategy and optimization of educational tourism are essential to maximize Batik Giriloyo's reach and revenue. By combining conventional sales at the Gazebo and through collaboration with sellers in town, as well as utilizing e-commerce and social media, Batik Giriloyo can reach a diverse market segment, from local buyers to international tourists. The integration of educational tourism not only creates a significant additional revenue stream for the artisans, but also serves as a powerful marketing tool. The hands-on experience of making batik enhances consumers' appreciation of the complexity and value of the product, which in turn encourages purchases. Thus, this model not only optimizes revenue but also strengthens Batik Giriloyo's position as a cultural and educational hub.

The batik industry, especially hand-drawn batik, faces stiff competition, both from mass batik producers and from other traditional batik centers in Indonesia. The main competitors for Giriloyo hand-written batik are batik factories in nearby areas that use stamping or printing techniques. This mass production allows them to produce large quantities of cloth, with lower production costs due to time and labor efficiency, so their products can be sold at a much cheaper price. In addition, Giriloyo Batik also competes with other well-known batik centers in Indonesia such as Solo, Pekalongan, Cirebon, Lasem, Tasikmalaya, East Kalimantan, Madura, and Bali, each of which has its own characteristics and market segments.

Nonetheless, Giriloyo Batik has a strong competitive advantage. The originality of the product, which is produced through the hand-written batik method (*nyanthing*), makes it more valuable and different from manufactured products. In addition, the ownership of *awisan* (rare motifs) historically reserved for the family of the Sultanate of Yogyakarta, such as Sido Asih, Sido Mukti, Sekar Jagad, Lung Atas Angin, and Wahyu Tumurun, is a unique and prestigious selling point. The historical connection with the Ngayogyakarta Sultanate also gives Giriloyo products a prestigious heritage.

The production capacity of Giriloyo Batik, which is done in groups, is estimated to reach up to 100 pieces of batik tulis per month. This limitation stems from the highly manual and labor-intensive nature of the production. While this production model preserves the authenticity and quality of the product, it also poses challenges in terms of scalability and efficiency.

The limitations of manual production capacity and limited potential for scalability are a direct consequence of the labor-intensive nature and high skill required in each stage of making hand-drawn batik. Production dominated by women artisans with skills passed down through generations, while enriching the cultural value and authenticity of the product, also means that an increase in production volume cannot be achieved quickly or easily. This limits the ability of the business to respond significantly to spikes in market demand. In addition, maintaining quality consistency across manual production units spread across many artisans requires a strict quality control system. Therefore, growth strategies should consider a balance between maintaining

traditional values and carefully identifying areas where innovation or technology can be applied without compromising the essence of the product.

The cost structure, which is highly influenced by raw material quality and labor intensity, has significant implications for the pricing strategy and profitability of Giriloyo Batik. Since hand-drawn batik is a labor-intensive product that uses quality materials, the cost of raw materials and direct labor will be the main cost components. This means that Giriloyo Batik cannot compete on price with mass-produced printed or stamped batik. Instead, the pricing should reflect the intrinsic value of the handicraft, the quality of the materials, and the complexity of the motifs, which justify the premium price. Hence, the focus should be on market segments that value authenticity, quality, and the story behind the product, rather than being price-sensitive. Batik Giriloyo shows significant revenue potential, especially through a diversified business model between the sale of batik products and educational tours. Giriloyo Batik Village Cooperative managed to earn a total revenue of up to Rp2 billion per year in 2019. This revenue comes from the sale of batik cloth and batik learning packages.

Batik education packages are a key component of their economic model. In 2019, a total of 29,000 people purchased batik learning packages, and although the number of visitors declined at the start of the pandemic (7,000 in the first three months of 2020), this figure recovered to 24,000 in 2022. The craftswomen, who are mostly housewives, earn around IDR 30,000 for every two hours of assisting visitors in learning batik. The income from this mentoring activity can reach Rp1 million to Rp1.2 million per month for an artisan, which is even greater than the direct income from batik making. Currently, Giriloyo Batik Village receives an average of 3,500 tourists per month.

The positive financial indicators and investment attractiveness shown by the financial feasibility analysis provide a strong basis for Giriloyo Batik to attract capital. The selling price of Giriloyo batik cloth varies from Rp500,000 to Rp2,000,000, some even higher, depending on the complexity of the motif and the manufacturing process. The more difficult the motif and the longer the making process, the more expensive the price.

