




Research article

Human-centred management processes for sustainable tourism governance in village-based destinations

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ABSTRACT

This study aims to examine how ergonomics-informed, human-centred conditions shape tourism governance effectiveness in village-based destinations, with particular attention to the mediating role of tourism management processes. A mixed-methods approach was adopted. Quantitative data were collected from 260 respondents involved in tourism governance in village destinations in Bali and analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). To support and explain the quantitative findings, confirmatory qualitative interviews were conducted with key tourism governance actors at the village level. The results indicate that systemic, holistic, interdisciplinary, and participatory ergonomics have significant positive effects on tourism management processes. Furthermore, tourism management processes strongly influence governance effectiveness and fully mediate the relationship between ergonomics-informed conditions and governance outcomes. The findings suggest that effective tourism governance in rural destinations depends less on formal institutional structures and more on the quality of everyday management processes that coordinate human actors, organisational arrangements, and working practices. This study contributes to tourism governance literature by integrating a macro-ergonomics perspective and empirically demonstrating tourism management processes as a key mediating mechanism in village-based tourism governance.

KEYWORDS

Tourism governance; macro-ergonomics; tourism management processes; village-based destinations; governance effectiveness

Introduction

Humans are at the center of the tourism development process when the perspective used is macro-ergonomics and socio-technical systems (Herrmann, 2026; Karwowski et al., 2025). Institutional and regulatory matters are not the main focus of this perspective, which instead focuses on the harmony of human capabilities, organizational management, and system performance. Destination development faces major challenges when confronted with the need for complex coordination, where the humans involved have various interests. Meanwhile, tourism destinations must be able to create sustainable economic, social, and environmental outcomes (McLoughlin & Hanrahan, 2023). Governance is the most crucial concept for tourism research when explaining how a destination will be developed and the development process, which involves many parties such as public authorities, local communities, and tourism organizations, all of which cannot work independently in the development process because the policies adopted and the communities involved in the process have a proven impact on the creation of a tourism system that produces sustainable results (Huruta et al., 2024; Volgger et al., 2023). There has been much research on tourism governance, but most of it uses a theoretical approach that argues that institutional arrangements, policy frameworks, and formal structures are the most decisive factors in the effectiveness of governance (Checkland et al., 2025; Dredge, 2022). This structure-centric orientation implicitly assumes that the presence of appropriate institutional designs and stakeholder configurations is sufficient to generate effective governance outcomes. However, such an

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assumption remains theoretically incomplete, particularly in small-scale and community-oriented destinations where governance is enacted less through formal institutions and more through everyday managerial and organisational practices (Nunkoo & Armbrecht, 2025). While recent tourism studies increasingly acknowledge the importance of collaboration, participation, and sustainability in destination governance (González-Rodríguez et al., 2022; Huruta et al., 2024; Volgger et al., 2023), they rarely theorise how these conditions are operationalised through concrete management processes. As a result, governance effectiveness is often treated as a direct outcome of governance inputs, rather than as an emergent property produced through intermediate organisational and managerial mechanisms (González-Rodríguez et al., 2023; Luongo et al., 2023). This lack of process-based and human-centred theorisation constitutes a critical gap in tourism and hospitality management research. Without explicitly modelling governance as a socio-technical and organisational process, existing governance theories provide limited explanation of why similar governance structures produce divergent outcomes across destinations, particularly in village-based contexts where governance effectiveness is shaped less by formal arrangements and more by managerial capabilities and everyday working practices (Pramudita et al., 2025).

While human factors and macro-ergonomics research has traditionally focused on work system design, organisational performance, and human–system interaction, its core concern with how human capabilities, organisational arrangements, and coordination processes shape system effectiveness is directly aligned with emerging process-based perspectives in tourism governance. Recent tourism governance scholarship increasingly conceptualises governance not merely as a function of institutional structures or policy frameworks, but as an enacted, practice-based process produced through everyday coordination, decision making, and implementation among multiple actors (Lundén et al., 2025; Nunkoo & Armbrecht, 2025). From this perspective, governance effectiveness depends on how governance arrangements are operationalised through organisational processes and human agency rather than on formal designs alone. Macro-ergonomics provides a theoretically robust lens for advancing this shift by explicitly theorising the socio-technical alignment between human actors, organisational systems, and performance outcomes (Herrmann, 2026; Karwowski et al., 2025). In tourism destinations, governance similarly unfolds within complex socio-technical systems involving local governments, community groups, tourism organisations, and visitors, whose interactions are mediated through management routines, coordination mechanisms, and everyday working practices. By foregrounding the design and functioning of these human-centred systems, an ergonomics-informed approach complements and extends mainstream tourism governance theories that have increasingly called for greater attention to governance processes, practices, and micro-level mechanisms (Farsari, 2023; Ramkissoon, 2023). Integrating macro-ergonomics into tourism governance theory therefore enables a more granular understanding of how governance effectiveness emerges from the quality of underlying management processes that organise human action across multi-actor destinations. Rather than treating governance outcomes as direct products of institutional arrangements, this perspective positions tourism governance as a socio-technical accomplishment shaped by the alignment between human capacities, organisational design, and everyday management practices. Such an approach responds directly to recent calls in tourism research for stronger theorisation of governance mechanisms and for analytical frameworks capable of explaining why similar governance structures produce divergent outcomes across destinations (Nunkoo & Armbrecht, 2025; Zhang et al., 2025).

