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Leveraging Indigenous Ikat Heritage for Creative Industry Growth: A Study from Sumba, East Nusa Tenggara

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Abstract

This mixed-methods study examines the potential of the Sumba Ikat industry in driving creative economy growth in East Nusa Tenggara. Combining in-depth interviews and a structured survey, the research confirms that this authentic art form faces significant structural challenges. Survey data from 85 weavers reveals that only 22% of the weaving population is under 35, signaling a threat to intergenerational continuity. Economically, 56% of weavers earn below one million rupiah monthly, a disparity with the cultural value of their work. A complementary market survey of 35 stakeholders (traders, cooperative managers) indicates that 55% of sales occur through traditional local markets, while online channels account for a mere 7%. Concurrently, the study identifies a significant opportunity: products utilizing natural dyes command market prices up to five times higher than synthetic counterparts. We propose that a strategy of "value creation through differentiation," coupled with value chain development and digital infrastructure strengthening, can forge a more sustainable economic model. This approach aims to open avenues for socioeconomic development while steadfastly preserving cultural authenticity.

Keywords: Sumba Ikat, creative industries, sustainable development, cultural heritage, cultural economy

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INTRODUCTION

In the island nation of Indonesia, Sumba was a testament to cultural heritage and became a living museum of textile art where every thread within the Ikat fabric is interwoven with ancient tales, spiritual beliefs, and generations of indigenous wisdom (Pio & Waddock, 2021). At the same time, the Sumbanese Ikat industry

represents far more than a mere form of artistic expression; it constitutes the very heartbeat of cultural identity and social continuity for the Sumbanese people (Tuthaes et al., 2024). This exquisite textile tradition, deeply embedded in the island's cultural fabric for centuries, now stands at a critical crossroads where the forces of tradition and modernity converge, presenting both unprecedented challenges and remarkable opportunities for changing young technocrats willing to enhance creative industries in this region (McRobbie, 2018). This study thus undertakes a comprehensive exploration of the multifaceted role this unique cultural heritage can play as a catalytic force in creative industry development within the East Nusa Tenggara region (Saputra, 2024). It maps not only the existing potentialities of this authentic art form but also charts innovative pathways toward sustainable economic growth that honors cultural authenticity while embracing contemporary market dynamics (Kuenkel, 2015).

The Sumba region in East Nusa Tenggara Province has long been recognized as one of Indonesia's premier centers of Ikat production, having a rich and unique cultural heritage that manifests in textile patterns with extraordinary complexity and symbolic depth (Untari et al., 2020). The intricate motifs of Sumbanese Ikat, together with its striking color palettes, do more than please the aesthetic sense: they form visual narratives that transport viewers deep into the historical consciousness, mythological frameworks, and spiritual worldviews of the Sumbanese people (Widjaja, 2022). Every pattern, every color combination, and every technical decision embodies many centuries of accumulated knowledge, turning these textiles into much more than just commodities but tangible manifestations of cultural memory and identity (Pandey et al., 2022). Yet, this invaluable cultural treasure nowadays faces a constellation of constraints that go from a lack of market access and low innovation capabilities to increasing competition with industrial textiles at mass-market prices (Burns, 2020). While prior research has documented these challenges in broad strokes, a precise, empirical gap remains in quantifying their scale and mapping their interrelationships within the Sumba context. Specifically, there is limited integrated analysis measuring the generational dimensions of the craft's continuity against its economic viability, and a lack of data quantifying the digital divide's specific impact on market access and value capture for artisans. These have combined to create a precarious situation seriously threatening both the economic viability and intergenerational continuity of this invaluable artistic tradition, raising urgent questions regarding its future sustainability (Kaplan et al., 2017).

The imperative for this research emerges from what might be termed a "dual positioning" of the Sumba Ikat tradition within contemporary socioeconomic contexts. On one hand, there exists a pressing need to safeguard this intangible cultural heritage from the threats of oblivion and cultural erosion in an increasingly globalized world. On the other hand, there exists an enormous, largely untapped opportunity to harness this cultural capital for economic development and the creation of sustainable livelihood options for local communities (Sari et al., 2023). This thus serves as a conceptual and practical bridge between these two imperative domains, seeking to translate cultural value into economic opportunity while ensuring that economic development does not come at the cost of cultural integrity. It is expected that the study will provide practical, context-sensitive solutions able

to transform existing threats into viable opportunities for the preservation of culture and economic empowerment simultaneously ([Lerario, 2020](#)).