The investment feasibility analysis for a hand-drawn batik business, such as Batik Giriloyo, shows positive financial indicators. The factors that greatly affect the profitability of Giriloyo Batik are the complexity of the motifs, the quality of the fabric, and the length of the production process. Batik with more difficult motifs and a longer production process can be sold at a much higher price, thus increasing the profit margin. The ability to maintain the premium quality and uniqueness of Giriloyo's signature motifs, including the awisan motifs, is key to justifying the high selling price and attracting a market segment that is willing to pay more for the value of art and cultural heritage.

To run a batik business in Indonesia, businesses, including Batik Giriloyo, must comply with various licensing requirements set by the government. These licenses are important to ensure operational legality and support business sustainability. Some of the commonly required business licenses include Business Identification Number (NIB), Taxpayer Identification Number (NPWP).

The batik industry in Giriloyo has a very positive and significant socioeconomic impact on the local community. One of its main contributions is the creation of extensive employment opportunities, especially for women in the village. Currently, around 640 housewives are batik artisans, which not only provides them with a livelihood but also economic independence. The batik skill, passed down through generations, has become a stable source of income for many families, even opening up opportunities for out-of-school children to engage in productive activities.

Collectively, the cooperatives of Kampung Batik Giriloyo are able to generate revenues of up to Rp2 billion per year, which directly flows into the community. In addition to the sale of batik products, the educational tourism model offered also makes a substantial economic contribution. The artisans earn income from assisting tourists who learn to make batik, with potential individual income reaching Rp1 million to Rp1.2 million per month from this activity alone. This income is often higher than the direct income from batik making, showing how this diversified business model directly improves the welfare of individuals within the community. The existence of Giriloyo Batik Village also has an indirect positive impact on other local merchants who depend on tourism, both from domestic and foreign visitors. More broadly, this batik activity enhances cooperation among community members, broadens horizons and knowledge, and fosters awareness of regional development. This shows that Batik Giriloyo is not just a business, but an entity that plays a crucial role in improving welfare and preserving local culture.

Batik Giriloyo's crucial role in welfare improvement and local cultural preservation goes beyond mere financial gain. By empowering hundreds of women through job creation and a stable income stream, the business directly improves the quality of life of families and the community as a whole. It also ensures the continued transmission of traditional batik skills, safeguarding an invaluable cultural heritage from generation to generation. These positive impacts create a virtuous circle: improved economic well-being enables the community to invest more in cultural preservation, while cultural preservation strengthens the unique appeal of the business, attracting more tourists and buyers. It is a holistic development model that integrates economic, social, and cultural aspects for long-term sustainability.

While Giriloyo's batik industry provides positive socio-economic impacts, there are significant challenges related to the environmental impacts of its production process, especially in the management of liquid waste. Most of the batik industries in the area still use traditional production methods without the application of sustainable or environmentally - friendly development principles, leading to pollution from liquid waste. To address these environmental impacts, investments in infrastructure and better waste management practices are required. Giriloyo Batik Village has embraced the principle of sustainability and strives to carve out an eco-friendly footprint, one of which is through the Integrated Wastewater Treatment Plant (IPAL) technology. Moreover, the transition towards the use of natural dyes and wax recycling practices will further minimize the ecological footprint. These measures not only fulfill environmental responsibilities but also enhance Batik Giriloyo's brand image as a responsible producer, attracting consumers who are increasingly concerned about sustainability.

IV. CONCLUSION

The business feasibility study of Batik Tulis Giriloyo shows that the venture has a strong foundation and significant growth potential, supported by a deep cultural heritage, product uniqueness, and a community-based business model that empowers local women. The long history and connection to the Mataram Kingdom provides a narrative of authenticity that cannot be replicated, justifying a premium position in the market. Consumer preferences centered on aesthetics, value, and fulfillment of expectations show that Batik Giriloyo has a loyal market segment that is willing to pay for the quality and the story behind the product. Income

diversification through educational tourism has also proven to be highly effective in supporting the financial stability and well-being of the community.

However, several challenges need to be overcome to ensure long-term sustainability. Competition from cheaper mass-produced batik demands a strong differentiation strategy. Limited manual production capacity and the challenge of regenerating young artisans require innovative solutions. Most crucially, the environmental impact of batik production waste, especially from synthetic dyes, requires serious attention and investment in waste management infrastructure.

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