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Original Article



## Heritage-Based Entrepreneurship and Digital Transformation in the Creative Economy: Revitalizing Majapahit Batik in Indonesia

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### Abstract

The sustainability of traditional cultural industries is increasingly challenged by globalization, changing consumer preferences, and the rapid growth of digital markets. Majapahit Batik, a heritage-based craft rooted in the historical legacy of the Majapahit Kingdom in Indonesia, faces similar pressures in maintaining both its cultural authenticity and commercial relevance. This study aims to examine how heritage-based entrepreneurship and digital transformation contribute to the revitalization and market expansion of Majapahit Batik within Indonesia's creative economy. Using a qualitative descriptive approach with a case study design, the research investigates three batik micro, small, and medium enterprises (MSMEs) located in Mojokerto: Batik Majapahit Negi, Batik Sekar Arum, and MyDebz Batik. Data were collected through in-depth interviews, field observations, and document analysis of digital marketing content. The findings reveal three key strategies driving the revitalization of heritage batik: (1) product innovation that reinterprets traditional Majapahit motifs through contemporary designs while preserving cultural symbolism; (2) digital transformation through social media, online marketplaces, and digital branding that expands market reach beyond local boundaries; and (3) cultural storytelling that communicates the historical and philosophical meanings of batik motifs, strengthening brand authenticity and consumer engagement. The study demonstrates that the collaboration between heritage values, creative innovation, digital technologies, and narrative branding forms a sustainable model of cultural entrepreneurship for traditional craft industries. The findings suggest that heritage-based industries can remain competitive in the modern creative economy when cultural preservation is integrated with innovation and digital strategies. These insights provide practical implications for artisans, creative entrepreneurs, and policymakers seeking to sustain cultural heritage while promoting inclusive economic development.



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## 1. Introduction

Indonesia is widely recognized as one of the world's most culturally diverse countries. Across the Indonesian archipelago, each region possesses unique cultural expressions that reflect historical experiences, social values, and artistic traditions passed down through generations. These cultural assets include various forms of traditional heritage such as architecture, performing

arts, handicrafts, and textiles. Among these cultural expressions, batik occupies a particularly prominent position as both a cultural identity and a symbol of Indonesian artistic heritage. Batik is not merely a decorative textile but represents a complex system of symbolism, philosophy, and craftsmanship embedded in local traditions. However, despite its cultural significance, contemporary social changes and modernization have contributed to a decline in

awareness and appreciation of traditional batik motifs, especially among younger generations (Aghtyana & Dahlan, 2024).

The cultural significance of batik is especially evident in Majapahit Batik, a style inspired by the historical legacy of the Majapahit Kingdom, one of the most influential civilizations in Indonesian history. The visual characteristics of Majapahit Batik originate from artistic elements found in temple reliefs, archaeological artifacts, and symbolic ornaments discovered in Trowulan, the former capital of the Majapahit Kingdom. These visual elements reflect cosmological perspectives, religious symbolism, and the collective identity of Javanese society. As such, Majapahit Batik represents more than aesthetic expression; it embodies cultural narratives and historical memory embedded within textile art. Previous studies emphasize that the design development of Majapahit Batik involves reinterpretation of historical motifs into contemporary visual forms, allowing traditional cultural heritage to remain relevant in modern creative contexts (Studyanto, 2018). This integration of historical legacy with contemporary creativity demonstrates how cultural heritage can evolve while preserving its symbolic meaning and identity.

Despite its strong cultural foundation, Majapahit Batik currently faces significant challenges in maintaining both its cultural authenticity and commercial relevance. The rapid advancement of globalization and industrialization has intensified competition within the textile and fashion industries. Mass-produced textiles, including printed batik, have increasingly dominated the market due to their lower costs and faster production. At the same time, changing consumer preferences, particularly among younger consumers, require traditional products to adapt to modern tastes, lifestyles, and fashion trends. These developments place traditional batik producers in a complex position, requiring them to simultaneously preserve cultural authenticity while remaining competitive in contemporary markets.

In this context, digital transformation has emerged as both an opportunity and a challenge for traditional cultural industries. The expansion of digital technologies, social media platforms, and e-commerce marketplaces has created new opportunities for artisans and micro, small, and medium enterprises (MSMEs) to reach broader audiences. Digital marketing tools enable businesses to communicate their brand identity, reach global consumers, and build stronger customer relationships. Research on the batik industry indicates that digital marketing strategies, particularly through social media and online platforms, can significantly enhance business visibility, expand market reach, and improve sales performance (Arsyad et al., 2024). Moreover, digital platforms provide opportunities for storytelling, brand positioning, and cultural education,

allowing producers to highlight the historical and philosophical meanings behind traditional batik motifs.

At the same time, integrating digital technologies into traditional craft industries requires significant adjustments. Many batik artisans and small enterprises still face limitations in digital literacy, access to technology, and marketing capabilities. Furthermore, the commercialization of cultural heritage also raises important concerns regarding the preservation of cultural authenticity and ethical representation. Without careful integration of cultural values, commercialization efforts risk reducing cultural heritage into purely economic commodities, potentially weakening the cultural meanings embedded within traditional crafts.