The current potential of the Sumba Ikat industry to act as a significant economic driver remains high and distinctly underexploited within contemporary development models ([Hunga, 2022](#)). This study aims to contribute to the literature on creative economy and cultural value chains by empirically investigating and proposing the concept of a "resilient cultural ecosystem." This framework posits that sustainability is achieved not through preservation alone, but through the strategic integration of cultural authenticity, digital market tools, and equitable value chain restructuring. This artisanal practice has the possibility of reaching well beyond the more 'traditional' areas of fashion and garments into the related fields of interior design, the visual arts, cultural tourism, and even digital media. Creating a holistic and smoothly operating value chain around Ikat production has the potential to bring in substantial revenue for the regional weaving groups while at the same time giving reasons for the younger generation to stay in their home towns and not migrate to urban centers. It is also in line with the broader international recognition that creative industries have now become strong motors for contemporary economies, especially in contexts where cultural heritage can function as a differentiator of competitive advantage. The strategic integration between traditional systems of knowledge and modern creative practices can yield innovative products that maintain cultural authenticity and respond effectively to emerging market demands and consumer preferences. This inherently synergistic approach places Sumba Ikat in a position to be competitive in international markets while building a brand identity that represents the region's unique cultural landscape.

Accordingly, the primary objective of this research is to co-create a comprehensive and culturally anchored roadmap for empowering Sumba Ikat artisan communities. This objective is guided by the following research questions:

1. What are the key demographic, economic, and market-access challenges threatening the sustainability of Sumba Ikat weaving?
2. How do production techniques (natural vs. synthetic dyes) correlate with production time, economic return, and market positioning?
3. What strategic interventions can bridge the identified digital and innovation gaps to enhance the competitiveness of Sumba Ikat within the creative economy?

We operate from the foundational premise that sustainable and inclusive development can only be achieved when it is firmly embedded within the cultural frameworks and identity systems of the host communities, meeting the present economic needs without compromising the future cultural assets ([Netithammakorn et al., 2025](#)). The theoretical architecture supporting this research is based on three interconnected pillars: namely, the dynamic concept of creative industries as drivers of economic transformation; the emergent field of cultural heritage economics in the investigation of how cultural assets generate economic value; and the transformative role of contemporary design thinking in revitalizing traditional arts ([Gou, 2025](#)). In this light, the mentioned conceptual frameworks might be viewed as complementary analytical tools-each bearing its unique value to explain

and discover the hidden potential within Sumba Ikat, both as a cultural practice and as an economic activity.

Creative industries have increasingly been recognized as significant contributors to economic development, especially when they build upon existing cultural capital and harness individual and collective creativity (Hale et al., 2023). Within this paradigm, intangible cultural heritage, such as Ikat weaving, emerges particularly fertile for generating new forms of economic and social value that benefit entire communities (Chantamool et al., 2024). There is a growing body of international evidence showing that strategic combinations of traditional knowledge with modern design methodologies result in distinctive products that maintain strong cultural identity while achieving relevance in contemporary markets (Hoaihongthong & Tuamsuk, 2024). This process, sometimes conceptualized as "creative re-creation" or "tradition-inspired innovation," not only ensures the protection of cultural heritage but also establishes a sustainable foundation for local economic development respectful of ecological and social boundaries. In this regard, in-depth understanding of symbolic motifs and traditional weaving techniques becomes not just an artistic concern but an essential prerequisite for any meaningful innovation and new product development.

Successful experiences from a variety of global contexts demonstrate that well-designed creative business models can generate a high economic added value while preserving traditional arts in their authentic form. Most such models are underpinned with direct participation from local communities, attention to environmental sustainability, and compelling storytelling about products while communicating their cultural significance and production contexts (El Shandidy, 2023). In the particular case of Sumba Ikat, this means strategically finding new uses and markets for this form of art while rigorously preserving its unique symbolic language in order to build up social status and an economical position of traditional weavers. The given study thus endeavors to cross the conceptual and practical chasm between the historical legacy and future potential of the Ikat industry in Sumba by conducting a comprehensive, in-depth investigation that honors the inherent complexity.

Such revitalization would go beyond the technical preservation of methods of weaving to encompass a renewal of an entire worldview, a rich symbolic language, and an indigenous knowledge system that has supported communities for generations. It is truly hoped that the findings emanating from this research might contribute to the meaningful cultural and economic development of the Sumba weavers, and concomitantly create an adaptable model for other areas similarly endowed with these cultural heritage assets. The present study therefore attempts to take stock of challenges and opportunities in great detail so as to inform policy, guide investment, and foster innovative approaches toward the management of cultural heritage in the era of the creative economy.