Against this theoretical background, this study examines tourism governance mechanisms in village-based destinations in Bali, where tourism development is strongly shaped by community involvement, local organisational capacities, and informal governance arrangements. Bali is an appropriate example because it is highly relevant in terms of its tourism, which has a formal administrative structure as well as a local governance system that is deeply rooted in the community's practices in managing village tourism (McLoughlin & Hanrahan, 2023). The call to create tourism governance that is process-oriented and prioritizes people led to this study being conducted from a perspective inspired by ergonomics. The aim is to understand how human-based, organizational, and daily practice-based tourism governance processes work in villages. This research provides empirical knowledge that reveals the mechanisms of tourism governance in rural areas and also discusses sustainable systems in relation to the effectiveness of governance, as in large-scale tourism and hospitality (Nunkoo & Armbrecht, 2025). This study makes three theoretical contributions to tourism governance research. First, it challenges structure-centric approaches to governance by demonstrating that governance effectiveness cannot be sufficiently explained by formal institutional arrangements alone. Building on this critique, the study introduces a macro-ergonomics perspective to explain how governance is enacted through human-centred and organisational mechanisms. These ergonomics-informed governance conditions are operationalised through systemic, holistic, interdisciplinary, and participatory dimensions that shape tourism management processes in village-based destinations. Second, the study advances process-oriented approaches to tourism governance by conceptualising tourism management processes as a mediating mechanism helps explain why governance

effectiveness does not emerge directly from ergonomics-informed conditions are translated into governance effectiveness. Third, by focusing on village-based destinations, the study enriches current understanding of governance in small-scale and community-oriented tourism contexts, where governance is enacted primarily through everyday managerial practices rather than formal institutional designs.

Conceptual framework and hypotheses development

Tourism governance has increasingly been conceptualised as a process-oriented and multi-actor phenomenon. In this view, governance effectiveness is shaped through coordination, decision-making, and implementation practices rather than determined solely by formal institutional structures (Ramkissoon, 2023). While existing research has advanced understanding of governance structures and stakeholder relationships, comparatively less attention has been paid to how governance is enacted. This includes limited theorisation of its human-centred and organisational mechanisms. This gap is particularly evident in small-scale and community-based destinations (González-Rodríguez et al., 2023; Ramkissoon, 2023). Governance in the process, when explained with reference to macro-ergonomics theory and sociotechnical systems, is that even though the components of the system are different, they can be harmonized. These components include human capabilities, organisational arrangements, and working practices. From this perspective, governance outcomes emerge through intermediate management processes rather than from direct structural effects (Karwowski et al. 2025). This perspective is especially relevant in village-based destinations, where governance relies on local actors and informal coordination (Huruta et al., 2024; Nunkoo & Armbrecht, 2025). In such socio-technical contexts, ergonomics-informed conditions shape how tourism management processes are enacted through everyday governance work. These processes function as the key mechanism linking human-centred and organisational conditions to governance effectiveness (McLoughlin & Hanrahan, 2023). Based on this conceptualisation, the following hypotheses are proposed:

H1: Ergonomics-informed conditions have a positive effect on tourism management processes in village-based destinations.

H1a: Systemic ergonomics have a positive effect on tourism management processes in village-based destinations.

H1b: Holistic ergonomics have a positive effect on tourism management processes in village-based destinations.

H1c: Interdisciplinary ergonomics have a positive effect on tourism management processes in village-based destinations.

H1d: Participatory ergonomics have a positive effect on tourism management processes in village-based destinations.

H2: Tourism management processes have a positive effect on governance effectiveness in village-based destinations.

H3a–H3d: Tourism management processes mediate the relationships between ergonomics-informed dimensions (systemic, holistic, interdisciplinary, and participatory) and governance effectiveness.