In recent academic discussions, the concept of heritage-based entrepreneurship has gained increasing attention as a strategic approach to addressing these challenges. Heritage entrepreneurship refers to entrepreneurial activities that utilize cultural heritage as a source of economic value while maintaining its cultural and social significance. This approach encourages local actors—including artisans, designers, creative entrepreneurs, and cultural communities to integrate traditional knowledge with innovative business strategies. Through this process, cultural heritage can be transformed into competitive creative products that simultaneously generate economic opportunities and preserve cultural identity. Studies on cultural heritage entrepreneurship also highlight the role of education, innovation, and collaborative initiatives in promoting sustainable development through cultural industries (Brinia et al., 2024).

Although previous studies have examined various aspects of batik development, several important research gaps remain. First, existing studies have explored the technological application of digital tools in batik education and cultural promotion, such as the use of augmented reality to introduce batik motifs to younger generations (Aghtyana & Dahlan, 2024). Second, other studies have focused on the design development and reinterpretation of historical motifs in Majapahit Batik, emphasizing the creative integration of heritage and contemporary aesthetics (Studyanto, 2018). Third, research has also highlighted the importance of digital marketing strategies in improving the competitiveness of the batik industry within the global fashion market (Arsyad et al., 2024). However, these studies tend to examine technological innovation, design development, or digital marketing separately. There remains limited research that integrates heritage-based entrepreneurship, product innovation, digital transformation, and cultural storytelling into a comprehensive framework for revitalizing heritage batik industries, particularly within the context of Majapahit Batik.

Furthermore, while the concept of cultural heritage entrepreneurship has been widely discussed in

international contexts, empirical studies of its application in traditional craft industries within Indonesia's creative economy remain relatively scarce. Understanding how heritage-based entrepreneurship can support the revitalization of traditional cultural industries is therefore essential for developing sustainable strategies that balance economic growth with cultural preservation. Thus, the current study aims to examine how heritage-based entrepreneurship and digital transformation can support the revitalization of Majapahit Batik within Indonesia's creative economy.

## 2. Literature Review

### 2.1. Cultural Heritage and the Historical Significance of Batik

Batik represents one of Indonesia's most important cultural heritage assets, embodying not only aesthetic expression but also philosophical meanings, social values, and historical narratives embedded in traditional craftsmanship. As a cultural artifact, batik reflects the identity and cultural continuity of Indonesian society, with motifs and techniques that have evolved through generations. However, modernization and globalization have gradually influenced the perception and appreciation of traditional batik, particularly among younger generations who often lack familiarity with traditional motifs and cultural symbolism (Aghtyana & Dahlan, 2024). This decline in cultural awareness has raised concerns regarding the long-term sustainability of batik heritage.

The historical significance of batik is particularly evident in Majapahit Batik, whose motifs are derived from cultural elements found in archaeological remains, temple reliefs, and artifacts from the Majapahit Kingdom. These motifs embody cosmological beliefs, social structures, and philosophical values embedded in Javanese culture (Studyanto, 2018). The reinterpretation of such historical motifs into contemporary batik designs demonstrates how cultural heritage can evolve while maintaining its symbolic essence. Similarly, Widagdo et al. (2023) highlight that batik heritage represents a foundation for entrepreneurial transformation, illustrating how traditional craftsmanship can serve as a platform for inclusive innovation and economic development.

Nevertheless, preserving cultural heritage through traditional crafts is increasingly challenging. Globalization has intensified competition with mass-produced textile products, which are often cheaper and more accessible than handmade batik. Consequently, artisans must navigate the tension between maintaining cultural authenticity and adapting to evolving market demands. While heritage-based industries offer significant cultural value, their sustainability increasingly depends on their ability to innovate and integrate modern business practices.

### 2.2. Heritage-Based Entrepreneurship and Cultural Innovation

In response to the challenges faced by traditional cultural industries, the concept of heritage-based entrepreneurship has emerged as an important theoretical framework for understanding how cultural heritage can generate economic value while preserving cultural identity. Heritage entrepreneurship emphasizes the role of entrepreneurs in transforming traditional knowledge, artistic practices, and cultural resources into innovative products and services that contribute to both cultural preservation and economic development (Brinia et al., 2024).

Several studies highlight the importance of integrating cultural heritage with entrepreneurial innovation. Hendriyana et al. (2025) argue that revitalizing traditional crafts requires bridging traditional knowledge with modern innovation through approaches such as design thinking and creative experimentation. Such strategies enable artisans to reinterpret cultural heritage while responding to contemporary consumer preferences. Similarly, Rifqiansyah (2025) emphasizes that culture-based entrepreneurship rooted in local wisdom can create sustainable business models that balance profitability with social and cultural values.

However, despite the growing interest in cultural entrepreneurship, several limitations remain in the existing literature. Many studies emphasize the conceptual potential of heritage-based entrepreneurship but provide limited empirical insights into how such models operate within specific cultural industries. In addition, research often focuses on general creative industries rather than on specific heritage products, such as batik, within localized cultural contexts. As a result, there remains a need for empirical studies that explore how heritage-based entrepreneurship can be operationalized within traditional craft industries while maintaining cultural authenticity.

### 2.3. Digital Transformation and Marketing in Creative Industries

The emergence of digital technologies has significantly reshaped the landscape of creative industries, including traditional craft sectors such as batik production. Digital transformation enables small enterprises to expand their market reach, improve operational efficiency, and enhance consumer engagement through online platforms. Research on the batik industry shows that digital marketing tools, such as social media, e-commerce platforms, and websites, can play a crucial role in promoting traditional products to broader audiences (Arsyad et al., 2024).

