

Re-Embedding Tradition: Artisans, Algorithms, and the Strategic Orchestration of Digital Futures

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ABSTRACT

This study addresses the paradoxical decline of UNESCO-recognized batik artisans in Klampar Village, Indonesia—where active artisans fell from 1,300 to 249 despite cultural prestige. Moving beyond adoption-centric models, we employ an integrated framework of Resource Orchestration Theory and Granovetter's embeddedness lens. Through a qualitative study of 16 MSMEs, we frame digitalization as strategic re-embedding: a shift from relational (collector-based) to algorithmic embeddedness (platform-dependent). Findings reveal four strategic pathways of resource orchestration and three bundling strategies mediating authenticity-algorithm tensions, demonstrating the reconfiguration—not elimination—of power dependencies. Artisans' institutional work—preserving identity, reconfiguring relationships, restructuring norms—drives this transition. Theoretically, we extend ROT into informal, community-based contexts. Practically, we advocate for differentiated ecosystem support, platform literacy, and propose Platform Cooperatives for Heritage (PCH) to mitigate power asymmetries. This offers a framework for digital transformation as contested socio-technical re-embedding, enabling cultural heritage communities to thrive digitally without severing socio-cultural roots.

INTRODUCTION

The UNESCO¹ designation of Indonesian batik as an Intangible Cultural Heritage of Humanity underscores its global cultural significance. However, this prestige has not insulated its artisan communities from severe economic pressures. For Micro, Small, and Medium Enterprises (MSMEs) in rural batik-producing villages, sustainability is threatened by the dual forces of mass-produced imitation goods and an inability to access broader markets². The case of Klampar Village in Pamekasan is a poignant illustration of this paradox. Despite being officially designated as a batik center, the community has experienced a dramatic decline, with the number of active artisans falling from 1,300 in 2013 to just 249 in 2024³. This decline occurs despite high-quality craftsmanship, indicating that the core challenge is not production but distribution and value capture. The local economy remains tethered to a traditional marketing paradigm⁴, predominantly reliant on the "Pasar 17 Agustus" and limited use of WhatsApp, confining artisans to a saturated local marketplace and rendering their livelihoods vulnerable to the slightest market shift. This context reveals an urgent imperative to explore pathways for digital transition that can ensure both the economic resilience and cultural preservation of such traditional craft communities.

Current scholarly discourse on MSME digitalization, while valuable, often remains confined to models of technology adoption, focusing on factors like perceived usefulness and ease of use⁵, or catalogues generic barriers such as limited capital and digital skills⁶. This dominant perspective is insufficient for understanding the profound institutional shift occurring in traditional ecosystems like Klampar. Here, the socio-economic order has long been structured around *pengepul* (collectors)—local intermediaries who control market access, capital, and pricing, creating a stable yet dependent patron-client relationship deeply embedded in local social fabric⁷. Consequently, the move towards a platform-based economy is not merely a technical upgrade but a fundamental reorganization of entrenched socio-economic relations. The literature, however, lacks a robust framework to analyze how

¹ UNESCO, "Indonesian Batik," 2009, <https://ich.unesco.org/en/RL/indonesian-batik-00170>.

² B S Amelia and Z Zakik, "Pengentasan Kemiskinan Melalui Pengembangan Industri Kreatif Batik Di Kabupaten Pamekasan (Studi Kasus Pada Sentra Industri Batik Klampar)," *Buletin Ekonomika Pembangunan* 4, no. 1 (2023); Mansur et al., "Pengentasan Keterpurukan Anak-Anak Pesisir Akibat Jerat Kekerasan Sosial Melalui SANASIR Di Desa Baddurih Pamekasan," *BHAKTI: Jurnal Pengabdian Dan Pemberdayaan Masyarakat* 3, no. 02 (2024): 148–61.

³ H. Ahmadi, *Interview*, Pamekasan, December 19, 2024

⁴ Mansur Mansur, Septi Gumindari, and M. Adib Hamzawi, "Magic Marketing Dalam Etika Bisnis Global: Kajian Literatur," *Ulumuna: Jurnal Studi Keislaman* 9, no. 2 (2024): 141–61, <https://doi.org/10.36420/ju.v9i2.6968>; A. Holisin and I. H. Priyadi, "Analisis Bauran Pemasaran (Marketing Mix) Warung Makan Indonesia Di Malaysia Perspektif Ekonomi Islam Pada UMKM Di Slangor Malaysia," *AT-TAWASSUTH: Jurnal Ekonomi Islam* 9, no. 2 (2024): 235–54, <https://doi.org/http://dx.doi.org/10.30829/ajei.v9i2.22501>.