Figure 1 summarises the proposed conceptual framework and illustrates a full mediation model in which systemic, holistic, interdisciplinary, and participatory ergonomics shape governance effectiveness indirectly through tourism management processes.

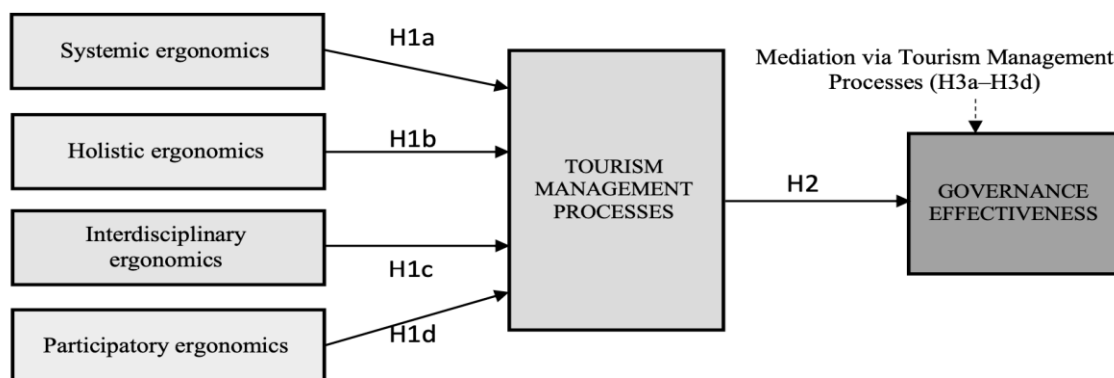


Figure 1. Conceptual framework of tourism governance mechanisms in village-based destinations

Methodology

Measurement of variables

The measurement items used in this study were adapted from established literature on tourism governance, destination management, and organisational processes, and refined to reflect the context of village-based tourism destinations (Volgger et al., 2023). The constructs capture ergonomics-informed governance conditions, tourism management processes, and governance outcomes, as summarised in Table 1. All items were measured using a five-point Likert scale. The questionnaire was reviewed by academic experts and tourism practitioners to ensure content validity and contextual relevance prior to data collection. Service capacity, community safety, and sustainability outcomes were included as complementary governance-related outcomes to enhance construct validity and reflect the multidimensional nature of governance effectiveness in village-based destinations.

Table 1. Measurement of variables and theoretical basis

Construct	Code	Measurement focus (keywords)	Theoretical basis
Systemic Ergonomics	SE1–SE3	Integration of work processes, organisational alignment, consistency of procedures	Macro-ergonomics; socio-technical systems (Karwowski et al. 2025)
Holistic Ergonomics	HE1–HE3	Visitor well-being, local social interaction, environmental & cultural consideration	Human-centred design; holistic governance (González-Rodríguez et al. 2022; Volgger et al. 2023)
Interdisciplinary Ergonomics	IE1–IE3	Cross-sector expertise, institutional coordination, knowledge exchange	Interdisciplinary governance; collaborative systems (Bebekova, Assaf, and Uysal 2025; McLoughlin and Hanrahan 2023)
Participatory Ergonomics	PE1–PE3	Community engagement, inclusive decision making, collaborative risk management	Participatory governance; community-based tourism (Huruta et al. 2024; Reina-Usuga et al. 2024)
Service Capacity	SC1–SC3	Ability to deliver services, facility adequacy, responsiveness	Destination management capacity (Laesser, Reinhold, and Beritelli 2025)
Governance Effectiveness	GE1–GE3	Accountability, stakeholder collaboration, monitoring & evaluation	Process-oriented tourism governance (Lundén, Saarinen, and Hall 2025)
Community Safety	CS1–CS3	Safety procedures, perceived security, emergency preparedness	Risk governance; safety management (Matteucci, Nawijn, and von Zumbusch 2022)
Sustainability Performance	SP1–SP3	Environmental sustainability, socio-economic benefits, conservation practices	Sustainable tourism governance (González-Rodríguez et al. 2023; Sharpley 2023)

