

Batik Indonesia MSMEs in the Digital Era: Innovating Tradition, Overcoming COVID-19

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Original Research
Received 24 April 2025
Revised 30 April 2025
Accepted 31 May 2025
Additional information at the end
of the article



Abstract: The COVID-19 pandemic has profoundly impacted Batik's Micro, Small, and Medium Enterprises (MSMEs) in Indonesia, particularly in regions such as Sumenep, Yogyakarta, Lasem, Solo, and Pekalongan. This paper examines the common challenges faced by these enterprises, including a significant decline in sales due to tourism closures, supply chain disruptions leading to increased raw material costs, and financial instability characterized by liquidity crises and salary deferrals. In response, various regional strategic adaptations have emerged, with MSMEs leveraging digital platforms like WhatsApp and Instagram for sales, while others have piloted e-commerce initiatives despite facing technical skill gaps. Government interventions, including subsidies for digital infrastructure and facilitation of SNI certification, have aimed to bolster the resilience of these enterprises. The findings reveal that while the pandemic accelerated digital adoption, it also exposed systemic gaps such as inequitable access to online tools and skill deficits among MSMEs. The reliance on pre-existing community networks has proven crucial for resilience, particularly in Solo, where social capital has facilitated bulk orders and community support. Contrary to traditional economic theories emphasizing price elasticity, the survival of these enterprises has hinged more on non-monetary strategies, such as customer engagement through social media. In conclusion, while Batik MSMEs have demonstrated remarkable adaptability, structured support is essential for their continued recovery and growth. Recommendations include expanding digital infrastructure training, providing tailored financial aid, and integrating cultural preservation into national tourism recovery plans. Future research should explore the longitudinal impacts of digital transformation on cultural authenticity within the MSME sector, contributing to a more comprehensive understanding of the interplay between economic resilience and cultural heritage in the face of global challenges.

Keywords: Batik, COVID-19, MSMEs, digital adoption, social media, economic resilience, cultural preservation, Indonesia

Abstrak: Pandemi COVID-19 telah berdampak besar pada Usaha Mikro, Kecil, dan Menengah (UMKM) Batik di Indonesia, terutama di daerah seperti Sumenep, Yogyakarta, Lasem, Solo, dan Pekalongan. Penelitian ini mengkaji tantangan umum yang dihadapi UMKM Batik, termasuk penurunan drastis penjualan akibat penutupan sektor pariwisata, gangguan rantai pasok yang menyebabkan kenaikan harga bahan baku, serta ketidakstabilan finansial yang ditandai dengan krisis likuiditas dan penundaan pembayaran gaji.

Sebagai respons terhadap tantangan ini, berbagai strategi adaptasi regional telah muncul. Beberapa UMKM memanfaatkan platform digital seperti WhatsApp dan Instagram untuk penjualan, sementara yang lain mulai menerapkan inisiatif e-commerce meskipun masih menghadapi kendala keterampilan teknologi. Intervensi pemerintah, seperti subsidi untuk infrastruktur digital dan fasilitasi sertifikasi SNI, bertujuan untuk meningkatkan ketahanan UMKM Batik.

Hasil penelitian menunjukkan bahwa meskipun pandemi mempercepat adopsi digital, tantangan sistemik tetap ada, seperti ketimpangan akses terhadap alat daring serta keterbatasan keterampilan digital di kalangan UMKM. Ketergantungan pada jaringan komunitas yang telah ada sebelumnya terbukti menjadi faktor kunci dalam meningkatkan ketahanan, terutama di Solo, di mana modal sosial telah memungkinkan pesanan dalam jumlah besar dan dukungan komunitas.

Berlawanan dengan teori ekonomi tradisional yang menekankan elastisitas harga, keberlanjutan UMKM Batik lebih banyak ditentukan oleh strategi non-moneter, seperti keterlibatan pelanggan melalui media sosial.