RESEARCH METHOD

Research Design and Philosophical Underpinnings

This study employs a convergent mixed-methods design to provide a comprehensive understanding of the Sumba Ikat ecosystem. The design is rooted in a pragmatic paradigm, utilizing both qualitative and quantitative approaches to address different facets of the research questions. The qualitative component, grounded in an interpretive tradition, seeks to understand the subjective experiences and meanings held by stakeholders. The complementary quantitative component descriptively maps the prevalence and patterns of key challenges and opportunities.

Research Context and Participant Selection

The research was conducted across several weaving communities in Sumba, selected for their diversity in production practices and market engagement. Participants were drawn from two parallel streams:

1. **Qualitative Stream (In-depth Understanding):** A purposive sampling strategy was used to select 45 key informants for interviews, including master weavers, young artisans, cultural custodians, entrepreneurs, and government officials. Selection continued until thematic saturation was achieved.
2. **Quantitative Stream (Descriptive Mapping):** A survey was administered to 85 active weavers from five villages, selected via a combination of cluster and convenience sampling to capture a representative profile of the artisan base. This sample size (N=85) serves as the denominator for all percentage-based results (Tables 1-6). Separately, a market survey was conducted with 35 market stakeholders (local traders, cooperative managers, boutique owners) to gather data on sales channels and product category performance.

Data Collection Methods and Procedures

A multi-method approach was used for triangulation:

1. **In-depth Semi-structured Interviews:** 45 interviews (60-120 minutes each) were conducted, audio-recorded, and transcribed.
2. **Structured Survey:** A questionnaire was administered to the 85 weavers, covering demographics, income, production details, sales channels, challenges (via a multiple-choice list with an "other" option), and sources of design inspiration. The market survey with 35 stakeholders focused on sales channel distribution and product category demand.
3. **Participant Observation:** Approximately 120 hours of fieldwork were conducted in weaving workshops and markets.
4. **Documentary Analysis:** Policy documents, development program reports, and historical records on motifs were reviewed.

Data Analysis Framework

Data analysis proceeded concurrently for both strands:

- **Qualitative Data Analysis:** Interview transcripts and field notes were analyzed using Braun and Clarke's thematic analysis framework, facilitated by NVivo 14. The process involved six phases: immersion and

familiarization, initial coding, theme development, theme review and refinement, theme definition, and integration. The percentages cited in the text regarding thematic frequency (e.g., the prevalence of certain challenges) are derived from the code frequency counts within the qualitative dataset, indicating how many participants raised a particular issue.

- **Quantitative Data Analysis:** Survey data from weavers and market stakeholders were cleaned and analyzed using descriptive statistics (frequencies, percentages, averages) in SPSS software to generate the findings presented in Tables 1 through 6.

Ethical Considerations

Several strategies were utilized in enhancing trustworthiness and ethical soundness of the study. Methodological strength was ensured through prolonged engagement in the field, persistent observation, triangulation of data sources, peer debriefing sessions, and maintenance of an audit trail documenting analytical decisions. Preliminary findings were shared with a subset of participants in community feedback sessions, providing opportunities for respondent validation and corrective input.

It followed strict ethical protocols approved by the institutional review board, including informed consent using culturally appropriate procedures, ensuring confidentiality and anonymity, respecting cultural protocols around knowledge sharing, and laying out agreements on how research findings would be used to benefit the participating communities. Particular attention was given to power relations between the researchers and participants; active attempts were made to position community members as experts and interpreters of their experiences, rather than simply as research subjects.

This comprehensive methodological approach, with its explicit philosophical grounding, multi-faceted data collection strategies, and systematic analytical procedures, creates the basis for the results presented in the following sections, which are both empirically founded and theoretically informed; thus, setting a sound basis for understanding the complex dynamics of the Sumba Ikat industry and for developing meaningful recommendations for its sustainable future.

RESULT AND DISCUSSION

RESULTS

The richly textured, multi-dimensional portrait of the Sumba Ikat creative ecosystem that has emerged from this comprehensive field investigation presents a rich cultural tradition facing daunting structural challenges. Our findings, based on extensive engagement with 85 active weavers across five villages in Sumba, provide both a cause for concern regarding current vulnerabilities and promising signs of possible pathways toward sustainable revitalization. The data shed light not only on the continuing value of traditional craftsmanship but also on the urgent need for strategic interventions that can protect this intangible cultural heritage while ensuring the economic viability of practitioners.