Confirmatory qualitative approach

Qualitative data were collected as a confirmatory component of the mixed-methods design to support and contextualise the quantitative findings derived from structural equation modelling (SEM). In mixed-methods research, confirmatory qualitative analysis is appropriate when quantitative results establish significant relationships and qualitative inquiry is used to explain how and why these relationships operate in routine governance settings (Creswell & Creswell, 2023). Accordingly, the qualitative component of this study was designed to confirm and elaborate the governance mechanisms identified through SEM, rather than to generate new constructs. Semi-structured interviews were conducted with key informants directly involved in village-level tourism governance and management, who were categorised into four role-based groups: village government representatives, tourism village managers, Tourism Awareness Group representatives, and village tourism coordinators. Informants were selected based on their formal or informal responsibilities in tourism planning, coordination, and implementation, ensuring source validity for examining governance processes in practice (Alattar et al., 2022). Interview themes were aligned with the conceptual framework, focusing on human capabilities, organisational arrangements, working practices, and tourism management processes. Following the existing conceptual framework, the data obtained from qualitative interviews was then analyzed thematically in a confirmatory manner. This method of analysis is in line with the interpretation of SEM results and also explains the statistically significant form of the relationship in the daily management process.

Data collection and sample

The research data was collected in 2025. The activity took place in rural tourist destinations in Bali, Indonesia. Parties directly involved in governance and destination management were given structured questionnaires as quantitative data, with the sample including village officials and members of organizations as representatives. They were the parties involved in the planning, coordination, and implementation of tourism practices, as they were considered appropriate sources for analyzing governance processes and how decisions were made in community-based village tourism practices (Liang et al., 2021). Key implementers in governance in the relevant tourist villages were interviewed to obtain semi-structured qualitative data, with the aim of gaining contextual insights into governance and management implementation. The data collected was then filtered, and 260 valid responses were obtained. These 260 responses were used for quantitative analysis. The responses recorded during the survey were securely stored so that they could be used in further data analysis.

Data analysis

Quantitative data were analysed using partial least squares structural equation modelling (PLS-SEM) to test the proposed conceptual framework and hypotheses (Hair et al., 2022). The analysis involved assessment of both the measurement and structural models. Qualitative interview data were analysed using a confirmatory thematic approach, guided by the conceptual framework, to support interpretation of the SEM results and to explain how statistically significant relationships are enacted through everyday governance processes (Creswell & Creswell, 2023).

Results

Structural model and hypotheses testing

Prior to hypothesis testing, the measurement model was assessed to ensure reliability and validity of the constructs. Internal consistency reliability was evaluated using Cronbach's alpha and composite reliability (CR), while convergent validity was assessed using average variance extracted (AVE). As shown in Table 2, all constructs exceeded the recommended threshold values, indicating that the measurement model was reliable and valid for subsequent structural model analysis.

Table 2. Measurement model reliability and validity

Construct	Cronbach's Alpha	Composite Reliability (CR)	AVE
Systemic Ergonomics	0.890	0.931	0.817
Holistic Ergonomics	0.912	0.944	0.850
Interdisciplinary Ergonomics	0.868	0.918	0.790
Participatory Ergonomics	0.867	0.918	0.789
Tourism Management Processes	0.935	0.944	0.586
Governance Effectiveness	0.945	0.965	0.902
Community Safety	0.924	0.952	0.868
Service Capacity	0.931	0.956	0.879
Sustainability Outcomes	0.946	0.965	0.903

The results of the structural model indicate that all ergonomics-informed dimensions have positive and statistically significant effects on tourism management processes (Table 3). These findings provide support for H1–H3, with the interdisciplinary dimension exhibiting the strongest effect. Furthermore, tourism management processes demonstrate a strong positive effect on governance effectiveness, supporting H4.

Table 3. Structural model results and hypotheses testing

Hypothesis	Structural Path	β	t-value	p-value	Decision
H1a	Systemic \rightarrow Tourism Management Processes	0.157	2.006	0.045	Supported
H1b	Holistic \rightarrow Tourism Management Processes	0.207	3.007	0.003	Supported
H1c	Interdisciplinary \rightarrow Tourism Management Processes	0.320	5.289	0.000	Supported
H1d	Participatory \rightarrow Tourism Management Processes	0.154	2.126	0.034	Supported
H2	Tourism Management Processes \rightarrow Governance Effectiveness	0.826	29.723	0.000	Supported

Figure 2 illustrates the estimated structural model and visualises the magnitude and direction of the relationships among the constructs. The figure complements the hypothesis testing results by showing the relative strength of the ergonomics-informed dimensions in shaping tourism management processes, as well as the central role of tourism management processes in influencing governance effectiveness.