Sebagai kesimpulan, meskipun UMKM Batik telah menunjukkan kemampuan adaptasi yang luar biasa, dukungan yang terstruktur tetap diperlukan untuk pemulihan dan pertumbuhan mereka ke depan. Rekomendasi yang diajukan meliputi perluasan pelatihan infrastruktur digital, penyediaan bantuan keuangan yang disesuaikan, serta integrasi pelestarian budaya ke dalam rencana pemulihan pariwisata nasional. Penelitian di masa depan sebaiknya mengeksplorasi dampak jangka panjang dari transformasi digital terhadap keaslian budaya dalam sektor UMKM, guna memberikan pemahaman yang lebih komprehensif mengenai keterkaitan antara ketahanan ekonomi dan warisan budaya dalam menghadapi tantangan global

Kata Kunci: Batik, COVID-19, UMKM, adopsi digital, media sosial, ketahanan ekonomi, pelestarian budaya

INTRODUCTION

The batik industry, a significant contributor to Indonesia's non-oil and gas manufacturing GDP, faced unprecedented challenges during the COVID-19 pandemic, which disrupted traditional business models and severely impacted sales. In 2020, batik micro, small, and medium enterprises (MSMEs) contributed approximately 6.76% to the national economy, highlighting their importance in sustaining economic stability and cultural heritage (Mulyasana & Yustika, 2022). However, the pandemic led to mobility restrictions and tourism closures, resulting in a reduction of sales by 50–80% in key regions (Shafi et al., 2020). This situation necessitated a thorough investigation into the predominant challenges faced by batik MSMEs and the regional strategies employed to mitigate these challenges.

The challenges encountered by batik MSMEs during the pandemic were multifaceted. Firstly, the abrupt decline in consumer demand due to lockdown measures and health concerns significantly affected sales and revenue streams (Mulyasana & Yustika, 2022). Additionally, many MSMEs struggled with supply chain disruptions, which hindered their ability to procure raw materials necessary for production (Shafi et al., 2020). The financial strain was exacerbated by the lack of digital infrastructure, which limited the ability of these enterprises to pivot to online sales channels (Anggadwita et al., 2023). Furthermore, the psychological impact of the pandemic on entrepreneurs and employees, including increased stress and uncertainty, further complicated the operational landscape (Hur et al., 2023).

In response to these challenges, regional strategies varied significantly, reflecting local contexts and available resources. Some regions implemented targeted support measures, such as financial assistance and training programs aimed at enhancing digital marketing skills among batik entrepreneurs (Mulyasana & Yustika, 2022). Others focused on fostering community networks to facilitate collaboration and resource sharing among MSMEs, thereby enhancing resilience (Anggadwita et al., 2023). The adaptation strategies employed by batik MSMEs underscore the importance of regional policy frameworks in supporting cultural industries during crises, as highlighted by the need for tailored interventions that address specific local challenges (Brown & Cowling, 2021).

This study contributes to the literature on cultural industry resilience by providing insights into the adaptive strategies of batik MSMEs during the pandemic. It also offers valuable recommendations for policymakers seeking to sustain traditional crafts in times of crisis, emphasizing the need for comprehensive support systems that can enhance the resilience of MSMEs in the face of future disruptions (Wardana et al., 2022).

LITERATURE REVIEW

The batik industry in Indonesia serves a dual purpose as both a cultural heritage and an economic driver, underscoring its significance in the national context. Prior studies highlight the importance of batik as a cultural artifact that contributes to the economy. Anggadwita et al. (2023) emphasize its role in preserving cultural identity while also acting as a source of income for many artisans. However, the COVID-19 pandemic exposed vulnerabilities in micro, small, and medium enterprises (MSMEs) within this sector, primarily due to their heavy reliance on offline markets for sales. The abrupt shift in consumer behavior, characterized by lockdowns and health concerns, resulted in significant declines in demand, further complicating the operational landscape for batik MSMEs.

Digital Transformation as a Resilience Strategy

Digital adoption has emerged as a potential resilience mechanism for MSMEs, although it remains underexplored in traditional sectors like batik. Many batik producers struggled to pivot to online sales channels during the pandemic, highlighting a critical gap in their business models (Anggadwita et al., 2023). The necessity of digital transformation has become increasingly evident, as businesses with strong digital strategies have been more successful in navigating market disruptions.