Similarly, Thamrin et al. (2023) highlight that digital marketing adoption among handicraft SMEs can

enhance business visibility and strengthen market competitiveness. However, the study also reveals that many SMEs face significant barriers in implementing digital marketing strategies, including limited technological skills, a lack of digital literacy, and unequal access to digital infrastructure. These challenges indicate that digital transformation is not solely a technological issue but also involves human capital development and organizational adaptation.

Other studies further emphasize the strategic role of digital transformation in enhancing SME competitiveness. Rahayu and Soetjipto (2025) demonstrate that digital business transformation enables SMEs to strengthen brand positioning, expand consumer reach, and improve sales performance through digital marketing strategies. Singh et al. (2025) similarly argue that digital marketing capabilities, including search engine optimization (SEO), social media engagement, and e-commerce platforms, can significantly improve handicraft businesses' performance by increasing consumer engagement and brand visibility.

Despite these findings, much of the existing literature focuses primarily on digital marketing strategies rather than examining how digital transformation interacts with cultural heritage preservation. While digital platforms offer opportunities for market expansion, the integration of digital technologies with heritage-based entrepreneurship remains insufficiently explored, particularly within traditional craft industries.

#### 2.4. Innovation and Sustainability in Batik Industries

Innovation plays a critical role in ensuring the sustainability of traditional cultural industries. For batik artisans, innovation can take many forms, including adapting product designs, improving production processes, and incorporating environmentally sustainable practices. Octavia et al. (2024) demonstrate that batik artisans can enhance their resilience by combining traditional motifs with contemporary design elements while adopting eco-friendly materials and digital marketing strategies.

Similarly, Febrianda et al. (2025) emphasize the importance of integrating entrepreneurship, digital technology, and innovation to enhance the competitiveness and sustainability of batik SMEs. Their study highlights the growing relevance of green innovation, particularly in addressing environmental concerns associated with batik production. Digital technologies, according to the study, can facilitate the implementation of both green and non-green innovations by supporting knowledge sharing, marketing activities, and operational efficiency.

However, while innovation is often discussed as a key driver of industry development, many studies treat it

as a purely technological or product-oriented process. Less attention has been given to the role of cultural narratives, identity, and storytelling in shaping innovation within heritage-based industries. This limitation suggests that innovation in cultural industries cannot be fully understood without considering the cultural and symbolic dimensions embedded within traditional crafts.

#### 2.5. Digital Technology and Cultural Preservation

Contrary to the assumption that technological advancement threatens traditional culture, recent studies suggest that digital technologies can play a significant role in preserving cultural heritage. Gondoputranto and Dibia (2022) demonstrate how digital tools such as algorithm-based batik design software can help artisans recreate and experiment with traditional motifs while maintaining cultural authenticity. Such technological innovations enable the preservation of traditional designs while facilitating creative experimentation.

Similarly, Aghtyana and Dahlan (2024) show that digital technologies such as augmented reality applications can enhance cultural education by introducing traditional batik motifs to younger audiences in interactive ways. These technological approaches highlight the potential of digital tools not only for commercial purposes but also for cultural preservation and knowledge transmission. Nevertheless, while digital technologies offer promising opportunities for cultural preservation, their successful implementation depends on the availability of digital skills, infrastructure, and institutional support. Without adequate training and support mechanisms, many artisans may struggle to adopt digital technologies effectively.

#### 2.6. Creative Economy, Governance, and Community-Based Development

The development of heritage-based industries cannot be separated from the broader context of the creative economy, which emphasizes the role of creativity, cultural assets, and innovation in economic development. Utami et al. (2026) highlight that the creative economy can facilitate the transformation of traditional fashion industries by integrating cultural innovation with modern entrepreneurship. This integration enables traditional cultural products, such as batik, to remain competitive in global markets.

Government policies also play an important role in supporting the development of creative industries. Dellyana et al. (2023) emphasize the importance of governance frameworks that facilitate digital innovation and collaboration among policymakers, creative practitioners, and businesses. Effective governance mechanisms can help create an enabling environment for cultural industries to adapt to digital transformation.

In addition to policy support, community participation is crucial for sustaining cultural industries. Hazlina et al. (2026) demonstrate how community-based initiatives can strengthen rural entrepreneurship, cultural preservation, and knowledge exchange through collaborative activities involving local SMEs, educational institutions, and community organizations. Similarly, Juliana et al. (2026) highlight how batik production can support community-based tourism development, create employment opportunities, while strengthen local cultural identity.

Furthermore, creative entrepreneurship has also been linked to cultural tourism development. Aditia and Kano (2025) argue that innovations in digital marketing, cultural events, and community engagement can enhance the attractiveness of cultural heritage destinations while contributing to sustainable tourism development.

Although the existing literature provides valuable insights into cultural heritage preservation, creative entrepreneurship, digital transformation, and innovation within traditional industries, several important gaps remain. First, many studies examine heritage preservation, entrepreneurship, and digital transformation separately, rather than exploring how these elements interact within a comprehensive framework for revitalizing cultural industries. Second, while research on batik innovation and digital marketing exists, relatively few studies specifically investigate Majapahit Batik, which possesses distinct historical and cultural characteristics rooted in the Majapahit civilization.

Third, the role of cultural storytelling and heritage narratives in strengthening market competitiveness remains underexplored in existing research. Most studies emphasize technological or marketing aspects but pay limited attention to how cultural narratives influence consumer engagement and brand authenticity. Therefore, this study seeks to address these gaps by examining how heritage-based entrepreneurship and digital transformation can collectively contribute to the revitalization of Majapahit Batik within Indonesia's creative economy. By integrating perspectives from cultural heritage studies, entrepreneurship research, and digital innovation, this research aims to develop a more comprehensive understanding of how traditional cultural industries can adapt to contemporary economic and technological environments while preserving their cultural identity.

