

Digital Transformation of Giriloyo Batik: A Necessity or a Choice?

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Abstract. (10 pt)

The Giriloyo Batik Centre in Bantul, Yogyakarta, is a traditional batik hub with significant historical and cultural value. However, in facing the challenges of modern markets and digitalisation, batik entrepreneurs in this area still encounter various structural and cultural obstacles. This study employs a descriptive qualitative approach to explore the perceptions, readiness, and barriers experienced by entrepreneurs during the digital transformation process. The researchers collected data through in-depth interviews, a literature review, and field documentation. The findings reveal that, despite attempts to utilise social media and marketplaces, limitations in digital literacy, the relatively old age of entrepreneurs, and a lack of digital managerial skills remain the primary barriers. Stakeholders have not yet fully implemented digital transformation as an integrated e-commerce system. Therefore, stakeholders must prioritise technology adoption and human resource development, which can be achieved through intensive training and mentoring initiatives. This study recommends a community-based approach to digitalising the traditional batik industry as a more sustainable strategy.

Keywords: *Giriloyo Batik, digital transformation, digital literacy, HR empowerment, creative industry.*

I. INTRODUCTION

The Giriloyo Batik Centre in Wukirsari Village, Imogiri Subdistrict, Bantul Regency, is one of the oldest and most well-known batik craft centres in the Yogyakarta Special Region. Its historical roots trace back to the 17th century when royal courtiers of the Mataram Kingdom were assigned to the royal burial complex in Imogiri and brought with them the craft of batik as part of palace culture (Mudzakir, 2020; Munawaroh, 2016). Since then, batik-making has become integral to Giriloyo's social and economic life, particularly among women, who practice the craft as a primary source of income and a cultural heritage passed down through generations (Nursaid and Armawi, 2016). Giriloyo's hand-drawn batik is renowned for its distinctive patterns, including mbantulan, nitik, and gurda, which reflect philosophical values and local identity (Sukanadi and Suharson, 2012).

Despite its substantial historical and cultural value, the Giriloyo batik industry is under immense pressure due to changing consumer patterns and global market challenges. Handmade batik products must compete with mass-produced printed batik and cheaper imported goods aggressively marketed through digital channels. In addition, the lack of young artisans, weak design innovation, and limited managerial and marketing capacity further weaken the position of Giriloyo's batik in the modern market (Sukanadi and Suharson, 2012). Reliance on conventional production and marketing methods has left many batik entrepreneurs stagnant and unable to tap into broader market opportunities.

In the context of rapid digital economy and information technology development, digital transformation has become a strategic path to enhance competitiveness and sustainability in the creative industry, including Giriloyo's batik. Technologies such as e-commerce platforms, social media, digital accounting systems, and visual-interactive consumer education open new opportunities for batik artisans to expand market access, increase production efficiency, and build broader business networks (Istiani, 2013). However, technology adoption among Giriloyo's batik artisans remains limited due to infrastructure gaps, low digital literacy, and resistance to change driven by traditional mindsets (Nursaid and Armawi, 2016).

Therefore, a key question arises and becomes the core focus of this study: Is digital transformation an absolute necessity or merely an option for the hand-drawn batik industry in Giriloyo? To answer this, the study explores the perceptions of local entrepreneurs toward digitalisation, the community's readiness to adopt technology, and the obstacles and opportunities faced during this transformation. Through this approach, the article aims to contribute to a deeper understanding of digital transformation in traditional craft industries and provide adaptive strategy recommendations based on local needs and cultural characteristics.

II. METHODS

This study employs a descriptive qualitative approach, utilising data collection techniques that include a literature review and field documentation. The researchers gathered primary data through in-depth interviews with members of the Giriloyo batik community in Wukirsari Village, Imogiri, Bantul. They collected secondary data from academic journals, government reports, program documentation, and other relevant literature. Informants were selected purposively based on their involvement in the batik production process. Data analysis involved the stages of data reduction, presentation, and conclusion drawing, with validity strengthened through source triangulation and confirmation with key informants (Meilania and Rahmi, 2019)

III. RESULT AND DISCUSSION

Overview of Giriloyo Batik

Giriloyo Hamlet, situated on the hilly slopes of Wukirsari Village, Imogiri Subdistrict, Bantul Regency, spans approximately 80 hectares, comprising predominantly agricultural and forest land. Access to the hamlet is relatively good despite the steep and winding roads. It comprises 674 people in 194 households and six neighbourhood units (RTs). The social structure remains deeply rooted in communal values, supported by an active youth organisation. Most residents work as farmers, labourers, or hand-drawn batik artisans. Many adult women simultaneously serve as housewives and home-based batik entrepreneurs, using their spare time to craft batik at home.

Hand-drawn batik craftsmanship in Giriloyo has been a generational heritage since the 17th century, mainly due to its proximity to the Yogyakarta royal palace. Although the craft declined after the 2006 earthquake, the local community revitalised it by establishing the Giriloyo Hand-Drawn Batik Association. (Pambudi, 2020). This association has played a vital role in skill training, economic empowerment, and expanding market access through conventional and digital means. Through a community-based empowerment approach, the association has successfully fostered solidarity among artisans and increased public participation in cultural preservation and the development of educational tourism.