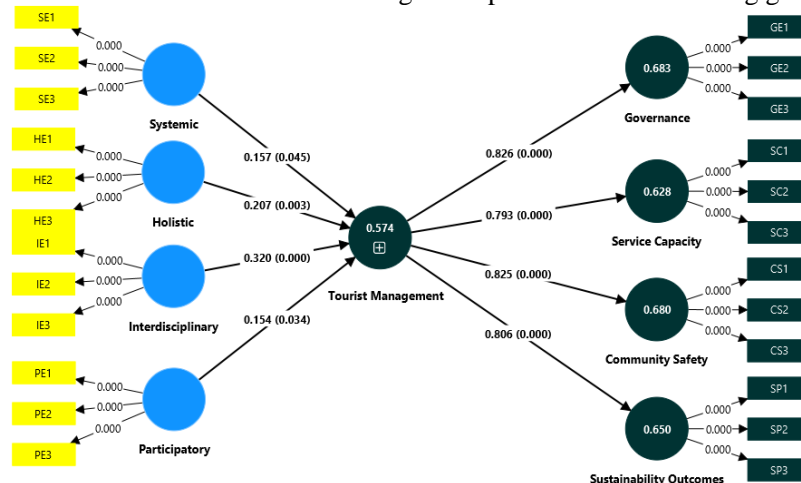


Figure 2. Structural model results (bootstrapping)

Explanatory power and predictive relevance

The explanatory power of the model was assessed using coefficients of determination (R^2). The results indicate that the model explains a substantial proportion of variance in tourism management processes ($R^2 = 0.574$) and governance effectiveness ($R^2 = 0.683$). Predictive relevance was further assessed using the blindfolding procedure, with positive Q^2 values observed for all endogenous constructs, confirming the model's predictive capability (Table 4).

Table 4. Coefficient of determination (R^2) and predictive relevance (Q^2)

Endogenous Construct	R^2	Q^2
Tourism Management Processes	0.574	0.332
Governance Effectiveness	0.683	0.610
Service Capacity	0.628	0.548
Community Safety	0.680	0.582
Sustainability Outcomes	0.650	0.581

Mediation effects of tourism management processes (H5a–H5c)

The mediation analysis demonstrates that tourism management processes significantly mediate the relationships between ergonomics-informed conditions and governance effectiveness. All specific indirect effects are positive and statistically significant, supporting H5a–H5c (Table 5).

Table 5. Indirect effects of ergonomics-informed conditions on governance effectiveness

Hypothesis	Indirect Path	β	t-value	p-value	Decision
H5a	Systemic → TM → Governance	0.130	2.016	0.044	Supported
H5b	Holistic → TM → Governance	0.171	2.966	0.003	Supported
H5c	Interdisciplinary → TM → Governance	0.265	5.193	0.000	Supported
H5d	Participatory → TM → Governance	0.127	2.110	0.035	Supported

Qualitative evidence supporting SEM results

The qualitative findings are presented to illustrate the statistically significant relationships identified in the SEM. They show how these relationships are enacted through everyday governance processes. Interview data provide confirmatory support for the SEM results by demonstrating how ergonomics-informed conditions shape tourism management processes and, in turn, governance effectiveness in village-based destinations. Across all interview sites, informants consistently emphasised that governance outcomes were not determined by formal rules alone, but by how tourism activities were coordinated and managed in day-to-day governance work.

Human-centred and organisational conditions (H1a–H1d)

In line with the significant effects of systemic, holistic, interdisciplinary, and participatory ergonomics on tourism management processes identified in the SEM, interviewees highlighted the importance of integrated work systems, cross-sectoral coordination, and community involvement. A statement from a village official said that tourism management would be weaker if responsibilities were fragmented: “*Only with clear coordination between the village government, community groups, and external stakeholders will the tourism program run well. The lack of cooperation will make implementation slow and ineffective.*” (Village government representative). One informant provided an explanation reflecting the relevance of an interdisciplinary and holistic approach for integration, through the environment, culture, and safety in tourism planning: “*It is impossible to handle tourism by relying on only one sector. To avoid problems in the future, it is necessary to discuss issues related to the environment, cultural preservation, and visitor safety together.*” (Tourism village manager). Other statements also support the idea that participatory practices address crucial issues, as SEM found that participatory ergonomics plays a positive role in the tourism governance process: “*Community involvement in village tourist destinations is very necessary. Involving the local community from the very beginning will make the implementation of decisions easier to carry out while avoiding the possibility of conflict.*” (Tourism Awareness Group representative).

Tourism management processes and governance effectiveness (H2)

Informants often emphasize that effective governance is greatly influenced by ongoing coordination, decision-making with clear processes, and consistency in implementation, confirming that management processes greatly influence management effectiveness: “*It is not just a written plan, but implementation that reflects whether governance is being carried out properly. Management accountability can be encouraged through coordinated regular meetings and the assignment of clear responsibilities.*” (Village tourism coordinator). This means that formal structures are not the sole guarantee of effective governance; rather, it is operational practices that determine this.