⁵ Kavita Kapoor et al., "Advances in Social Media Research: Past, Present and Future," *Information Systems Frontiers* 23, no. 1 (2021): 1–28, <https://doi.org/10.1007/s10796-020-10006-7>.

⁶ Lukman Nugroho, N Nurfadilah, and R Pramono, "Digital Transformation Challenges for Small and Medium Enterprises in the Indonesian Creative Industry," *Journal of Asian Finance, Economics and Business* 9, no. 3 (2022): 341–50, <https://doi.org/10.13106/jafeb.2022.vol9.no3.0341>.

⁷ S I Suharwati, "Pengembangan Industri Batik Tulis Sebagai Potensi Daerah (Studi Kasus Di Desa Klampar Kabupaten Pamekasan)," *J-PIPS (Jurnal Pendidikan Ilmu Pengetahuan Sosial)* 6, no. 1 (2019): 13–21; Mark Granovetter, "The Social Construction of Economic Institutions," *Annual Review of Sociology* 47 (2021): 1–19, <https://doi.org/10.1146/annurev-soc-090320-111119>.

artisans, as embedded social actors, navigate this reorganization. Specifically, a critical gap exists in understanding the micro-level processes through which they reconfigure existing social and cultural resources to engage with digital platforms. This gap necessitates a theoretical shift from studying passive "adoption" to understanding active, strategic "orchestration" within a changing institutional field.

To address this gap, an integrated theoretical lens is required. On one hand, Resource Orchestration Theory (ROT) provides a dynamic framework for understanding how actors strategically structure, bundle, and leverage resources to build capabilities and create value^{8,9}. Recent work applies ROT to digital transformation, highlighting the need to orchestrate technological, human, and financial resources¹⁰. However, this research predominantly focuses on formal organizational settings, overlooking the informal, community-embedded contexts of traditional MSMEs where resources are inseparable from social relations¹¹. On the other hand, sociological perspectives emphasize the embeddedness of economic action within networks of social relations, trust, and obligation¹². This lens is crucial for understanding the persistence of intermediaries like *pengepul* and the social complexities of disrupting such ties¹³. While studies note that digital platforms can reconfigure value chains and market relationships¹⁴, there is limited integration of this socio-economic perspective with resource-centric management theories like ROT. This theoretical disconnect is particularly problematic in cultural heritage sectors like batik, where digitalization presents a core tension: the need to balance commercial adaptation and market integration with the preservation of cultural authenticity and traditional knowledge¹⁵.

We therefore propose that bridging Resource Orchestration Theory (ROT) with the sociological concept of embeddedness offers a powerful framework. This integrated lens posits that digitalization is a process of strategic resource orchestration under institutional

⁸ David G Sirmon et al., "Resource Orchestration to Create Competitive Advantage: Breadth, Depth, and Life Cycle Effects," *Journal of Management* 37, no. 5 (2011): 1390–1412.

⁹ Munish Chadhar and M S Rahman, "Resource Orchestration Theory and Digital Transformation of Traditional Organizations," *Journal of Computer Information Systems* 62, no. 3 (2022): 539–50, <https://doi.org/10.1080/08874417.2021.2009925>.

¹⁰ Sabai Khin and Theresa C F Ho, "Digital Technology, Digital Capability and Organizational Performance: A Mediating Role of Digital Innovation," *International Journal of Innovation Science* 11, no. 2 (2019): 177–95.

¹¹ P K Sanjiwani, "Hak Kekayaan Intelektual Dalam Industri Pariwisata Studi Kasus: Perlindungan Hukum Pemanfaatan Local Genius Dalam Produk Pengusaha Lokal," *Jurnal Ilmiah Hospitality Management*, 2016, <https://jihm.stpbipress.id/index.php/JIHM/article/view/31>.

¹² Granovetter, "The Social Construction of Economic Institutions."

¹³ Zhang Qiang, Xiao Ting, and Li Chuanchuan, "Research on the Construction and Application of Early Warning Model of Network Public Opinion in the Era of Intelligent Communication," in *2024 3rd International Conference on Data Analytics, Computing and Artificial Intelligence (ICDAI)* (IEEE, 2024), 404–8.

¹⁴ Annabelle Gawer, "Digital Platforms and Ecosystems: Remarks on the Dominant Organizational Forms of the Digital Age," *Innovation: Organization & Management* 23, no. 4 (2021): 1–15, <https://doi.org/10.1080/14479338.2021.1965888>; V Kumar, "Integrating Theory and Practice in Marketing," *Journal of Marketing*, 2017, <https://doi.org/10.1509/jm.80.2.1>.