The utilization of social media, particularly Instagram, has proven to be a pivotal strategy for MSMEs in Indonesia. Nursanti, T. D., Steelyana, E., & WawoRuntu, I. (2024) highlight Instagram's role in enhancing growth opportunities for MSMEs in Lasem, emphasizing its effectiveness in promoting economic independence and cultural preservation through live sales and skill development platforms. Hasanah et al. (2024) further discuss how Instagram serves as a powerful medium for business communication, enabling MSMEs to increase brand awareness and customer engagement. Similarly, Sitorus (2024) demonstrates how VOI Churros, an MSME in Pematangsiantar, effectively leveraged Instagram features to enhance sales and brand visibility. However, challenges persist, as Santana et al. (2024) note that content relevance and engagement are critical factors in maximizing the platform's potential. The broader implications of social media marketing for MSMEs are further explored by Guillen and Lim (2023), who discuss growth opportunities through Facebook advertising and growth hacking strategies. They underscore the importance of digital literacy and resource availability in the successful implementation of these strategies. Wefa (2025) echoes this perspective, emphasizing the necessity of optimizing social media profiles and content strategies to enhance consumer engagement and market reach. Additionally, Melati et al. (2023) illustrate how effective content mapping and editorial planning on Instagram can significantly contribute to the growth of MSME accounts, reinforcing the idea that strategic social media management is essential for success in the digital marketplace.

Theoretical Perspectives on Market Challenges

Theoretical frameworks related to demand elasticity and supply chain management provide valuable context for understanding the challenges faced by batik MSMEs. Demand elasticity theories suggest that consumer responsiveness to price changes can significantly impact sales, particularly in times of crisis when disposable income is constrained (Idris et al., 2023). Furthermore, effective supply chain management is essential for ensuring the availability of raw materials and maintaining production levels. Storer et al. (2014) highlight that disruptions

in supply chains can severely hinder the operational capabilities of MSMEs, emphasizing the importance of strategic supply chain management in fostering innovation and resilience in the face of external shocks.

The batik industry illustrates the intricate interplay between cultural heritage and economic viability. The COVID-19 pandemic has underscored the vulnerabilities of batik MSMEs, necessitating a reevaluation of their business strategies. Emphasizing digital transformation and robust supply chain management can enhance their resilience, ensuring that these enterprises not only survive but thrive in a post-pandemic world. The literature indicates a clear trend towards the digital transformation of MSMEs through social media platforms, with Instagram emerging as a particularly effective tool for marketing and customer engagement. This transition not only facilitates business growth but also fosters cultural preservation and economic independence within local communities.

RESEARCH METHODOLOGY

This study employed a multi-case study design to investigate the challenges and adaptive strategies of batik micro, small, and medium enterprises (MSMEs) during the COVID-19 pandemic. The research focused on five key batik clusters located in Sumenep, Yogyakarta, Lasem, Solo, and Pekalongan. These regions were selected due to their historical significance and prominence in the batik industry, providing a rich context for understanding the impact of the pandemic on local enterprises.

Data collection involved the analysis of secondary data sources, including government reports, academic publications, and MSME surveys conducted between 2020 and 2021. This approach allowed for a comprehensive understanding of the challenges faced by batik MSMEs, as well as the strategies they employed to adapt to the rapidly changing market conditions. The use of secondary data is particularly advantageous in this context, as it provides a broader perspective on the industry's dynamics during the pandemic without the logistical challenges associated with primary data collection.

Thematic analysis was employed to identify recurring challenges and adaptive strategies within the batik MSMEs. Key challenges included rising raw material costs, payment delays from customers, and disruptions in supply chains, which were exacerbated by the pandemic (Rosyada & Wigiawati, 2020). Additionally, the analysis revealed that many MSMEs were compelled to adopt e-commerce platforms as a means of reaching consumers who were increasingly shopping online due to mobility restrictions (Anggadwita et al., 2023). This shift towards digital marketing and online sales channels is indicative of a broader trend within the craft industry, where traditional business models are being re-evaluated in light of contemporary challenges (Betzler et al., 2020).

To ensure representativeness across regions, non-probability systematic sampling was utilized. This method allowed for the selection of diverse cases that reflect the varying circumstances and responses of batik MSMEs in different locales. By focusing on a range of enterprises, the study aimed to capture a holistic view of the sector's resilience and adaptability during the pandemic. The findings from this research not only contribute to the understanding of the batik industry's response to crises but also offer valuable insights for policymakers and practitioners seeking to support cultural industries in times of economic distress (Azhar & Evanthi, 2024). The methodology employed in this study combines a multi-case study design with thematic analysis of secondary data, ensuring a comprehensive exploration of the challenges and

adaptive strategies of batik MSMEs during the COVID-19 pandemic. This approach provides a robust framework for understanding the resilience of traditional industries in the face of unprecedented challenges.