Confirming the mediating role of tourism management processes (H3a–H3d)

Governance outcomes are more significant when practiced through well-structured management, rather than relying solely on human capabilities or community involvement. This respondent's statement reinforces SEM's finding that the ergonomic conditions in the management process indirectly affect the effectiveness of governance: *“Even though community support is adequate and tourism stakeholders have good capabilities, clear management procedures are still necessary for tourism activities to run well.”* (Village tourism coordinator). The above statement is a qualitative insight that governance effectiveness is shaped by strengthening management processes that are systemic, holistic, interdisciplinary, and participatory in nature. This statement supports the SEM results and the interpretation of the rural tourism governance study.

Discussion

Interpreting ergonomics-informed governance mechanisms

This proves that shaping the effectiveness of rural tourism governance is also greatly influenced by its two main focuses, namely people and organizational systems, not just formal written rules. Thus, these results are in line with the understanding of destination management based on ergonomics. These findings reinforce the understanding that tourism management is a process with a dynamic system, so that the results of its management arise from coordination, interaction, and implementation in real activities by its diverse actors (Zhang et al., 2025). In this regard, this study is consistent with process-based interpretations of governance as collaborative practices and governance (Lundén et al., 2025; Nunkoo & Armbrrecht, 2025), but the difference in development here is that it uses this approach while explicitly linking it to a macro-ergonomic lens. There are already many management frameworks that emphasize inter-actor relationships, formal coordination, and participatory rules (Ramkissoon, 2023; Volgger et al., 2023), but there are still not many that delve into an analysis of how human capabilities, systems created in work practices, and organizational design impact more effective governance in daily tourism activities. The macro-ergonomic lens used here highlights the socio-technical alignment of humans, organizations, and systems in their performance (Herrmann, 2026; Karwowski et al., 2025), which ultimately provides a more detailed explanation of the routine management processes that result in effective governance. This distinction helps clarify why destinations with similar governance structures may experience divergent governance outcomes (Farsari, 2023; Zhang et al., 2025). The significant effects of systemic, holistic, interdisciplinary, and participatory ergonomics on tourism management processes indicate that governance effectiveness is embedded in the quality of underlying macro-ergonomic organisational systems. These systems include work design, information flows, and coordination arrangements rather than governance structures in a narrow legal–institutional sense. Effective performance and ensuring human well-being are emphasized in macroergonomic lens system-oriented ergonomics, which in this case pays closer attention to socio-technical systems to ensure that existing systems are sustainable (Martins & Ribeiro, 2023). The macroergonomic lens used here will discuss how systemic and holistic ergonomics form the basis for national organizational conditions for the implementation of tourism management processes.

Interconnected structures, coherent procedures, and governance actors working in tandem are highlighted in the ergonomics system. This system creates coordinated daily activities, reinforcing the evidence that separate management will only hinder destination coordination and complicate the sustainability of tourism involving many actors (Farsari, 2023). Environmental sustainability, social interaction, and visitor experience must also be integrated into daily tourism practices as part of holistic ergonomics. This aligns with the approach that states destinations are complex adaptive systems where management responses across various sectors are required by the system as a whole (Tejeida-Padilla et al., 2025). In the tourism management process, interdisciplinary ergonomics is a major contributor, serving as a tool for assessing cross-sectoral excellence and utilizing knowledge integration to address the complex challenges of tourism management. A multidisciplinary approach is also needed in the study of complex tourism governance so that destinations can survive and strengthen their sustainability (Berbekova et al., 2025). Through participatory ergonomics, community participation is strengthened in governance activities, where this participation plays a central role in routine management to enhance legitimacy, trust, and shared learning (Reina-Usuga et al., 2024). The above explanation confirms that the governance mechanisms created between systemic, holistic, interdisciplinary, and participatory ergonomics are interrelated. These mechanisms shape how tourism management processes are enacted across village-based destinations. In line with human-centred and relational perspectives on destination governance, governance effectiveness emerges from the alignment of organisational systems, working practices, and actor capabilities, rather than from formal governance structures alone (Cai et al., 2024; Sharpley, 2023).

