

Cognition and Governance in Advancing Regenerative Tourism: The Case of Penglipuran Village, Bali

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Abstract

Regenerative tourism seeks to restore and co-create socio-ecological systems beyond the limits of sustainability, yet empirical understanding of how cognition and governance interact to achieve this goal remains limited. Despite the growing adoption of regenerative principles, many community-based destinations continue to face challenges of superficial participation, weak collective learning, and limited integration of local wisdom into governance. This study investigates how community cognition, defined as shared knowledge, understanding, and awareness, interacts with participatory governance to advance regenerative outcomes in Penglipuran Tourism Village, Bali, a globally recognized model of sustainable rural development. Using a concurrent mixed-methods design, data were collected from 100 local respondents through structured surveys and 15 key informant interviews with village leaders, homestay owners, and tourism managers. Structural Equation Modeling (SEM) and thematic analysis were used to explore the cognitive-participatory nexus. Results show that community knowledge and understanding significantly enhance engagement in decision-making, planning, and collaboration, while participatory governance rooted in desa adat institutions mediates this relationship by reinforcing inclusivity, accountability, and cultural legitimacy. The synergy between cognition and governance promotes creative economy growth, empowerment, and social well-being, though environmental conservation remains largely policy-driven. Theoretically, this study extends regenerative tourism discourse by empirically linking cognitive and governance dimensions, while practically offering insights for policymakers to design inclusive and adaptive governance models for resilient rural destinations.

Keywords

Regenerative tourism, Community cognition, Participatory governance, Penglipuran Village, Bali

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Introduction

Tourism has long been recognized as a double-edged phenomenon—capable of generating economic growth while simultaneously accelerating ecological and socio-cultural degradation. Globally, tourism contributed 9.1% to world GDP and supported more than 320 million jobs in 2023, yet many destinations continue to experience resource depletion, cultural erosion, and social tension (UN Tourism, 2023). These paradoxes have prompted a paradigm shift from sustainability—focused merely on minimizing harm—to regeneration, which emphasizes restoration, co-creation, and the enhancement of socio-ecological systems (Dangi & Jamal, 2016; Hes & Coenen, 2018). However, while regenerative tourism is increasingly promoted in policy and practice, empirical understanding of how communities operationalize regenerative principles in real contexts remains limited (Bellato & Cheer, 2021).

In Indonesia, this issue is particularly relevant as rural tourism has rapidly expanded across the archipelago. Bali alone has officially registered 244 tourism villages (BPS Bali, 2024), yet only a few have successfully integrated cultural preservation with environmental stewardship. Among them, Penglipuran Tourism Village, located in Bangli Regency, stands out as a leading model of culture-based rural development and community-led tourism. The village's spatial layout, social organization, and rituals embody the Balinese philosophy of *Tri Hita Karana*—the harmony among people (*pawongan*), nature (*palemahan*), and the divine (*parahyangan*). This coherence between spatial form and cultural meaning has earned Penglipuran international recognition, including its inclusion in UN Tourism's Best Tourism Villages 2023. Despite these achievements, the village faces ongoing challenges in balancing cultural authenticity, economic dependency, and generational participation in governance—especially as visitor numbers and commercialization pressures grow.

Previous studies have explored Penglipuran through three main lenses: sustainability and participation (Sudarmanto et al., 2022; Ahmad & Hall, 2023), architectural and heritage conservation (Dharmadiatmika & Kohdrata, 2020), and economic analysis (Barkauskas et al., 2015). These studies highlight Penglipuran's "managed authenticity" and success in preserving heritage, yet they largely overlook the cognitive and governance dynamics that underpin its resilience. Specifically, little is known about how community cognition, shared knowledge, understanding, and awareness, interacts with participatory governance to drive regenerative outcomes. Community cognition shapes how individuals internalize sustainability principles, influence policy compliance, and translate collective awareness into behavioral engagement (Setijawan, 2018; Herdiana, 2019; Ira & Muhamad, 2019). However, participation continuity is often constrained by organizational challenges, market pressures, and institutional limitations (Nadhira, 2023; Saputro, 2023; Sumiarsa, 2023). This intersection between cognition and structural governance remains empirically underexplored, particularly amid the ongoing transition from sustainability's harm-reduction logic to regeneration's restorative paradigm (Mang & Haggard, 2016; Dwyer, 2018).

Building on this gap, the present study investigates how community cognition influences participatory engagement and regenerative outcomes in Penglipuran Village, Bali. It further examines the mediating role of participatory governance embedded in *desa adat* (customary village) institutions, which manage decision-making, resource allocation, and conflict resolution. A concurrent mixed-methods design was applied, combining Structural Equation Modeling (SEM) using SmartPLS 4.0 with thematic analysis of qualitative interviews and governance documents (Creswell, 2009; Hair et al., 2022). This integrative approach enables a comprehensive

understanding of how cognitive alignment, shared values, and institutional frameworks interact to sustain regeneration at the destination level.