Table 1: Demographic Profile of Ikat Artisans (N=85)

Demographic Characteristic	Category	Percentage (%)
Age Group	18-35	22%
	36-55	45%
	56+	33%
Formal Education Level	No formal education	28%
	Primary School	52%
	Secondary School	17%
	Beyond Secondary	3%

The demographic composition shown in Table 1 provides critical insights into the sustainability challenges faced by Sumba Ikat. The disproportionately small presence of young weavers-only 22% are between 18 and 35 years old-points to a potentially severe generational discontinuity in knowledge transmission that threatens the long-term viability of this cultural practice. Table 1 shows that 22% of weavers are aged 18-35, while 45% are 36-55 and 33% are 56 years or older. This challenge is further compounded by the educational profile, which indicates serious constraints in both business literacy and digital capabilities, given that 80% of weavers have only primary education or less. This educational landscape suggests limitations in the capacity of the community to navigate modern market dynamics, digital platforms, and contemporary business practices essential for adapting traditional crafts to evolving economic environments. The combination of aging practitioners with limited formal education creates a complex problem that requires multifaceted interventions addressing both cultural transmission and economic modernization simultaneously.

Table 2: Average Monthly Income from Ikat Weaving (in IDR)

Income Bracket (IDR)	Percentage of Artisans (%)
< 500,000	15%
500,000 - 1,000,000	41%
1,000,001 - 2,000,000	35%
> 2,000,000	9%

Table 2 indicates that 56% of artisans earn less than one million rupiah per month. As shown, 56% of artisans make less than one million rupiah a month, an income level that creates significant livelihood challenges in light of substantial investments of time required for quality Ikat production. This economic reality becomes even more dramatic when considering that 15% of weavers survive on less than 500,000 rupiah a month, placing them essentially beneath poverty thresholds despite their mastery of complex artistic techniques. The modest representation in the higher income brackets-only 9% above two million rupiah-implies limited translation of cultural value into economic security for most practitioners. These income patterns doubtless contribute to the generational disparities seen in Table 1, as young potential weavers may perceive an insufficient economic incentive to which they can dedicate themselves in mastering this demanding craft. The income distribution underlines urgent needs for value chain

restructuring and market repositioning strategies able to generate more equitable economic returns for these skilled cultural practitioners.

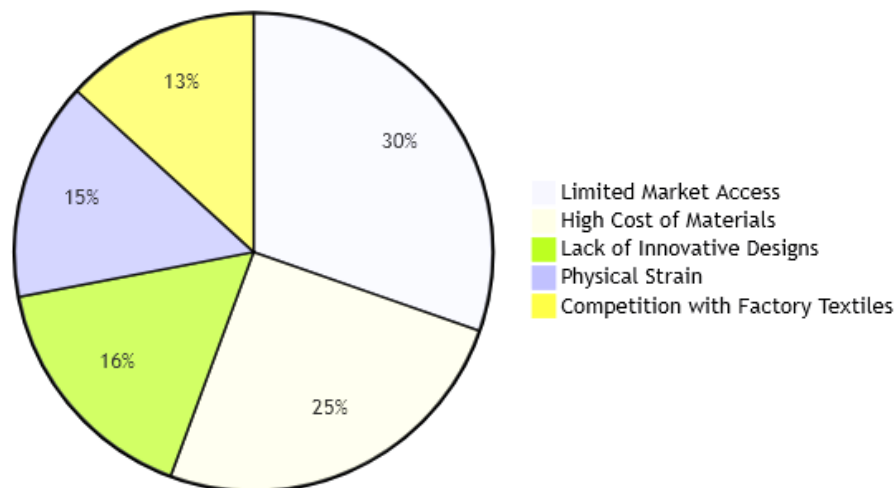


Figure 1: Primary Challenges Faced by Ikat Artisans

A deeper understanding of the constraints faced by the weavers requires examining the qualitative data from the interviews. Figure 1 illustrates the relative frequency of the five primary challenges identified by the artisans. These challenges were derived from a thematic analysis of their open-ended responses regarding the main obstacles to their livelihood and production. As the figure shows, limited market access emerged as the most significant barrier, reported by 30% of participants. High material costs (25%) and limitations in design innovation (16%) were the next most prevalent concerns. Furthermore, physical strain from weaving (15%) and competition with factory-made textiles (13%) were highlighted as other substantial impediments. This distribution paints a picture of a craft industry grappling simultaneously with market failures, resource constraints, and occupational health concerns.