Tourism management processes as a mediating mechanism

The findings indicate that tourism management processes function as the key mediating mechanism through which ergonomics-informed conditions shape governance effectiveness in village-based destinations. In line with process-based perspectives on destination governance, governance outcomes are not produced directly by structural or contextual conditions but emerge through ongoing managerial practices that coordinate actors, resources, and decision-making routines in everyday settings (Lundén et al., 2025). In this study, tourism management processes are conceptualised as a mechanism rather than as an outcome or an organisational input. They refer to the routine managerial practices through which coordination, decision-making, and implementation are enacted in village-based tourism governance (Lundén et al., 2025). From a socio-technical and macro-ergonomics perspective, these processes constitute the operational arena where human-centred and organisational conditions are translated into collective action (Karwowski et al., 2025). Conceptualising tourism management processes as a mediating mechanism therefore helps explain why governance effectiveness does not emerge directly from ergonomics-informed conditions, but depends on how such conditions are enacted through everyday management work. From a human-centred governance standpoint, ergonomics-informed conditions create the capacity and potential for effective governance. However, this potential is realised only when such conditions are embedded within management processes that structure interaction, coordination, and implementation across everyday governance activities. Governance research on smart and community-based destinations similarly stresses that governance inputs such as institutional frameworks, leadership, and stakeholder configurations must be translated into concrete planning, coordination, and monitoring processes to become effective (Parra-Lopez et al., 2025).

This study is also consistent with the latest empirical research. Based on the full mediation observed, in order to transform governance in rural destinations into concrete results, a collaborative process is needed, such as face-to-face meetings to discuss issues, build trust, and develop a common understanding so that every decision made involves all relevant parties. This is because formal institutional capacity is limited, making informal coordination essential (Minoia & Jokela, 2022). Collaborative governance studies in rural and village tourism further show that processes of communication, commitment to joint action, and negotiated role sharing among government, DMOs, and local communities are decisive for whether governance structures actually improve development and sustainability outcomes (Nguyen, 2022). In this sense, tourism management processes constitute the operational arena where ergonomics-informed, human-centred governance conditions are activated, adjusted, or undermined, thereby mediating their ultimate effects on the effectiveness of village-based tourism governance.

Governance effectiveness in village-based destinations

In village tourism management, how management is implemented in the management process is more decisive in determining the effectiveness of the results than formal institutional arrangements alone. The approach that defines governance as a tourism practice emphasizes that management outcomes are derived from coordination, interaction, and routine implementation by local actors rather than from rigid management designs (McLeod, 2023; Suyatna et al., 2024). The main determinant of the effectiveness of small-scale destination management is the ability of tourism actors to translate written management plans into daily management actions (Farsari, 2023). The characteristics of rural tourism are limited administrative resources, poorly organized leadership roles, and heavy reliance on informal systems or a combination of customary rules and formal structures (Nguyen, 2022). Based on these characteristics, effective management does not usually arise from a top-down system, but rather from adaptive practices in which various parties participate in management by mobilizing local knowledge, which is then adapted to organizational rules and carried out jointly by the community, local government, and tourism organizations (Danzi et al., 2025). How governance is carried out and what the results are depends on the ability of local actors to organize and work together collectively, divide roles according to their abilities, and pay attention to the limitations and opportunities that exist from the learning process that has been carried out (Okada & Renn, 2025).

The quality of tourism management also greatly determines the effectiveness of governance, namely through monitoring, accountability, and decisions made collectively. Research has shown that management practices in rural tourism management prove that in order to achieve sustainability, it will be more effective and achievable if the management is people-oriented and participatory, so that it must prioritize coordination, learning from past experiences, and stakeholders jointly taking responsibility for all policies and actions (Prayitno et al., 2025). Legitimate and sustainable governance must ensure that power is balanced, that all information is transparent, that discussions are inclusive, and that implementation is carried out jointly by all parties (Prayitno et al., 2024). Through this research, which focuses primarily on rural tourism, it is increasingly evident that small-scale tourism will be more effective through local governance and integrated management by various actors, rather than through formal structures alone. This confirms that a human-oriented systemic governance approach is in line with this research, namely that tourism management is

dynamic and occurs through mechanisms of interaction between systems, daily practices, and the capabilities of tourism actors (Wu et al., 2022). Therefore, it is necessary to prioritize building coordination, encouraging community collaboration, and adjusting formal institutional rules to tourism conditions so that the effectiveness of rural tourism governance becomes stronger (Reindrawati, 2023).