### 3. Materials and Methods

#### 3.1 Research Approach and Design

This study adopts a qualitative research approach with a descriptive case study design to explore the entrepreneurial strategies used in revitalizing Majapahit Batik within the context of Indonesia's creative economy.

A qualitative approach was selected because the research aims to gain an in-depth understanding of the experiences, practices, and perspectives of actors involved in the batik industry, particularly artisans, designers, and micro, small, and medium enterprises (MSMEs) engaged in Majapahit Batik production and marketing.

The case study method allows the researcher to investigate complex social, cultural, and economic phenomena within their real-life context. In the context of heritage-based industries, such as traditional batik production, this approach is particularly useful for examining how cultural values, entrepreneurial practices, and digital transformation intersect in everyday business activities. Rather than relying solely on quantitative measurements, the case study approach enables exploration of the contextual dynamics of batik enterprises, including innovation practices, marketing strategies, and cultural storytelling.

The descriptive design of this research aims to systematically document and analyze how product innovation, entrepreneurial strategies, and digital transformation practices contribute to the revitalization and commercialization of heritage batik. Similar qualitative approaches have been widely applied in research on creative industries and MSME development, particularly in studies examining innovation and marketing strategies in traditional craft sectors (Sahetapy et al., 2024).

#### 3.2 Research Locations and Participants

The research was conducted in Mojokerto and surrounding areas, which are recognized as important centers for Majapahit Batik production and cultural heritage preservation. These locations were selected because they represent regions where traditional batik craftsmanship intersects with contemporary market development and creative industry practices. The study focuses on three batik enterprises that actively develop and promote Majapahit-inspired batik motifs:

1. Batik Majapahit Negi – Jatirejo (Dinoyo Village, Jatirejo District); This enterprise specializes in hand-drawn batik featuring traditional Majapahit motifs and has a strong historical background in developing locally inspired batik designs.
2. Batik Sekar Arum – Magersari (Mojokerto City); A batik production house known for producing various Majapahit-inspired motifs, including the Surya Majapahit pattern, which reflects historical symbolism associated with the Majapahit civilization.
3. MyDebz Batik – Tambakagung, Puri District (Teras Hamlet); A batik design studio and gallery that combines batik production with creative design activities and digital marketing initiatives.

Participants were selected using purposive sampling, a qualitative research technique that identifies individuals with relevant knowledge and experience related to the research topic. Informants included artisans, designers, and business owners who have been actively involved in batik production, design innovation, or marketing activities for several years. This selection ensured that the collected data reflected authentic practices and real-world dynamics within the heritage batik industry. Similar sampling strategies have been used in research on craft industries and creative MSMEs in Indonesia (Sahetapy et al., 2024).

### 3.3 Data Collection Techniques

To obtain comprehensive insights into the processes of cultural revitalization and entrepreneurial strategies within the batik industry, data were collected using multiple qualitative methods. The use of multiple data sources allows for triangulation and strengthens the credibility of the findings. First, in-depth interviews were conducted with selected informants using semi-structured interview guidelines. The interviews explored various themes, including cultural values embedded in Majapahit batik motifs, product innovation processes, digital marketing practices, entrepreneurial challenges, and strategies for maintaining cultural authenticity in commercial markets.

Second, field observations were carried out at the selected batik enterprises to directly observe production activities, interactions between artisans and designers, and the processes involved in batik creation. Observations also included documenting business activities such as order management, product display, and the use of digital platforms for customer engagement.

Third, document and digital content analysis was conducted to examine various forms of supporting materials related to the batik enterprises. These materials included social media content, online catalogs, e-commerce listings, promotional materials, and business documentation. The analysis of digital content was particularly important for understanding how cultural narratives and heritage values are communicated through digital marketing platforms. Previous studies on digital marketing in craft industries emphasize the importance of analyzing online content to understand branding strategies and consumer engagement patterns (Thamrin et al., 2023).

### 3.4 Data Analysis

The collected data were analyzed using a qualitative data analysis framework based on the interactive model proposed by Miles and Huberman, which involves three main stages: data reduction, data display, and conclusion drawing and verification. During the data

reduction stage, interview transcripts, observation notes, and document materials were systematically reviewed and coded to identify relevant themes related to entrepreneurial strategies, product innovation, digital marketing, and cultural storytelling. This process helped to organize the large volume of qualitative data into meaningful categories. In the data display stage, the categorized data were presented as narrative descriptions, thematic matrices, and selected quotations from informants. This step facilitated the identification of patterns, relationships, and recurring themes across the different batik enterprises studied.

Finally, in the conclusion drawing and verification stage, the researcher interpreted the findings by connecting the empirical evidence with the theoretical perspectives discussed in the literature review. This stage also involved cross-checking data consistency and validating interpretations by comparing multiple data sources. Such qualitative analytical procedures are commonly applied in research on creative industries and cultural entrepreneurship (Thamrin et al., 2023). In addition, digital content analysis was conducted to examine how batik enterprises communicate cultural heritage values through online platforms. This analysis focused on how heritage narratives, brand identity, and product innovation are presented through social media and digital marketing channels, and how these elements influence consumer perception and engagement.