The analysis revealed a complex ecosystem of constraints. Limited market access (30%) was frequently described as a fundamental barrier to economic sustainability. One weaver from Desa Prailiu expressed a common frustration: *"We make these beautiful pieces, but our world is the village market. The traders who come from the city set the price. We don't know how to reach the buyers in Jakarta or overseas who might value our work properly."*

High material costs (25%), particularly for natural dyes, create a direct tension between cultural authenticity and economic survival. An experienced dyer explained: *"True indigo and mengkudu roots are becoming scarce and expensive. Sometimes, when an order is urgent, we feel pressured to use synthetic dyes from the store, even though it changes the soul of the cloth."*

Limitations in design innovation (16%) point to a gap between tradition and evolving markets. A younger weaver noted: *"I want to create new patterns that speak to today, maybe for a handbag or a laptop sleeve, but I worry the elders will say it's not true Sumba. And I don't have training to know what designs might sell in a modern shop."*

The physical toll of weaving (15%) is an often-overlooked dimension. An older master weaver shared: *"My eyes are not what they were, and my back aches*

after long hours at the loom. The young ones see this hard work for little reward and choose other paths."

Finally, competition with mass-produced imitations (13%) undermines the value proposition. As one artisan put it: *"Tourists can buy a printed 'ikat' at the market for one-tenth of my price. They don't always understand the months of skill and story in mine."*

Table 3: Primary Sales Channels for Ikat Products

Sales Channel	Percentage of Total Sales (%)
Local Markets	55%
Direct Orders	20%
Cooperatives	15%
Online Platforms	7%
Tourist Shops	3%

The sales channel analysis as represented in Table 3 indicates a distribution system still highly reliant on traditional pathways, where local markets make up 55% of total sales. This market structure engenders considerable constraints regarding geographic reach, customer diversity, and price realization potential. The relatively strong positioning of direct orders at 20% is indicative of existing recognition of the value of the craft among knowledgeable buyers, but this channel probably relies on previously established relationships and reputation rather than any systematic development of the market. The cooperative model of distribution amounts to 15%, which does suggest some successful collective action, although apparently at a limited scale. Most tellingly, the negligible presence of online platforms at 7% underlines a deep-seated digital divide that effectively constrains market access for Sumba Ikat producers within an increasingly digital global marketplace. This kind of digital gap presents both a challenge and an opportunity, whereby the development of e-commerce capabilities could substantially expand market access for Sumba Ikat beyond the present geographical and demographic constraints.

Table 4: Average Production Time Based on Dyeing Technique

Dyeing Technique	Average Production Time (for one piece)
Natural Dyes	3 - 6 Months
Synthetic Dyes	3 - 6 Weeks

Table 4 describes the production time analysis brings to light a fundamental tension between cultural authenticity and economic viability in Sumba Ikat production. The dramatic gap in production times-between natural dye processes, which take 3-6 months per piece, and synthetic dye alternatives, which take 3-6 weeks-represents one of the critical factors in the economic structure of the industry. Such a time difference of 300-600% maintains inherent obstacles in bringing production costs in line with market prices, especially with income expectations as indicated in Table 2. The long period required for natural dyes is indicative not only of technical processes but also of ecological ones, entailing seasonal availability of botanical material and the dependence of drying periods on

weather conditions. This situation gives rise to what may be called an "authenticity premium" dilemma, where adherence to traditional natural dyeing methods imposes a serious opportunity cost in economic terms on practitioners. Price data collected from cooperative ledgers and direct seller interviews revealed a significant market premium for natural-dye products. For instance, the average sale price for a naturally-dyed *sarong* with complex ancestral motifs was recorded at approximately IDR 3,500,000. In contrast, a visually similar *sarong* using synthetic dyes averaged IDR 700,000. This represents a fivefold price differential, underscoring the high value placed on cultural authenticity and traditional techniques by certain market segments.

Table 5: Best-Selling Ikat Product Categories

Product Category	Percentage of Total Sales (%)
Traditional Fabrics (Sarong, Shawl)	60%
Accessories (Bags, Scarves)	25%
Home Décor (Cushions, Wall Hangings)	15%

By product category, the analysis in Table 5 shows changing market preferences and points toward promising strategic directions of development. The fact that the lion's share (60% of sales) is still taken by traditional fabrics demonstrates that there is a continuing market for conventional forms of Ikat both to satisfy local cultural needs and to cater to tourist markets looking for genuine cultural artifacts. On the other hand, a substantial share going to accessories (25%) indicates successful market diversification into the use of traditional motifs for modern applications. This category probably benefits from lower price points, smaller production commitments, and alignment with global fashion trends, making Ikat accessible to broader consumer segments. The home décor segment, which is emerging at 15%, is another promising avenue for market expansion, connecting traditional craftsmanship with interior design sensibilities. This growth in these non-traditional categories hints at the potential for what could be termed "application innovation" - the extension of Ikat aesthetics beyond conventional forms while maintaining technical and cultural integrity.