¹⁵ Jian Wu et al., "The Role of Institutional Entrepreneurship in Building Digital Ecosystem," *Technological Forecasting and Social Change* 180 (2022): 121707, <https://doi.org/10.1016/j.techfore.2022.121707>; Evelyn Micelotta, Michael Lounsbury, and Royston Greenwood, "Pathways of Institutional Change: An Integrative Review and Research Agenda," *Journal of Management* 43, no. 6 (2017): 1885–1910.

constraint, where the 'how' of managing resources is inseparable from the 'where'—the specific socio-cultural fabric in which those resources and actors are embedded. It recognizes that artisans possess significant intangible resources—deep tacit knowledge, mastery of a revered craft, and dense communal networks. The central question is not merely if they adopt digital tools, but *how* they strategically structure and bundle these traditional resources with new digital capabilities to navigate away from the collector-based model and its associated dependencies. This process is fundamentally understood as re-embedding—the active, often contested, work of re-anchoring economic activities within new socio-technical arrangements (platforms, algorithms, digital communities) while negotiating the legacy of old ones.

Consequently, this research is guided by the question: How does the process of resource orchestration shape the transformation of socio-economic relations during the digitalization of traditional batik MSMEs? This question allows us to investigate the strategic micro-decisions artisans make and how these decisions simultaneously reshape their economic agency, social dependencies, and the institutional fabric of their community.

This study makes two pivotal contributions. Theoretically, it extends ROT by applying it to the context of informal, community-embedded MSMEs, demonstrating how resource orchestration is simultaneously a managerial, socio-political, and cultural process of institutional re-embedding. It moves beyond a firm-centric view to show how orchestration can be a collective, community-level endeavor. Practically, our findings, grounded in the empirical realities of Klampar, provide nuanced guidance for policymakers and development agencies. Moving beyond generic digital literacy advocacy, we identify specific orchestration challenges—such as bundling artisanal storytelling with e-commerce algorithms or transforming communal trust into digital cooperative governance—that require targeted, context-sensitive intervention. By critically examining the transition from collectors to platforms as a process of re-embedding, this article illuminates a pathway for cultural heritage industries to not only survive but thrive in the digital age, positioning artisans as active agents in the redesign of their own economic futures.

METHODS

This study employs a qualitative multiple-case study design grounded in an interpretive-constructivist paradigm¹⁶. This paradigm is essential as it centers on understanding the socially constructed meanings, strategies, and lived experiences of artisan-entrepreneurs navigating digital transition, rather than seeking a singular objective truth.

The research was conducted in Klampar Village, Pamekasan, Indonesia¹⁷—a critical case due to its stark decline in active artisans (from 1,300 to 249) amidst its heritage status. Following theoretical sampling principles¹⁸, we selected 16 batik enterprises across four

¹⁶ J W Creswell and C N Poth, *Qualitative Inquiry and Research Design: Choosing among Five Approaches* (SAGE Publications, 2018); Leon Andretti, "Metode Penelitian Dan Analisis Data Comprehensive" (Cirebon, 2021).

¹⁷ Amelia and Zakik, "Pengentasan Kemiskinan Melalui Pengembangan Industri Kreatif Batik Di Kabupaten Pamekasan (Studi Kasus Pada Sentra Industri Batik Klampar)"; Sri Ira Suharwati and Siti Azizah, "Relationship Among Toddler Treatment, Biophysical Environment, and Toddler Morbidity in Klampar Village, Proppo District, Pamekasan Regency," in *1st International Conference on Geography and Education (ICGE 2016)* (Atlantis Press, 2016), 134–38; Yufita Listiana, Kurniyati Indahsari, and Kinnatus Zahrah, "Local Wisdom to Support the Development of Batik Creative Industry in Pamekasan," *KnE Social Sciences* 10, no. 5 (2025): 340–50.

¹⁸ Ashleigh E Butler, Beverley Copnell, and Helen Hall, "The Development of Theoretical Sampling in Practice," *Collegian* 25, no. 5 (2018): 561–66.

strategically significant categories: traditional family-based workshops, collector-dependent producers, emerging digital adopters, and hybrid model enterprises. This selection captures the full spectrum of strategic responses to digitalization, enabling a comparative analysis of the conditions under which different resource orchestration pathways emerge¹⁹.

Data collection was conducted over nine months (April–December 2024) using a triangulated multi-method approach²⁰. Primary data included 45 semi-structured interviews with master artisans, *pengepul* (collectors), platform representatives, and local officials, alongside immersive participant observation focusing on production, market interactions, and digital practices. Secondary data encompassed production records and digital traces (e.g., social media posts, transaction histories).