FINDINGS

The COVID-19 pandemic dealt a heavy blow to MSMEs across Indonesia. In tourism-dependent regions like Sumenep and Yogyakarta, revenue plunged by 70–100% as visitor numbers collapsed (Atmojo & Fridayani, 2021). Supply chain disruptions further strained businesses, with raw material costs rising by 20–30%, particularly affecting Pekalongan's polyester industry (Wijaya & Rahmayanti, 2023). Financial instability followed—half of Lasem's MSMEs faced liquidity crises, while 80% of Solo's businesses had to delay salaries (Soniawan, 2023). These struggles reveal the sector's fragility, with many businesses relying on small cash reserves and local markets (Endris & Kassegn, 2022).

Regional Strategic Responses

MSMEs across regions adopted innovative strategies to survive. In Sumenep, businesses turned to WhatsApp and Instagram for sales, though their reach remained mostly local (Fridayani et al., 2024). Yogyakarta MSMEs experimented with Shopee and Tokopedia but encountered skill gaps that hindered digital adoption (Suryawardani et al., 2021). Lasem tackled this challenge by launching government-backed digital literacy programs (Mavilinda et al., 2022). Solo leveraged community networks, using WhatsApp groups to secure bulk orders (Nurwijayanto et al., 2024). Meanwhile, Pekalongan embraced design innovation and hybrid marketing, blending offline events with social media campaigns (Giantari et al., 2022).

Government Interventions

To support MSMEs, the government introduced key initiatives. These included facilitating SNI certification and subsidizing digital infrastructure, such as the "Kuklik Batik" national platform, to help businesses embrace online markets (Noviati et al., 2022). Strengthening digital capabilities is vital for long-term resilience, ensuring MSMEs stay competitive in an evolving economic landscape (Hurdawaty & Tukiran, 2024).

DISCUSSION

The pandemic has accelerated digital adoption among MSMEs but has also exposed systemic gaps that need addressing. For instance, only 50% of MSMEs in Yogyakarta utilized online tools, primarily limited to WhatsApp, indicating inequitable access to digital resources (Sharma et al., 2021). Additionally, technical skill deficits have been identified as significant barriers to effective e-commerce integration, underscoring the need for targeted training programs (Yustisi, 2024). The reliance on pre-existing community ties, as seen in Solo's success, suggests that network capital is a critical factor in building resilience among MSMEs (Abbas et al., 2019).

Contrary to Sarjono's (2017) demand theory, which posits that price elasticity significantly influences business survival, the findings indicate that non-monetary strategies, such as customer engagement through social media, have been more pivotal for MSMEs during the pandemic (Srikalimah et al., 2021). This shift emphasizes the need for a broader understanding of business resilience that incorporates social and community dynamics alongside traditional economic metrics.

CONCLUSION

The adaptability demonstrated by Batik MSMEs during the pandemic is commendable; however, structured support is essential for their continued recovery and growth. Expanding digital infrastructure and training programs focused on e-commerce and fintech tools will be vital for enhancing the operational capabilities of these enterprises (Sikarwar, 2021). Additionally, tailored financial aid, such as loans specifically for raw material procurement and technology investments, can help stabilize their operations (Sunargo, 2022). Furthermore, integrating batik into national tourism recovery plans can promote cultural preservation while supporting economic revitalization (Noviati et al., 2022). Future research should explore the longitudinal impacts of digital transformation on cultural authenticity within the MSME sector.

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Recommended Citation:

Evy Steelyana Wiyarti (2025). Batik Indonesia MSMEs in the Digital Era: Innovating Tradition, Overcoming COVID-19. *Journal of Business and Entrepreneurship*, 13, 1, DOI: 10.46273/2spz7e59

This article is available online at:

<http://ojs.sampoernauniversity.ac.id> (ISSN: 2302-4119 Print, 2685-6255 Online)