## 4. Results and Discussions

### 4.1 Product Innovation Rooted in Heritage Values

Findings from the three batik enterprises studied reveal that product innovation plays a central role in revitalizing Majapahit Batik while maintaining its cultural authenticity. Across the cases, innovation is not interpreted as replacing traditional motifs but rather as reinterpreting heritage elements to respond to contemporary market preferences. This approach reflects a broader trend in heritage-based industries where innovation is used to sustain cultural relevance without eroding historical meaning. Research on traditional craft revitalization emphasizes that culturally sensitive innovation enables artisans to adapt their products to modern markets while preserving the cultural narratives embedded in traditional designs (Hendriyana et al., 2025).

One of the key dimensions observed in the field is adaptive design, in which traditional Majapahit motifs are retained while combined with modern visual elements, such as contemporary color palettes, minimalist compositions, and diversified product forms. These innovations include transforming batik from traditional cloth into ready-to-wear fashion, accessories, and lifestyle products, enabling heritage batik to reach broader consumer segments. This strategy reflects the concept of cultural innovation in the creative economy,

integrating traditional craftsmanship with modern design thinking to enhance both aesthetic value and market competitiveness (Utami et al., 2026). In this context, innovation serves not only as a design strategy but also as a mechanism for preserving batik's cultural identity while adapting to evolving consumer demands.

Interviews with artisans and entrepreneurs further indicate that heritage motifs are perceived as both an "identity asset" and a "unique selling proposition." Rather than competing solely on price or production scale, batik MSMEs emphasize the cultural narratives behind their designs, which differentiate their products from mass-produced textiles. This finding aligns with studies suggesting that heritage-based products derive a competitive advantage from their cultural symbolism and authenticity, which create emotional connections between producers and consumers (Rifqiansyah, 2025). Such symbolic value allows traditional craft products to maintain market relevance even in highly competitive global fashion markets.

More specifically, each enterprise demonstrates distinct innovation strategies. Batik Majapahit Negi focuses on strengthening Majapahit-inspired ornamentation, drawing inspiration from temple carvings, floral motifs, and royal symbols associated with the Majapahit civilization. While maintaining these historical elements, the enterprise introduces innovative color combinations and more dynamic motif arrangements to attract younger consumers. This approach illustrates how heritage motifs can be preserved while being visually refreshed to suit contemporary tastes. Similar strategies have been observed in other batik industries, where artisans reinterpret historical motifs through modern design elements to sustain cultural relevance (Studyanto, 2018).

In contrast, Batik Sekar Arum adopts a more conservative innovative strategy that emphasizes the preservation of classical Majapahit motifs while introducing subtle modern adaptations. The enterprise maintains traditional design structures but experiments with pattern repetition, color variations, and fabric types. This approach reflects a balance between cultural preservation and market adaptation, demonstrating that innovation within heritage industries need not be radical but can also occur through incremental design improvements.

Meanwhile, MyDebz Batik demonstrates the most progressive innovation approach among the three enterprises. This batik studio actively transforms Majapahit symbols into contemporary visual patterns characterized by bold color contrasts and minimalist geometric lines. Such innovations are designed to align with urban fashion aesthetics and ready-to-wear apparel markets. By repositioning traditional motifs within modern fashion contexts, MyDebz Batik illustrates how cultural heritage can be integrated into contemporary

lifestyle products. This strategy reflects broader developments in the creative economy, where traditional crafts are evolving into creative design industries capable of reaching international markets (Widagdo et al., 2024).

The findings of this study reinforce previous research highlighting that product innovation is a critical driver of sustainability in traditional craft industries. Innovation allows artisans to expand the functional and aesthetic scope of their products while maintaining cultural authenticity. Studies on batik SMEs also show that integrating innovation, entrepreneurship, and digital technology can significantly enhance the competitiveness and sustainability of heritage-based industries (Febrianda et al., 2025). Similarly, research on batik artisans in Indonesia demonstrates that combining traditional craftsmanship with modern design strategies enables artisans to respond effectively to changing consumer preferences and global market trends (Octavia et al., 2024).

The evidence from this study suggests that heritage-based product innovation serves as a bridge between cultural preservation and market competitiveness. Rather than replacing traditional knowledge, innovation allows artisans to reinterpret cultural heritage in ways that resonate with contemporary audiences. This approach supports the broader concept of heritage-based entrepreneurship, in which cultural assets are transformed into creative economic opportunities while preserving their historical and cultural significance (Brinia et al., 2024).

#### 4.2 Digital Transformation and Market Expansion

The findings of this study indicate that digital transformation plays a crucial role in expanding the market reach of heritage-based batik enterprises. Across the three MSMEs examined, the adoption of digital platforms—including social media, online marketplaces, and digital catalogs—has significantly enhanced product visibility and enabled batik entrepreneurs to connect with broader consumer markets. This observation reflects broader trends in the creative economy, where digital technologies increasingly function as key enablers for small enterprises to overcome geographic limitations and access national and international markets (Rahayu & Soetjipto, 2025).

The integration of digital marketing tools has allowed batik entrepreneurs to promote their products more efficiently while maintaining the cultural identity embedded in their designs. Studies on digital marketing in traditional industries emphasize that platforms such as Instagram, Facebook, and online marketplaces serve not only as promotional tools but also as strategic channels for strengthening brand communication and customer engagement (Arsyad et al., 2024). In this research, batik enterprises that actively utilize digital

platforms reported significant increases in customer orders from outside their immediate local areas, including large cities, other provinces, and even cross-island markets. This expansion demonstrates how digital technologies enable traditional craft enterprises to transcend local market boundaries.