Data analysis followed an abductive, iterative strategy²¹, moving between empirical data and the integrated theoretical constructs to develop a process theory of re-embedding. Using NVivo 14, we conducted within-case narrative building and cross-case thematic analysis²², deductively informed by ROT's structuring-bundling-leveraging framework and inductively open to emergent themes like "algorithmic anxiety" and "communal pooling." Methodological rigor was ensured through prolonged engagement, triangulation, member checking, and maintaining a detailed audit trail²³. We actively engaged in reflexivity regarding our positionality as local academics, balancing insider access with critical analytical distance to authentically represent artisan voices while advancing theoretical insight²⁴.

¹⁹ Zainal Abidin, "The Movement of Economy Islamization Based on Local Wisdom in Pamekasan," *IQTISHADIA Jurnal Ekonomi & Perbankan Syariah* 4, no. 2 (December 2017): 194–213, <https://doi.org/10.19105/iqtishadia.v4i2.1340>.

²⁰ Ramakrishnan Vivek, Yogarajah Nanthagopan, and Sarmatha Piriyaarshan, "Beyond Methods: Theoretical Underpinnings of Triangulation in Qualitative and Multi-Method Studies," 2023; Mansur et al., "A Slanted View on the Future of Islamic Fintech and Conventional Fintech in South and Southeast Asian Countries," *El Barka: Journal of Islamic Economics and Business* 5, no. 2 (2022): 207–34, <https://doi.org/10.21154/elbarka.v5i2.5147>.

²¹ Stefan Timmermans and Iddo Tavory, *Data Analysis in Qualitative Research: Theorizing with Abductive Analysis* (University of Chicago Press, 2024).

²² D A Gioia, K G Corley, and A L Hamilton, "Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology," *Organizational Research Methods* 16, no. 1 (2022): 15–31, <https://doi.org/10.1177/1094428112452151>.

²³ Marian Carcary, "The Research Audit Trail: Methodological Guidance for Application in Practice," *Electronic Journal of Business Research Methods* 18, no. 2 (2020): pp166-177; F N Masithoh, D Fernandez, and ..., "Fostering Environmental Awareness among Santri through Religious Leadership and Local Cultural Wisdom: A Case Study at Pondok Pesantren Lirboyo, Kediri ...," *Journal of Malay ...* 8, no. 1 (2025): 25–36., <https://jurnal.radenfatah.ac.id/index.php/jmis/article/view/30395%0Ahttps://jurnal.radenfatah.ac.id/index.php/jmis/article/download/30395/9178>.

²⁴ Sri Sukasih et al., *Research Methodology (Concepts and Cases)* (Maharashtra, India: Novateur Publication, 2021), <https://novateurpublication.com/index.php/np/catalog/book/49>; M Mansur, "Understand The Application Of Qualitative Research In Indonesia," in *Research Methodology: Concepts and Cases* (Maharashtra, India: Novateur Publication, 2021), 102–8, <https://doi.org/https://novateurpublication.com/index.php/np/catalog/book/49>.

RESULT AND DISCUSSION

Four Pathways of Digital Resource Orchestration

To address our research question—how resource orchestration shapes socio-economic transformation²⁵—we first examined how artisans structure their digital resource portfolios. Our analysis reveals four distinct, strategic pathways, summarized in Table 1, that are deeply conditioned by pre-existing social capital and risk perception.

Table 1: Strategic Pathways of Digital Resource Orchestration and Outcomes

Pathway	Cases	Key Motivation	Primary Resources	Net Autonomy Gain
Strategic Accumulators	4	Market expansion & value capture	E-commerce platforms, digital payments, pro photography	Moderate. High growth but new algorithmic dependencies.
Collaborative Sharers	2	Overcoming individual limits via collective action	Shared equipment, group subscriptions, co-learning	High. Collective bargaining mitigates platform power.
Selective Acquirers	9	Maintain relationships with minimal disruption	Basic smartphones, WhatsApp, Facebook	Minimal. Low risk, low reward; maintains status quo.
Resistant Non-Adopters	1	Preserve socio-cultural boundaries	Basic feature phones only	Negligible. Avoids digital dependencies but isolates from new markets.