Most batik artisans, aged between 20 and 70, exhibit an extraordinary work ethic. They work from morning to night, often working overtime to meet order deadlines, driven to support their families' economic well-being and achieve financial independence. The artisans allocate their batik income to cover daily needs, finance education, build savings, and support religious activities, such as pilgrimages. Batik-making provides a means of self-actualisation for Giriloyo women, allowing

them to step beyond domestic roles and contribute meaningfully and with dignity to social and economic life.



Figure 1: Giriloyo activities

Use of Social Media and Marketplaces

Interview results indicate that some artisans have attempted to utilise social media and marketplaces to promote their products, although the outcomes have been suboptimal. One informant stated, “Yes, we’ve tried using Facebook and Shopee. But it didn’t sell well. We uploaded pictures, but few people bought them. Maybe because we don’t know how to market them properly or understand how the algorithms work.” This quote reflects an initial initiative, but a lack of understanding of digital marketing strategies and platform algorithms limits success.

This finding aligns with previous research that emphasises that technology alone does not guarantee improved business performance, especially if not supported by adequate digital literacy and targeted marketing strategies (Istiani, 2013). Technology may become ineffective if entrepreneurs cannot operate digital platforms or understand online consumer behaviour. Therefore, technical mentoring is crucial for introducing social media and marketplaces, and equipping artisans with knowledge of digital algorithms, market trends, and skills to create attractive, brand-aligned promotional content. Without ongoing support, the use of technology remains superficial (Hasibuan et al., 2024).

Barriers to E-Commerce and Digital Transactions

The adoption of digital technology for transaction purposes remains very limited. One informant explained, “Right now, we’re just displaying the products. So people can see them, but they can’t directly buy them. We haven’t reached that stage because we don’t know how to manage transactions, shipping, and so on.” This finding indicates that digital transformation in Giriloyo has not yet reached full e-commerce integration. Digitalisation is still in its initial stage of product visibility, lacking integration with payment systems and logistics.

This condition reinforces the argument that digitalisation in small businesses, including batik crafts, cannot rely solely on infrastructure such as internet networks or digital devices. More importantly, it requires comprehensive digital managerial skills, including knowledge of online store management, electronic transactions, logistics, and virtual customer service (Suprayitno and Suharti, 2025). Without proper training in these aspects, artisans risk using digital platforms merely as static showcases rather than effective distribution channels. In the long term, this limits business growth potential and widens the digital gap between adaptive and non-adaptive entrepreneurs. Thus, a

holistic and continuous intervention is needed to ensure digitalisation drives inclusive and competitive economic transformation.

Human Resource and Production Readiness

Another crucial aspect is human resource readiness. As one interviewee expressed, *“Honestly, we’re not ready. Most entrepreneurs here are elderly, so it’s hard to learn how to use systems or apps. For production, we still use traditional methods. Financial matters are still recorded manually.”* This statement highlights the demographic and work culture challenges impeding digital transformation.

This finding is consistent with the results of Nursaid and Armawi (2016), who revealed that Most batik artisans in Giriloyo are over 50 years old and continue to practise traditional, manual methods that they have inherited through generations. The community members utilise these practices as production techniques that express their cultural identity and reinforce community pride. In this context, stakeholders cannot implement digitalisation instantly or uniformly; they must account for the entrepreneurs’ social and cultural characteristics. Therefore, practitioners should design the adoption of digital systems through participatory approaches that actively engage artisans in planning and training activities. Moreover, they need to introduce these systems gradually to facilitate effective adaptation. This approach is vital to minimise cultural resistance and reduce technological gaps that may hinder successful digital transformation at the grassroots level.

Prioritising Human Resource Empowerment

As a solution, informants emphasised the importance of empowering people before introducing digital systems. *“In my opinion, the most important thing is to prepare the people first. The human resources must be equipped first, then we can think about systems. If people don’t understand, even the most sophisticated systems are useless.”* This statement highlights that the success of digital transformation largely depends on the readiness of individuals and communities, rather than the technology itself.

In the context of Giriloyo’s traditional batik development, the local community—particularly community members—must independently manage and utilise technology to ensure the success of digital transformation. (Yusrijal et al., 2025). Therefore, top-down interventions alone are insufficient. A capacity-building approach is necessary, encompassing hands-on digital skills training, education on online marketing, and the enhancement of digital literacy. Furthermore, the regeneration of young entrepreneurs is equally essential, as younger generations tend to be more tech-savvy and can serve as catalysts for change within their communities. Thus, training, digital education, and youth involvement are not merely initial steps but essential prerequisites for sustainable and successful digital transformation in creative economic sectors rooted in local cultural heritage, such as Giriloyo’s batik.

IV. CONCLUSION

Digital transformation at the Giriloyo Hand-Drawn Batik Centre is not merely an option but a strategic necessity to maintain relevance in an increasingly digital market. However, its success cannot rely solely on providing technology; it must begin with human resource development. Key barriers, including low digital literacy, an ageing artisan population, and limited managerial skills, indicate that stakeholders must implement digitalisation gradually and following the local context. Training, youth regeneration, and ongoing assistance are essential to ensure digitalisation becomes a passive display platform and an effective empowerment tool. A community-based approach focusing on socio-cultural readiness is a relevant strategy for addressing the challenges of digital transformation in traditional craft industries, such as Giriloyo’s hand-drawn batik.

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