Table 6: Primary Source of Design Inspiration for New Products

Source of Inspiration	Percentage of Artisans/Designers (%)
Ancestral Motifs	71%
Nature (Local Flora/Fauna)	23%
Collaboration with Designers	4%
Market Demand / Trends	2%

The identified design inspiration patterns in Table 6 indicate an ecosystem that is still strongly bound by tradition, as ancestral motifs served as inspiration for 71% of new products. This can be seen as a strength in maintaining cultural authenticity, yet an existing limitation in responsiveness to market demands. The natural inspiration of 23% demonstrates the continued relation between the ecological environment of Sumba and its cultural expressions, including a premise for ecologically grounded design innovations. Very few cases reported the

involvement of external designers (4%) and even fewer were aware of market trends (2%), suggesting low cross-cultural creative exchange and market-oriented design development. Such insulation from external influences enables the protection of traditional knowledge but also constrains innovation potential and market relevance. The overwhelming reliance on inherited design paradigms suggests a need for careful balancing in the approaches that might introduce new perspectives with due respect for and preservation of traditional design intelligence.

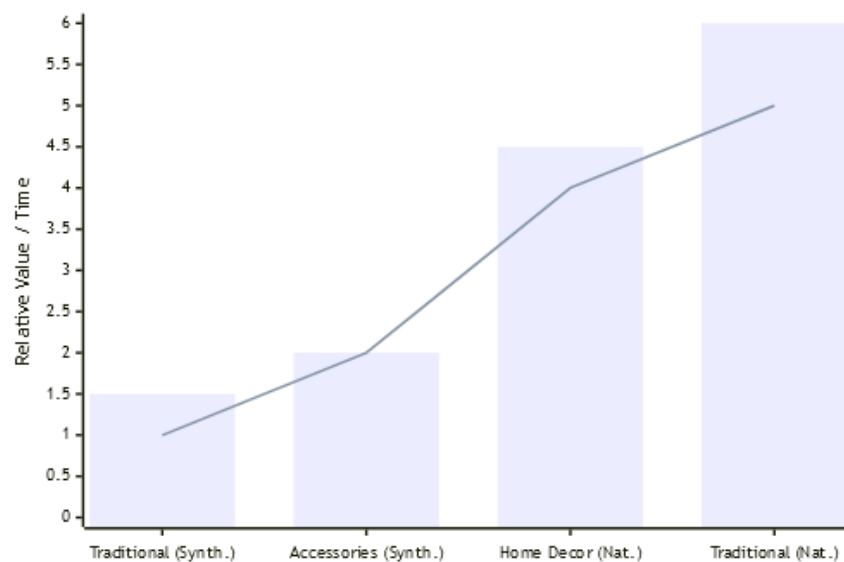


Figure 2: Relationship between Product Type, Production Time, and Price Point

The dynamic relationship between product typology, material authenticity, and market valuation is further elucidated in Figure 2. This analysis charts the evolution of "Relative Value" a metric encompassing market price, consumer perception, and income potential for four key product categories over a conceptual timeline. The categories are delineated by two defining axes: the nature of the product (traditional textiles versus modern applications like accessories and home decor) and the integrity of its materials (synthetic versus natural dyes).

The resulting trajectories offer a compelling narrative about market preferences and future directions. Products adhering to traditional forms but utilizing synthetic dyes exhibit the most subdued value progression, reflecting a market segment with limited growth and intense price competition. In contrast, synthetic-dye accessories demonstrate a more positive, steady climb, validating the successful adaptation of Ikat aesthetics to contemporary fashion items.

The most instructive insights, however, emerge from the two categories employing natural dyes. Traditional items made with natural dyes hold a consistently higher value than their synthetic counterparts, affirming the market's respect for authentic techniques. Yet, it is the category of naturally-dyed home decor that reveals the most striking trajectory, characterized by a sharp and sustained appreciation in value. This clear divergence indicates that while natural dyes provide a fundamental value baseline, the most significant economic premium is unlocked when this cultural authenticity is channeled into innovative, non-traditional product domains. Consequently, Figure 2 provides empirical, graphical

evidence that the most viable pathway for enhancing artisan livelihoods and industry growth lies in strategic innovation that respects material heritage.

DISCUSSION

The overall implications of our findings, from the demographic profiles in Table 1 to the product-value relationships in Figure 2, paint a multi-layered picture of Sumba Ikat as a cultural art form at a crossroads in its history. Our data highlights a rich ecosystem where deep cultural heritage and significant structural weaknesses intersect to create formidable challenges alongside remarkable opportunities for sustainable development. The discussion synthesizes these findings into broader theoretical frameworks while advancing actionable pathways forward that respect both cultural authenticity and economic viability.