The pathway of Collaborative Sharers is particularly significant, challenging individualistic models of technology adoption. As one cooperative member stated, “Alone, the algorithm controls you. Together, we learn to control our story”²⁶. This finding shows that resource orchestration can be a collective, community-level process, a dimension largely absent from mainstream ROT literature focused on firm managers. Conversely, Resistant Non-Adopters engage in strategic non-participation, an act of institutional preservation that highlights how the choice *not* to orchestrate digital resources is itself a socio-economic

²⁵ M. Mansur et al., “Beyond Moral Compliance: Faith, Trust, And Socio-Economic Bonding In Indonesian Islamic Microenterprises,” *Hakam: Jurnal Kajian Hukum Islam Dan Hukum Ekonomi Islam* 10, no. 2 (2026): 674 – 693, <https://doi.org/https://doi.org/10.33650/jhi.v10i2.14999>.

²⁶ Hermanto, *Interview*, Pamekasan, November 2024

strategy²⁷. Thus, these pathways represent the initial, divergent modes through which artisans begin the complex process of re-embedding their economic activities into the digital sphere, based on their social and cultural starting points.

The Bundling Dilemma: Authenticity vs. Algorithmic Appeal

The core tension in the re-embedding process manifests in how artisans bundle their traditional craft resources with new digital capabilities. We identified three strategic approaches to this bundling dilemma, each with distinct trade-offs between cultural authenticity and commercial appeal optimized for platform algorithms, with critical implications for the nature of re-embedding (see Table 2).

Table 2: Strategic Bundling of Traditional and Digital Resources

Bundling Strategy	Cases	Key Integration Mechanism	Trade-off & Outcome (Implication for Re-embedding)
Transformative Bundling	5	Complete redesign of products/marketing for digital platforms (e.g., simplified motifs for online visuals).	High Growth, High Risk. Achieves ~240% market expansion but risks shallow re-embedding (market integration without deep cultural anchoring).
Complementary Bundling	6	Digital tools support, but do not alter, core traditional processes (e.g., WhatsApp for orders, hand-made production).	Balanced, Incremental. Achieves steady growth (~85%) while strongly preserving authenticity, enabling gradual re-embedding.
Selective Isolation	4	Strict separation of digital (commercial) and analog (heritage) production lines.	Protected Authenticity, Limited Reach. Safeguards cultural capital but yields minimal growth (~35%), representing defensive re-embedding (protection at the cost of market engagement).

Enterprises employing Transformative Bundling achieved the highest market reach by fundamentally adapting to algorithmic logic—what one artisan called “creating batik for the smartphone screen.” However, this often required decoupling production from its traditional narrative and communal context, leading to what another termed “empty bestsellers.” In contrast, Selective Isolation represents a form of institutional boundary work,

²⁷ Fitria Nur Masithoh et al., “Socio-Economic Bonding as an Enabler of Circular Economy Integration in MSMEs: A Community-Based Green Transformation Model for Sustainable Economic Resilience,” *Ekosiana Jurnal Ekonomi Syari Ah* 13, no. 1 (2026): 121–43, <https://doi.org/https://doi.org/10.47077/ekosiana.v13i1.659>.

deliberately firewall-ing core cultural practices from market pressures. The most nuanced strategy observed was a dynamic, Adaptive Integration (1 case), which created a feedback loop: digital sales data informed subtle, culturally coherent innovations (e.g., new color blends), while deep craft knowledge was translated into compelling digital storytelling. This represents not mere bundling but resource translation—the core mechanism for a resilient re-embedding that creates value in digital markets without severing socio-cultural roots.

Reconfiguring Power: The Shift from Relational to Algorithmic Embeddedness

A central finding is that digital transformation reconfigures, rather than eliminates, socio-economic dependencies. This shift is a move from relational embeddedness—where power derived from personal ties, local knowledge, and control of physical market access via the *pengepul*—to algorithmic embeddedness, where power derives from platform architectures, data control, and visibility metrics.

Artisans articulated this shift vividly: “Before, my price was set by Pak Huri [a collector] after sharing a meal. Now, my price is suggested by Shopee after ‘learning’ from a thousand transactions. Who do I negotiate with?”²⁸. This new dependency is more opaque, standardized, and often less negotiable. However, our data shows artisans are not passive. They engage in strategic counter-orchestration: multi-homing across platforms to avoid lock-in, building direct community via WhatsApp groups to bypass fees, and leveraging social media narratives to build brand loyalty independent of algorithmically-granted visibility. This active navigation underscores that re-embedding is a contested process of negotiating agency within new, technologically-mediated structures of power.