Theoretically, this study extends the discourse on regenerative tourism by integrating cognitive and governance dimensions into the analytical framework of community-based tourism. It contributes to Dangi and Jamal's (2016) integrated model by empirically validating cognition as a key antecedent of participation and demonstrating how participatory governance mediates regenerative outcomes. Practically, the findings offer insights for policymakers and destination managers to design inclusive and adaptive governance systems that empower rural communities, enhance destination resilience, and move beyond sustainability toward genuine regeneration.

Methodology

This study employed a concurrent mixed-methods design to examine how community cognition and participatory governance influence regenerative tourism in Penglipuran Tourism Village, Bali. Quantitative and qualitative data were collected simultaneously to capture both general patterns and contextual meanings (Creswell, 2009). The population consisted of community members engaged in tourism-related activities, such as homestay owners, artisans, tour guides, cultural performers, and members of the village tourism management body, with approximately 350 residents directly involved in tourism. A purposive sampling technique was used to ensure representation across gender and occupational groups, resulting in 100 valid survey responses—meeting the recommended 10:1 ratio for Structural Equation Modeling (Hair et al., 2022) and 15 key informants, including the Kelian Adat, youth, women entrepreneurs, and tourism managers, selected for in-depth interviews to complement the quantitative data. Data were collected between February and April 2024 through structured questionnaires, semi-structured interviews, participant observation, and document review; ethical clearance was obtained from the Faculty of Tourism, Universitas Udayana, and all participants provided informed consent. The quantitative model tested nine constructs: community knowledge (X1), understanding (X2), engagement (X3), perceived challenges (X4), and five regenerative outcomes, creative economy, environmental conservation, empowerment, visitor education, and social well-being (Dangi & Jamal, 2016; Bellato & Cheer, 2021), measured using a five-point Likert scale adapted from prior studies. All constructs achieved Cronbach's alpha and composite reliability (CR) values above 0.70 and AVE above 0.50, confirming reliability and convergent validity (Hair et al., 2022), while discriminant validity was confirmed using the Fornell–Larcker criterion. The moderating effect of perceived challenges on the relationship between engagement and regenerative outcomes was examined using the product-indicator approach in SmartPLS 4.0 (Rigdon et al., 2017). The qualitative data, analyzed thematically (Braun & Clarke, 2006), provided nuanced insights into community perceptions of cognition and governance, supported by member checking and triangulation to enhance credibility. The analytical framework posits that community cognition (knowledge and understanding) influences engagement, mediated by participatory governance and moderated by perceived challenges, thereby integrating community learning, governance, and destination resilience within the regenerative tourism paradigm (Dangi & Jamal, 2016; Bellato & Cheer, 2021; Bramwell & Lane, 2011).

Results and Discussion

• Respondents' Characteristics and Socio-Cultural Context

The 100 survey respondents and 15 interviewees represented diverse functional roles within Penglipuran's tourism ecosystem, including village leaders, homestay owners, artisans, cultural performers, and youth groups. Most participants were aged between 31–50 years, with balanced gender representation and a majority possessing secondary or higher education. This demographic reflects the active working population responsible for daily tourism operations and community decision-making.

Socio-culturally, Penglipuran operates under a *desa adat* (customary village) governance model that integrates spiritual, social, and environmental principles of *Tri Hita Karana*, harmony among people, nature, and the divine. Decision-making follows *musyawarah* (deliberation) practices led by the *Kelian Adat* (customary head), ensuring that economic activities remain aligned with communal values. This strong cultural framework provides institutional legitimacy and social cohesion, allowing regenerative tourism to thrive as both an ethical and economic system.

• Results

The analysis integrated quantitative and qualitative findings to examine the cognitive–participatory dynamics shaping regenerative tourism in Penglipuran Tourism Village. The quantitative results from Structural Equation Modeling (SEM) demonstrated strong model reliability and validity (α and CR > 0.70; AVE > 0.50) (Hair et al., 2022). The structural model achieved high explanatory power, explaining 97.5% of the variance in engagement ($R^2 = 0.975$) and 93.5% of the variance in social outcomes ($R^2 = 0.935$), confirming the robustness of the proposed model.

Table 1. Structural Model Results (Path Coefficients and Significance Levels)

Relationship	Coefficient	p-value	Decision
X1 → X3 (Knowledge → Engagement)	0.445	0.000***	Supported
X2 → X3 (Understanding → Engagement)	0.572	0.000***	Supported
X3 → Y1 (Engagement → Creative Economy)	0.432	0.000***	Supported
X3 → Y2 (Engagement → Environmental Conservation)	-0.007	0.284	Not Supported
X3 → Y3 (Engagement → Community Empowerment)	0.461	0.000***	Supported
X3 → Y4 (Engagement → Visitor Education)	0.545	0.000***	Supported
X3 → Y5 (Engagement → Social Impact)	0.892	0.000***	Supported
X3 × X4 → Y1 (Moderation on Creative Economy)	0.099	0.085	Not Significant