Another important finding is that digital platforms function not only as sales channels but also as tools for cultural storytelling and brand development. Many batik entrepreneurs regularly share content such as the batik-making process, explanations of Majapahit motifs, artisan stories, and short videos documenting production activities. These forms of digital storytelling strengthen consumers' emotional connection to the product while enhancing appreciation for the cultural heritage embedded in batik designs. Research on digital marketing in handicraft industries highlights that storytelling-based marketing strategies can increase consumer trust and brand loyalty by communicating the authenticity and cultural significance of heritage products (Singh et al., 2025).

Furthermore, digital marketing has also facilitated creative collaborations and networking opportunities within the fashion and creative industries. For example, enterprises that actively use digital platforms are more likely to attract collaborations with fashion designers, retailers, and cultural organizations. Such partnerships help expand product exposure and strengthen the market positioning of heritage-based batik products. These findings are consistent with research suggesting that digital entrepreneurship plays an important role in enhancing SME competitiveness by expanding market access and enabling strategic partnerships (Widagdo et al., 2024).

However, despite these benefits, the findings also reveal several challenges associated with digital transformation among batik MSMEs. One of the primary obstacles identified by respondents is limited digital literacy among artisans, particularly among older craftsmen who are more accustomed to traditional production and marketing methods. In addition, maintaining consistent digital content production can be difficult for small enterprises with limited human resources. These constraints often result in irregular online engagement and reduced effectiveness of digital marketing strategies.

Another challenge concerns the gap between increasing online demand and traditional production capacity. As digital platforms expose batik products to wider audiences, some enterprises struggle to fulfill large orders because hand-drawn batik production is time-intensive. Similar challenges have been identified in studies of handicraft SMEs, where the adoption of digital marketing is often constrained by limited technological skills and organizational capacity (Thamrin et al., 2023).

The comparison of digital engagement among the three batik enterprises in this study further illustrates the relationship between digital marketing activity and market expansion.

**Table 1.** Comparison of digital engagement among batik enterprises

Enterprise	Digital Marketing Level	Market Impact
Majapahit Negi	Medium	Steady growth among youth, adult buyers, and marketplace users
Sekar Arum	Low-Medium	Moderate local and intercity demand
MyDebz Batik	High	Inter-provincial orders and fashion collaboration opportunities

Among the three enterprises (see Table 1), MyDebz Batik demonstrates the highest level of digital engagement, actively utilizing social media platforms and online marketplaces to promote its products. As a result, the enterprise has successfully expanded its market reach beyond regional boundaries and established collaborations with fashion designers and creative communities. In contrast, Batik Majapahit Negi and Batik Sekar Arum rely more on traditional marketing methods and moderate digital engagement, leading to slower market expansion.

This study found that digital transformation is not merely a technological process but also involves organizational learning, human resource development, and strategic branding. Successful digital adoption requires not only access to technology but also the development of digital skills, consistent content creation, and the integration of cultural storytelling into marketing strategies. Within the context of heritage-based industries, digital transformation serves as a critical mechanism for connecting traditional cultural products with contemporary markets while preserving their cultural authenticity.

#### 4.3 Cultural Storytelling as Brand Identity

Another significant strategy observed in the revitalization of Majapahit Batik is the use of cultural storytelling as a core element of brand identity. Cultural storytelling refers to the communication of narratives about history, symbolism, philosophy, and the cultural meanings embedded in batik motifs. These narratives help establish a deeper connection between the product and the consumer, transforming batik from a simple textile commodity into a meaningful cultural artifact. In heritage-based industries, storytelling functions as an important mechanism for strengthening brand authenticity and cultural value, enabling products to

stand out in increasingly competitive markets (Rifqiansyah, 2025).

The findings of this study indicate that cultural storytelling serves as one of the most effective strategies for differentiating heritage batik from mass-produced textiles, such as printed batik fabrics that often lack historical and symbolic meaning. Through storytelling, batik entrepreneurs convey the cultural significance of Majapahit motifs and highlight the craftsmanship behind traditional batik production. This approach aligns with research suggesting that cultural heritage products gain a competitive advantage when their cultural narratives and historical origins are effectively communicated to consumers (Brinia et al., 2024).

Across the three batik enterprises examined in this research, cultural storytelling is integrated into branding and marketing strategies in distinct ways. Batik Majapahit Negi, for example, emphasizes the historical roots of Majapahit Batik by presenting detailed narratives about motif origins, historical symbolism, and connections to the Majapahit civilization in its digital catalogs and promotional materials. These narratives often explain how particular motifs are inspired by temple reliefs, royal ornaments, and traditional symbols associated with the Majapahit Kingdom. Such storytelling strategies reinforce the product's authenticity and highlight its cultural heritage value.

In contrast, Batik Sekar Arum focuses on illustrating the evolution of traditional motifs within contemporary design contexts. Rather than presenting historical narratives in isolation, the enterprise frames its batik products as part of an ongoing creative process in which traditional motifs are continually reinterpreted to align with modern fashion trends. This approach demonstrates how heritage can evolve while maintaining its cultural foundation. Previous studies have also noted that the reinterpretation of traditional batik motifs into contemporary design forms can strengthen the relevance of heritage products in modern markets (Studyanto, 2018).

Meanwhile, MyDebz Batik adopts a more contemporary storytelling strategy, positioning Majapahit Batik as wearable cultural art that can be integrated into everyday life. Through digital marketing campaigns and social media storytelling, the enterprise emphasizes that wearing heritage batik represents cultural appreciation and identity expression. This framing resonates particularly with younger consumers who seek products that combine cultural meaning with modern fashion aesthetics.