Institutional Work as the Engine of Re-Embedding

The transition captured above is propelled by deliberate institutional work—the purposive actions of artisans to create, maintain, or disrupt the rules and norms governing their field. We identify three intertwined forms of this work that constitute the engine of re-embedding:

1. **Identity Preservation Work:** Artisans developed new institutions to maintain authenticity in digital space. This included creating community-verified digital certificates for motifs, producing “making-of” videos to signal handmade quality, and curating narratives that connect designs to local history. This work converts intangible cultural capital into a defensible value proposition online.
2. **Relationship Reconfiguration Work:** Rather than abrupt cuts, artisans meticulously managed the de-institutionalization of *pengepul* ties. Most successful cases adopted a hybrid approach, gradually reducing dependence while maintaining cooperative relations for specific local markets. This work involved renegotiating terms (“I now use him only for bulk orders, not my premium line”) and demonstrates that re-embedding is a gradual rewearing, not a severing, of the social fabric.
3. **Normative Restructuring Work:** The community collectively engaged in establishing new norms for the digital marketplace. Through informal gatherings and social media groups, they debated and set standards for “fair” online pricing, acceptable motif adaptations, and ethical digital representation. This bottom-up creation of a digital craft ethic is fundamental to re-embedding economic activity into a new, community-governed socio-technical system.

In sum, this institutional work is the engine of re-embedding. It is through these deliberate actions—preserving identity, reconfiguring ties, restructuring norms—that artisans transition from being subjects of a *pengepul*-based system to becoming strategic

²⁸ Huri, *Interview*, Pamekasan, October 2024

orchestrators within an algorithm-based one. They are not merely moving from one economy to another; they are actively re-weaving the very socio-technical fabric of their economic lives. This view positions them not as mere adopters of technology, but as active institutional entrepreneurs reshaping their own socio-economic landscape, directly answering our research question on how resource orchestration shapes socio-economic relations.

CONCLUSION

This study concludes that the digitalization of traditional batik MSMEs in Klampar is fundamentally a process of socio-technical reconfiguration, where artisans actively orchestrate resources to navigate shifting institutional landscapes. The transformation from a collector-based to a platform-based economy does not represent a linear path toward empowerment, but rather a reconfiguration of dependencies—from the localized, relational power of *pengepul* to the algorithmic, infrastructural power of digital platforms. This study thus reframes digital transformation as a problem of re-embedding—a conceptual shift that prioritizes the re-anchoring of social relations within new technological infrastructures. Successful digital transition hinges on the strategic bundling and translation of cultural capital into digital value, with the most sustainable outcomes emerging from adaptive integration strategies that maintain bidirectional dialogue between tradition and innovation, rather than through full assimilation or outright resistance.

The research demonstrates that resource orchestration in this context is inherently an exercise of institutional work. Artisans engage in identity preservation, relationship reconfiguration, and normative restructuring to actively shape the terms of their digital engagement. This challenges top-down, technology-centric models of development and highlights the agentic capacity of traditional craft communities to innovate within—and despite—structural constraints. While this study deepens our understanding of re-embedding in one cultural industry, its findings are bounded by the unique socio-cultural context of Klampar. Future research should test this framework in other craft ecosystems and formalize the proposed strategic typologies through large-scale, mixed-methods investigation.

For policymakers and support institutions, the imperative is to move beyond generic digital literacy toward differentiated, ecosystem-sensitive support. Interventions should recognize and strengthen hybrid business models and facilitate community-based digital cooperatives. Specifically, we propose the development of "Platform Cooperatives for Heritage" (PCH)—a novel institutional model defined as legally recognized, artisan-owned digital entities that negotiate collectively with global platforms, manage shared digital assets (like brand certification and analytics tools), and enforce community-defined standards of authenticity. This model directly addresses the power asymmetries of algorithmic embeddedness by providing a structural mechanism for collective agency. Ultimately, preserving cultural heritage in the digital age requires enabling artisans not merely as adopters of technology, but as strategic orchestrators who can leverage their deep craft knowledge and social capital to redesign their own economic futures within an evolving digital landscape.