X3 × X4 → Y2 (Moderation on Environmental Conservation)	-0.000	0.875	Not Significant
X3 × X4 → Y3 (Moderation on Community Empowerment)	0.001	0.969	Not Significant
X3 × X4 → Y4 (Moderation on Visitor Education)	-0.103	0.048*	Marginally Supported
X3 × X4 → Y5 (Moderation on Social Impact)	0.021	0.377	Not Significant

Source: Authors' analysis using SmartPLS 4.0 (2025)

Note: ***p < 0.001; *p < 0.05

Quantitative results reveal that knowledge and understanding significantly enhance engagement, validating the proposed cognitive-participatory model. Engagement, in turn, positively affects creative economy development, empowerment, visitor education, and social well-being, showing that community cognition drives multidimensional regeneration. However, the non-significant link between engagement and environmental conservation indicates that ecological actions remain largely policy-driven rather than community-initiated.

Qualitative findings support and enrich these patterns. Interviews with Kelian Adat and community members revealed that engagement in Penglipuran is guided by Balinese philosophy (Tri Hita Karana), emphasizing harmony between people, nature, and spirit. As one respondent explained, "Economy may grow, but rituals must continue," illustrating that economic activities coexist with cultural and ethical commitments. Women-led microenterprises and youth-driven digital promotion highlight creative and intergenerational participation, while the persistence of *musyawarah* (collective decision-making) ensures governance legitimacy and cohesion.

The minimal moderating effect of challenges aligns with the qualitative insight that desa adat governance provides moral authority and institutional resilience, mitigating external pressures such as market fluctuation and overtourism. These findings confirm that cognitive alignment and participatory governance jointly sustain Penglipuran's regenerative capacity, transforming sustainability from compliance into collective learning and adaptive restoration.

• Discussion

The findings affirm that community cognition is a critical antecedent of participatory engagement in regenerative tourism. Knowledge and understanding significantly enhance community participation, supporting the proposition that cognition transforms sustainability from policy compliance into co-creation. This aligns with Dangi and Jamal's (2016) notion that regeneration depends on collective awareness and shared learning. In Penglipuran, cognitive engagement manifests through the integration of local wisdom and governance, particularly the Tri Hita Karana philosophy, which anchors social, ecological, and spiritual harmony. The result that engagement fosters creative economy growth, empowerment, and social well-being indicates that regenerative outcomes emerge from cultural alignment rather than external intervention. This evidence extends Butler's (1980) Tourism Area Life Cycle (TALC) by positioning regeneration not as a post-decline rejuvenation stage but as an ongoing adaptive process sustained by community learning and moral ecology.

Conversely, the weak relationship between engagement and environmental conservation suggests that ecological stewardship remains largely institutionally managed. However,

Penglipuran's *desa adat* governance mitigates these gaps through moral authority and participatory decision-making, corroborating Bramwell and Lane's (2011) model of collaborative governance, where legitimacy and trust enhance destination resilience. The minimal moderating role of challenges indicates that a strong institutional culture can offset market and organizational constraints. Integrating both quantitative and qualitative insights, this study highlights that regeneration in Penglipuran is rooted in the synergy between cognition, participation, and culture, forming a dynamic system where awareness fosters action and collective engagement nurtures long-term sustainability. These insights provide practical implications for community education and tourism governance reform in other rural destinations

Conclusion

This study definitively confirms the pivotal role of community cognition (local knowledge, shared understanding, and collective awareness) in driving participatory engagement and achieving regenerative outcomes within Penglipuran Tourism Village, Bali. The mixed-methods approach utilized demonstrates that strong cognitive alignment significantly enhances the community's participation in planning, decision-making, and collaboration. This vital relationship is effectively mediated by participatory governance, which is deeply embedded within the village's *desa adat* (customary village) institutions, thereby fostering inclusivity, accountability, and cultural legitimacy.

The resulting community engagement has been shown to positively influence several key regenerative outcomes, including the growth of the creative economy, community empowerment, visitor education, and overall social well-being. However, the direct impact of engagement on environmental conservation remains insignificant, suggesting that ecological actions are still largely policy-driven rather than initiated organically by the community. Fundamentally, the Tri Hita Karana philosophy continues to serve as the moral compass for local practices, ensuring that regeneration is approached as a cultural and ecological process, rather than being treated merely as a managerial objective.

Theoretically, this research advances the regenerative tourism framework by empirically validating the cognitive-governance nexus as a core driver of regeneration, highlighting that cognition not only precedes participation but also sustains the moral and institutional foundations of community-based governance. Practically, the findings imply that policymakers should prioritize enhancing community cognition through educational and knowledge-sharing mechanisms. Strengthening the participatory structures within customary governance, such as *musyawarah* (deliberation), can further sustain regenerative practices. The study recommends that ecological stewardship programs shift beyond mere compliance toward community-led environmental co-management.

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