The findings further indicate that cultural storytelling significantly influences consumer perception and purchasing behavior. When consumers understand the cultural significance behind batik motifs and the craftsmanship involved in their production, purchasing decisions often extend beyond functional considerations

such as price or design. Instead, consumers perceive their purchases as a way of participating in the preservation of cultural heritage. Similar observations have been reported in studies on cultural entrepreneurship, which suggest that heritage narratives can strengthen consumer engagement and brand loyalty by connecting cultural identity with economic value creation (Widagdo et al., 2024).

Moreover, digital platforms have enhanced storytelling effectiveness by enabling entrepreneurs to share visual and narrative content directly with consumers. Through photos, videos, and written explanations, artisans can convey the meanings of motifs, the history of batik traditions, and the production process for each piece. Research on digital marketing in craft industries confirms that storytelling-based communication enhances consumer trust and engagement by emphasizing authenticity and transparency in heritage products (Singh et al., 2025).

This study indicates that cultural storytelling functions as a strategic bridge between cultural preservation and market competitiveness. By integrating narratives of heritage, identity, and craftsmanship into branding strategies, batik enterprises can differentiate their products from mass-produced textiles while strengthening consumer appreciation for cultural heritage. Within the broader framework of heritage-based entrepreneurship, storytelling therefore plays a critical role in transforming traditional cultural knowledge into economic and creative value within the modern creative economy.

#### *4.4 Integrative of Heritage, Innovation, Digitalization, and Storytelling*

The findings of this study indicate that the revitalization of Majapahit Batik is not driven by a single factor but rather by the interaction of multiple strategic dimensions, including heritage values, product innovation, digital transformation, and cultural storytelling. These elements operate synergistically to form an integrated framework that supports the sustainable commercialization of heritage-based batik enterprises. Instead of functioning independently, these dimensions reinforce one another and collectively enhance the competitiveness of batik within the creative economy.

At the core of this framework are heritage values, which provide the philosophical and cultural foundation of batik production. Majapahit Batik motifs represent historical narratives, symbolic meanings, and cultural identity derived from the Majapahit civilization. These heritage values serve as a source of authenticity and cultural differentiation, distinguishing handmade batik from mass-produced textiles. Studies on heritage-based entrepreneurship emphasize that cultural heritage functions as an important intangible asset that can

strengthen brand identity and create unique value propositions in creative industries (Rifqiansyah, 2025; Widagdo et al., 2023).

However, heritage values alone are insufficient to ensure the sustainability of traditional craft industries. To remain relevant in modern markets, these values must be complemented by design innovation. Innovation enables artisans to reinterpret traditional motifs in ways that align with contemporary consumer preferences while maintaining cultural authenticity. Research on cultural craft revitalization suggests that combining traditional craftsmanship with modern design thinking can enhance both cultural relevance and market competitiveness (Hendriyana et al., 2025). Similarly, studies on the batik industry's innovation demonstrate that adapting motifs, color palettes, and product forms enables artisans to respond effectively to evolving fashion trends without eroding cultural heritage (Octavia et al., 2024).

In addition to design innovation, digital transformation plays a crucial role in connecting heritage-based products with broader markets. Digital platforms enable batik enterprises to expand their visibility, reach wider audiences, and engage consumers beyond local geographic boundaries. Previous studies highlight that digital technologies and online marketing tools significantly enhance the competitiveness of SMEs by enabling market expansion and improving brand communication (Arsyad et al., 2024; Rahayu & Soetjipto, 2025). In the context of heritage industries, digital transformation also facilitates the dissemination of cultural knowledge by allowing artisans to share stories, production processes, and historical narratives through online media.

Another critical component of this integrative framework is cultural storytelling, which strengthens the emotional and symbolic connection between heritage products and consumers. Storytelling communicates the meaning behind batik motifs, the history of batik traditions, and the craftsmanship involved in production. This narrative dimension transforms batik from a functional commodity into a cultural experience that resonates with consumers seeking authenticity and cultural identity. Studies on heritage branding indicate that storytelling enhances consumer engagement and brand differentiation by emphasizing the cultural significance of heritage products (Singh et al., 2025). The interaction between these four dimensions can be summarized in Table 2.

Table 2 shows integrative dimensions of heritage batik revitalization. The integration of these elements reflects a broader model of cultural entrepreneurship, in which economic activities are rooted in cultural heritage and supported by innovation and technological adaptation. Within this model, the success of heritage batik commercialization cannot be measured solely by

short-term sales performance but must also consider the preservation of cultural values and the sustainability of traditional craftsmanship. This perspective aligns with studies suggesting that cultural entrepreneurship allows traditional industries to balance economic development with cultural preservation (Brinia et al., 2024; Widagdo et al., 2024).

**Table 2.** Integrative dimensions of heritage batik revitalization

Dimension	Function
Heritage values	Source of cultural identity and philosophical narrative
Design innovation	Ensures contemporary relevance and product diversification
Digital transformation	Expanding market reach and connecting local culture with global consumers
Cultural storytelling	Builds emotional engagement and strengthens brand differentiation

Furthermore, the integrative framework identified in this study highlights that tradition and market competitiveness are not mutually exclusive. Instead, they can coexist when business strategies are implemented with cultural sensitivity and responsible innovation. By integrating heritage values with creative design and digital marketing strategies, batik enterprises can simultaneously maintain cultural authenticity and adapt to contemporary market demands. Research on the creative economy also emphasizes that cultural heritage industries can thrive when innovation is grounded in local traditions and supported by digital technologies (Utami et al., 2026).