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REFERENCES

- Abidin, Zainal. "The Movement of Economy Islamization Based on Local Wisdom in Pamekasan." *IQTISHADIA Jurnal Ekonomi & Perbankan Syariah* 4, no. 2 (December 2017): 194–213. <https://doi.org/10.19105/iqtishadia.v4i2.1340>.
- Amelia, B S, and Z Zakik. "Pengentasan Kemiskinan Melalui Pengembangan Industri Kreatif Batik Di Kabupaten Pamekasan (Studi Kasus Pada Sentra Industri Batik Klampar)." *Buletin Ekonomika Pembangunan* 4, no. 1 (2023).
- Andretti, Leon. "Metode Penelitian Dan Analisis Data Comprehensive." Cirebon, 2021.
- Butler, Ashleigh E, Beverley Copnell, and Helen Hall. "The Development of Theoretical Sampling in Practice." *Collegian* 25, no. 5 (2018): 561–66.
- Carcary, Marian. "The Research Audit Trail: Methodological Guidance for Application in Practice." *Electronic Journal of Business Research Methods* 18, no. 2 (2020): pp166-177.
- Chadhar, Munish, and M S Rahman. "Resource Orchestration Theory and Digital Transformation of Traditional Organizations." *Journal of Computer Information Systems* 62, no. 3 (2022): 539–50. <https://doi.org/10.1080/08874417.2021.2009925>.
- Creswell, J W, and C N Poth. *Qualitative Inquiry and Research Design: Choosing among Five Approaches*. SAGE Publications, 2018.
- Gawer, Annabelle. "Digital Platforms and Ecosystems: Remarks on the Dominant Organizational Forms of the Digital Age." *Innovation: Organization & Management* 23, no. 4 (2021): 1–15. <https://doi.org/10.1080/14479338.2021.1965888>.
- Gioia, D A, K G Corley, and A L Hamilton. "Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology." *Organizational Research Methods* 16, no. 1 (2022): 15–31. <https://doi.org/10.1177/1094428112452151>.
- Granovetter, Mark. "The Social Construction of Economic Institutions." *Annual Review of Sociology* 47 (2021): 1–19. <https://doi.org/10.1146/annurev-soc-090320-111119>.
- Holisin, A., and I. H. Priyadi. "Analisis Bauran Pemasaran (Marketing Mix) Warung Makan Indonesia Di Malaysia Perspektif Ekonomi Islam Pada UMKM Di Slangor Malaysia." *AT-TAWASSUTH: Jurnal Ekonomi Islam* 9, no. 2 (2024): 235–54. <https://doi.org/http://dx.doi.org/10.30829/ajei.v9i2.22501>.
- Kapoor, Kavita, Kuttimani Tamilmani, Nripendra P Rana, Pankaj Patil, Yogesh K Dwivedi, and Sridhar Nerur. "Advances in Social Media Research: Past, Present and Future." *Information Systems Frontiers* 23, no. 1 (2021): 1–28. <https://doi.org/10.1007/s10796->

- 020-10006-7.
- Khin, Sabai, and Theresa C F Ho. "Digital Technology, Digital Capability and Organizational Performance: A Mediating Role of Digital Innovation." *International Journal of Innovation Science* 11, no. 2 (2019): 177–95.
- Kumar, V. "Integrating Theory and Practice in Marketing." *Journal of Marketing*, 2017. <https://doi.org/10.1509/jm.80.2.1>.
- Listiana, Yufita, Kurniyati Indahsari, and Kinnatus Zahrah. "Local Wisdom to Support the Development of Batik Creative Industry in Pamekasan." *KnE Social Sciences* 10, no. 5 (2025): 340–50.
- Mansur, Fahmi Assulthoni, Taufik, and Moh Safik. "Pengentasan Keterpurukan Anak-Anak Pesisir Akibat Jerat Kekerasan Sosial Melalui SANASIR Di Desa Baddurih Pamekasan." *BHAKTI: Jurnal Pengabdian Dan Pemberdayaan Masyarakat* 3, no. 02 (2024): 148–61.
- Mansur, M., S. N. Mahmudah, F. N. Masithoh, and S. Sahrul. "Beyond Moral Compliance: Faith, Trust, And Socio-Economic Bonding In Indonesian Islamic Microenterprises." *Hakam: Jurnal Kajian Hukum Islam Dan Hukum Ekonomi Islam* 10, no. 2 (2026): 674 – 693. <https://doi.org/https://doi.org/10.33650/jhi.v10i2.14999>.
- Mansur, M. "Understand The Application Of Qualitative Research In Indonesia." In *Research Methodology: Concepts and Cases*, 102–8. Maharashtra, India: Novateur Publication, 2021. <https://doi.org/https://novateurpublication.com/index.php/np/catalog/book/49>.
- Mansur, Mansur, Septi Gumindari, and M. Adib Hamzawi. "Magic Marketing Dalam Etika Bisnis Global: Kajian Literatur." *Ulumuna: Jurnal Studi Keislaman* 9, no. 2 (2024): 141–61. <https://doi.org/10.36420/ju.v9i2.6968>.
- Mansur, Mansur, Andriani Samsuri, Nurhayati Nurhayati, and K Khoyyilah. "A Slanted View on the Future of Islamic Fintech and Conventional Fintech in South and Southeast Asian Countries." *El Barka: Journal of Islamic Economics and Business* 5, no. 2 (2022): 207–34. <https://doi.org/10.21154/elbarka.v5i2.5147>.
- Masithoh, F N, D Fernandez, and ... "Fostering Environmental Awareness among Santri through Religious Leadership and Local Cultural Wisdom: A Case Study at Pondok Pesantren Lirboyo, Kediri" *Journal of Malay ...* 8, no. 1 (2025): 25-36. <https://jurnal.radenfatah.ac.id/index.php/jmis/article/view/30395%0Ahttps://jurnal.radenfatah.ac.id/index.php/jmis/article/download/30395/9178>.
- Masithoh, Fitria Nur, Aninda Adistyana Dewi, Uliyatul Mu'awwanah, Miftakhur Rohmah, and Mansur Mansur. "Socio-Economic Bonding as an Enabler of Circular Economy Integration in MSMEs: A Community-Based Green Transformation Model for Sustainable Economic Resilience." *Ekosiana Jurnal Ekonomi Syari Ah* 13, no. 1 (2026): 121–43. <https://doi.org/https://doi.org/10.47077/ekosiana.v13i1.659>.
- Micelotta, Evelyn, Michael Lounsbury, and Royston Greenwood. "Pathways of Institutional Change: An Integrative Review and Research Agenda." *Journal of Management* 43, no. 6 (2017): 1885–1910.
- Nugroho, Lukman, N Nurfadilah, and R Pramono. "Digital Transformation Challenges for Small and Medium Enterprises in the Indonesian Creative Industry." *Journal of Asian Finance, Economics and Business* 9, no. 3 (2022): 341–50. <https://doi.org/10.13106/jafeb.2022.vol9.no3.0341>.
- Qiang, Zhang, Xiao Ting, and Li Chuanchuan. "Research on the Construction and Application of Early Warning Model of Network Public Opinion in the Era of Intelligent Communication." In *2024 3rd International Conference on Data Analytics, Computing and*