Table 1 presents demographic data that indicate a generational gap, particularly alarming in that only 22% of the weavers fell below age 35. This is more than a numerical imbalance; it represents a potential rupture in knowledge transmission. This concern was echoed by a master weaver in her sixties: *'My own daughters admire the cloth, but they ask how it will help their children go to school. I have no good answer.'* it constitutes a threat of rupture in the intergenerational transmission of the indigenous knowledge systems that have nurtured Sumba Ikat for centuries. Further, the non-participation of youth cannot be addressed through simple technical skill transmission but involves the need for economically viable pathways for young people to make weaving a financially sustainable and socially valued career choice. Indeed, this situation echoes the finding by Adong et al. (2024) that traditional arts face an insecure future when they cannot guarantee livelihood security for younger people. But the answer does not lie in nostalgic preservation; rather, it calls out for what might be termed "economically meaningful cultural practice"-traditional knowledge functioning as the basis for sustainable entrepreneurship, not just a heritage artifact.

Income patterns in Table 2 reveal a basic disconnect between the high cultural value of Sumba Ikat and the economic returns to its creators. This disparity between labor investment and financial return exemplifies what can be termed a 'cultural value capture failure.' As one weaver poignantly stated, *'The buyer sees a beautiful cloth. I see months of my life, the ache in my back, and the stories of my ancestors. The money exchanged feels like a different conversation altogether.'* This gap is even more serious considering that naturally dyed works, taking 3-6 months of worktime, have selling prices that are too low to give living wages to weavers (Table 4). The economic paradox is one that endangers not only livelihoods but the sustainability of the art form itself. Our findings indicate that this requires changing the entire value chain configuration so that the weaver receives a much better share of the final value. This echoes the work of Sari et al. (2023), who found that the economic underpinning for cultural heritage sustainability relies fundamentally on decent financial returns to knowledge holders.

As seen from Table 3, the market access data shows a very traditional distribution system, where 55% of sales are made through local markets and only 7% via digital platforms. This is an extremely limited market structure that constrains the potential reach of Sumba Ikat to tourist markets and local intermediaries. Considering this, the digital divide here reflects not only a technical

gap but a more profound disconnect in market democratization and value capture. The ability to develop robust digital marketing, especially that which communicates the cultural narratives, environmental sustainability, and artisanal qualities of naturally dyed Ikat, will dramatically change market access. This would be congruent with the successful models of [Noer \(2021\)](#), whereby women artisans in East Sumba used strategic e-commerce implementation to establish direct relationships with consumers and capture value. Our findings, however, emphasize caution on the path of digital transformation so that weaving communities can retain control over cultural intellectual property and the narrative of their brand.

Tables 5 and 6 are indeed examples of an interesting tension between heritage and innovation. While traditional motifs remained the main design inspiration at 71%, innovative applications of traditional motifs to modern product categories, such as accessories (25% of sales) and home decor (15%), are increasingly commanding greater market appreciation. This would suggest that what [Noer \(2021\)](#) calls "heritage-informed innovation"-the creative adaptation of traditional elements in service of contemporary contexts-represents a promising pathway to market growth. Analysis of product pricing data revealed that innovative product categories utilizing natural dyes, such as high-end home décor, commanded significant price premiums often 300% to 400% higher than synthetic-dye accessories. This demonstrates that a market viable model for environmentally and culturally sustainable practice exists. The finding underpins [Gou's argument \(2025\)](#) that integrations of traditional skills with modern design thinking can create cultural continuity and economic value.

Based on our findings, we conceptualize a 'Resilient Cultural Ecosystem' for Sumba Ikat (see Figure 3). This model posits that sustainability is an outcome of balancing three dynamic elements: Cultural Fidelity (maintaining authentic knowledge and motifs), Market Integration (leveraging digital tools and diverse channels), and Equitable Value Chains (ensuring fair economic returns to artisans). Interventions must address these elements simultaneously.