However, the sustainability of such strategies depends on several enabling conditions at the local and institutional levels. These include the regeneration of artisans, development of digital literacy, maintenance of product quality, community support, and supportive public policies such as training programs, market access initiatives, and the protection of cultural intellectual property rights. Without these supporting mechanisms, the commercialization of cultural heritage may reduce cultural products to mere commodities, stripping them of their historical and symbolic meaning.

Scholars have also warned that the commercialization of cultural heritage must be accompanied by ethical considerations and long-term sustainability strategies. For example, studies on digital transformation in creative industries emphasize that technological adoption should not overshadow the cultural essence embedded within traditional crafts (Rahayu & Soetjipto, 2025). Instead, responsible innovation should ensure that cultural values remain central to business practices and market strategies.

The findings of this study suggest that the revitalization of Majapahit Batik depends on a balanced integration of heritage preservation, creative innovation, digital transformation, and cultural storytelling. When these elements are effectively combined, heritage-based industries can evolve into sustainable creative enterprises that contribute not only to economic development but also to the preservation and transmission of cultural identity.

## 5. Conclusions

This study examined how heritage-based entrepreneurship and digital transformation contribute to the revitalization of Majapahit Batik within Indonesia's creative economy. Based on qualitative case studies of three batik MSMEs—Batik Majapahit Negi, Batik Sekar Arum, and MyDebz Batik—the findings reveal that the sustainable development of heritage batik is supported by integrating heritage values, product innovation, digital transformation, and cultural storytelling.

First, the study demonstrates that product innovation rooted in cultural heritage plays a fundamental role in revitalizing traditional batik. Rather than replacing traditional motifs, artisans reinterpret Majapahit-inspired designs to align with contemporary aesthetic preferences and fashion trends. This adaptive innovation enables batik products to remain culturally authentic while appealing to modern consumers.

Second, digital transformation has significantly expanded market opportunities for batik MSMEs. The adoption of social media platforms, e-commerce marketplaces, and digital catalogs enables artisans to reach consumers beyond their local markets, including national and interregional buyers. Digital platforms also serve as important tools for brand communication and customer engagement, allowing batik entrepreneurs to promote their products and communicate cultural narratives more effectively.

Third, cultural storytelling emerges as a powerful strategy for strengthening brand identity and consumer engagement. By communicating the historical meaning, symbolism, and cultural philosophy embedded in Majapahit motifs, batik enterprises can differentiate their products from mass-produced textiles. Storytelling transforms batik from a functional commodity into a cultural experience, encouraging consumers to view their purchases as a form of cultural preservation.

The findings confirm that the revitalization of heritage batik depends on a synergistic model of cultural entrepreneurship that integrates cultural preservation with creative innovation and digital technology. Within this framework, heritage values provide authenticity, innovation ensures contemporary relevance, digital transformation enables market expansion, and storytelling strengthens brand identity. This integrated

approach demonstrates that traditional crafts can remain economically viable while maintaining their cultural significance.

### 5.1. Research Limitations

Despite its contributions, this study has several limitations. First, the research focuses on a limited number of case studies within a specific geographical context, namely, Majapahit Batik enterprises in Mojokerto. As a result, the findings may not fully represent the diversity of practices across other batik-producing regions in Indonesia. Second, the study primarily relies on qualitative data, which provides in-depth insights but may limit generalizability to larger populations of batik MSMEs. Third, while the study examines digital marketing practices, it does not quantitatively measure the economic impact of digital transformation on sales performance or business growth.

### 5.2. Research Implications

The findings provide several implications for both theory and practice. From a theoretical perspective, this study contributes to the literature on heritage-based entrepreneurship and creative economic development by demonstrating how cultural heritage, innovation, and digital technologies can be integrated within a single entrepreneurial framework. The study also highlights the importance of cultural narratives and storytelling as strategic assets in heritage-based industries.

From a practical perspective, the findings offer insights for artisans, creative entrepreneurs, and policymakers seeking to strengthen the sustainability of traditional craft industries. Batik MSMEs should continue to develop product innovation strategies that preserve cultural identity while adapting to modern market preferences. At the same time, improving artisans' digital literacy and marketing capabilities is essential to maximizing the benefits of digital transformation. Policymakers can further support these efforts through training programs, digital infrastructure development, and policies that protect cultural intellectual property and support creative industries.

### 5.3. Future Research

Future research can extend this study in several directions. First, comparative studies involving multiple batik-producing regions or different types of heritage crafts could provide broader insights into the dynamics of heritage-based entrepreneurship in Indonesia. Second, quantitative or mixed-method approaches could be used to examine the economic impact of digital transformation on MSME performance, including sales

growth, market expansion, and employment creation. Third, future studies may explore the role of emerging technologies such as artificial intelligence, augmented reality, and digital design tools in preserving and promoting traditional craft industries. Finally, further research is needed to examine how cultural authenticity and commercialization can be balanced in heritage-based industries to ensure that economic development does not undermine cultural values.

This study concludes that the revitalization of Majapahit Batik illustrates how traditional cultural heritage can be successfully integrated with modern entrepreneurship and digital technologies. By combining heritage preservation, creative innovation, and digital market strategies, heritage-based industries can contribute not only to economic development but also to the long-term sustainability of cultural identity in the modern creative economy.

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