- Artificial Intelligence (ICDACA)*, 404–8. IEEE, 2024.
- Sanjiwani, P K. “Hak Kekayaan Intelektual Dalam Industri Pariwisata Studi Kasus: Perlindungan Hukum Pemanfaatan Local Genius Dalam Produk Pengusaha Lokal.” *Jurnal Ilmiah Hospitality Management*, 2016. <https://jihm.stpbipress.id/index.php/JIHM/article/view/31>.
- Sirmon, David G, Michael A Hitt, R Duane Ireland, and Brett Anitra Gilbert. “Resource Orchestration to Create Competitive Advantage: Breadth, Depth, and Life Cycle Effects.” *Journal of Management* 37, no. 5 (2011): 1390–1412.
- Suharwati, S I. “Pengembangan Industri Batik Tulis Sebagai Potensi Daerah (Studi Kasus Di Desa Klampar Kabupaten Pamekasan).” *J-PIPS (Jurnal Pendidikan Ilmu Pengetahuan Sosial)* 6, no. 1 (2019): 13–21.
- Suharwati, Sri Ira, and Siti Azizah. “Relationship Among Toddler Treatment, Biophysical Environment, and Toddler Morbidity in Klampar Village, Proppo District, Pamekasan Regency.” In *1st International Conference on Geography and Education (ICGE 2016)*, 134–38. Atlantis Press, 2016.
- Sukasih, Sri, Noening Andrijati, Arini Estiastuti, Dewi Nilam Tyas, Dr. Muhammad Isman Jusuf, Abdul Rahmat, Dr. Froilan D. Mobo, et al. *Research Methodology (Concepts and Cases)*. Maharashtra, India: Novateur Publication, 2021. <https://novateurpublication.com/index.php/np/catalog/book/49>.
- Timmermans, Stefan, and Iddo Tavory. *Data Analysis in Qualitative Research: Theorizing with Abductive Analysis*. University of Chicago Press, 2024.
- UNESCO. “Indonesian Batik,” 2009. <https://ich.unesco.org/en/RL/indonesian-batik-00170>.
- Vivek, Ramakrishnan, Yogarajah Nanthagopan, and Sarmatha Piriyatharshan. “Beyond Methods: Theoretical Underpinnings of Triangulation in Qualitative and Muti-Method Studies,” 2023.
- Wu, Jian, Wen Mei, Liang Liu, and Aman Uppal. “The Role of Institutional Entrepreneurship in Building Digital Ecosystem.” *Technological Forecasting and Social Change* 180 (2022): 121707. <https://doi.org/10.1016/j.techfore.2022.121707>.