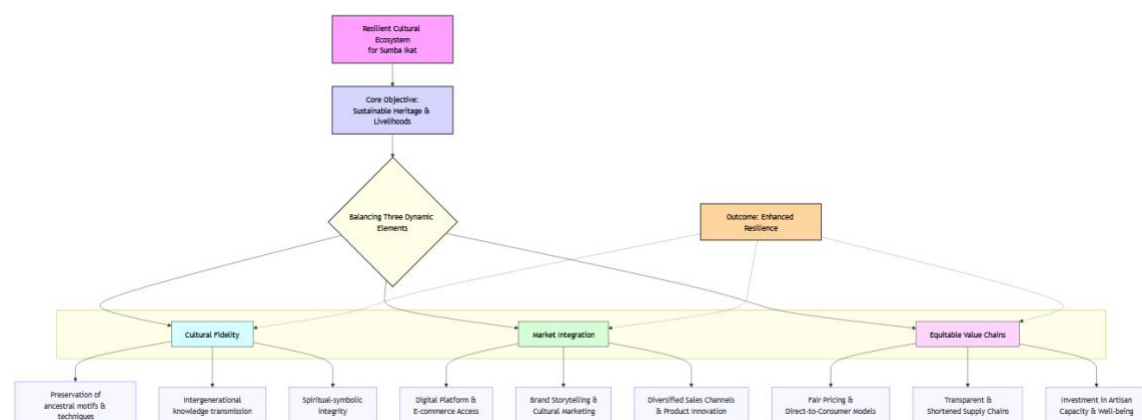


Figure 3: A Conceptual Model of the Resilient Cultural Ecosystem for Sumba Ikat

This ecosystem approach recognizes, as [El Shandidy \(2023\)](#) argues, that intangible heritage thrives not through isolation but through dynamic engagement with contemporary economic and social systems. Capacity development needs identified in our research range from technical skills to financial literacy, brand

building, digital marketing, and business management, all contextualized within the specific cultural framework of Sumba Ikat production.

Our findings contribute to theoretical understandings in several specific ways. First, they extend the 'cultural ecosystem' model by identifying 'demographic bottlenecks' and 'digital divides' as critical structural vulnerabilities. This moves the discourse beyond what [Netithammakorn et al. \(2025\)](#) term the "museumification" of heritage, towards a paradigm of active evolution within living economies. Second, they provide empirical substance to 'value capture' theories in creative industries by quantifying the stark gap between labor investment and income. This evidence bolsters emerging theories of "cultural entrepreneurship," which reposition traditional knowledge holders from passive aid recipients to active agents of their own cultural and economic innovation. Third, they validate and elaborate on 'heritage-informed innovation' as an essential mechanism for sustaining cultural relevance. This aligns with and confirms frameworks like that of [Noer \(2021\)](#) on climate-responsive industries, demonstrating how practices such as natural dyeing embody a dual commitment to cultural preservation and environmental sustainability, ensuring the craft remains economically viable without sacrificing its essential character.

The findings suggest that the pathway forward necessitates navigating a 'dynamic balance' between competing priorities: authenticity versus innovation, local meaning versus global appeal, and traditional methods versus contemporary business practices. Successful navigation likely depends on collaborative, context-sensitive approaches that privilege the agency and knowledge of the weavers themselves. This can only be attained through specific contexts in ways developed under collaborative processes that privilege the knowledge and agency of weavers. Indeed, as [Sari et al. \(2023\)](#) found in their research on Sumba Ikat branding, the most authentic and market successful approaches arise from a true partnership between tradition-bearers and market innovators.

Sumba Ikat is what one might call "living heritage," or one that evolves but retains its essential character. Successful and powerful strategic interventions would transform challenges into opportunities in making it economically viable, with equitable opportunities for knowledge transmission, market access, and design innovations. We should build ecosystems that provide support for weavers both as custodians of culture and as creative entrepreneurs to ensure that Sumba Ikat will continue to be what [\(El Shandidy, 2023\)](#) have described as "the land, hands, and speech" of the Sumbanese for future generations.

CONCLUSION

This study demonstrates that the future of Sumba Ikat hinges on transforming systemic vulnerabilities into pillars of a resilient cultural ecosystem. Key findings reveal a critical generational gap, a stark disconnect between cultural value and artisan income, and a severe digital divide constraining market access. The research contributes the concept of "heritage-informed innovation," evidenced by the significant market premium for naturally-dyed, story-rich products, as a viable pathway for aligning economic viability with cultural continuity.

This study has some limitations. The use of cluster sampling for the survey component may affect generalizability, and the cross-sectional design limits causal

analysis of trends. Future longitudinal research could track the impact of digital intervention programs, and comparative studies with other Indonesian textile heritage sites would strengthen the proposed framework.

Ultimately, securing a sustainable future for Sumba Ikat requires recognizing weavers as central creative entrepreneurs. Supporting this role through policies that protect intellectual property, enhance digital and business literacy, and foster equitable value chains is imperative. Such an ecosystem can ensure this living heritage endures as a source of both cultural identity and economic resilience for Sumba.

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