Theoretical contributions to tourism governance research

This study directly addresses the theoretical gap concerning the limited understanding of how tourism governance is enacted through human-centred and organisational mechanisms. Building on recent calls for more explicit theorising in tourism and governance research (Nunkoo & Armbrrecht, 2025) and on socio-technical, system-oriented perspectives in destination governance (Huang, 2025), the findings show that governance effectiveness in tourism destinations is not driven by institutional structures alone but is produced through human-centred, ergonomics-informed conditions that shape governance practice (Abdelmalak, 2025). By empirically operationalising governance as a process-based and human-centred phenomenon, the study extends tourism governance theory beyond its traditional focus on institutional configurations, actor constellations and macro-level governance types (Wang et al., 2022). The results indicate that systemic, holistic, interdisciplinary and participatory ergonomics function as foundational governance mechanisms that structure how governance is enacted in routine governance settings, thereby filling a key gap on the micro-level and organisational drivers of governance effectiveness in destinations and community-oriented settings (Zhang et al., 2022). The study further advances process-oriented governance theory by demonstrating that tourism management processes mediate the relationship between ergonomics-informed conditions and governance effectiveness. In response to demands for dynamic destination management and prioritizing processes over simply following static rules (Jørgensen et al., 2024). This study explains how to achieve effective governance through tourism management. Rather than explaining the direct impact of formal governance on governance outcomes, it is the management process that is described as shaping governance outcomes. (Parappallil et al., 2024). Representing rural-based tourism, this study provides new insights into the context of destination management, which has not been widely discussed (Fannell & Twining-Ward, 2004). The effectiveness of rural-based tourism management is not only determined by formal institutional systems, but also as a result of local participatory and interdisciplinary actions, which is in line with the perspective of governance as a practice and participatory (Gorji & Seyfi, 2026; Seyfi et al., 2024). This research contributes to an integrated framework for human-centered, process-based tourism management that is consistent with actual conditions.

Conclusion

This study provides empirical evidence on the role of human-centred management processes in strengthening tourism governance effectiveness in village-based destinations. Drawing on a macro-ergonomics perspective and employing Partial Least Squares Structural Equation Modelling (PLS-SEM), the findings demonstrate that systemic, holistic, interdisciplinary, and participatory ergonomics exert significant positive effects on tourism governance effectiveness through the mediating role of tourism management processes. This confirms that governance outcomes are shaped not only by formal institutional structures but, more critically, by the quality of everyday management processes that coordinate human actors, organisational arrangements, and working practices. From a theoretical perspective, this study extends tourism governance literature by integrating macro-ergonomics into governance analysis and empirically validating a process-oriented governance framework. By positioning tourism management processes as a central mediating mechanism, the study advances existing structure-centric models and offers a more dynamic explanation of how governance effectiveness emerges in village-level tourism contexts. In practical terms, the findings suggest that efforts to improve tourism governance in rural destinations should prioritise the development of human-centred management practices. Policymakers and destination managers are encouraged to focus on strengthening participatory decision-making, cross-stakeholder coordination, and adaptive working practices rather than relying solely on regulatory or organisational reforms. Such an approach is particularly relevant for village-based destinations where governance effectiveness depends on collaboration among local governments, community organisations, and tourism practitioners. This study is subject to certain limitations. The empirical analysis is confined to village-based tourism destinations in Bali, which may limit the generalisability of the findings to other tourism contexts. Future research could apply the proposed framework to different destination types, incorporate longitudinal designs to examine governance dynamics over time, and further explore the interaction between macro-ergonomics and institutional factors in shaping sustainable tourism governance

Conflict of interest

The authors declare that they have no known competing financial or personal interests that could have appeared to influence the work reported in this paper.

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Declaration of Generative AI

AI-assisted tools were used solely to improve language clarity. The authors reviewed and take full responsibility for the manuscript's content and accuracy.

References

- Abdelmalak, F. (2025). Smart tourism governance: An institutional perspective on sustainability, innovation, and resilience. *Journal of Smart Tourism*, 5(4), 185–202. <https://doi.org/10.1177/27652157251380629>
- Alattar, M. A., Cottrill, C., & Beecroft, M. (2022). Exploring informants' perspectives on the role of crowdsourced active travel data. *Transportation Planning and Technology*, 45(3), 226–250. <https://doi.org/10.1080/03081060.2022.2092736>
- Berbekova, A., Assaf, A. G., & Uysal, M. (2025). Interdisciplinary approach to tourism demand modeling: Quality of life indicators. *Journal of Hospitality & Tourism Research*, 49(3), 635–639. <https://doi.org/10.1177/10963480241229238>
- Cai, Y., Qiu, R. T. R., & Wen, L. (2024). A holistic model of tourists' pro-sustainability shopping consumption: The role of tourist heterogeneity. *Tourism Management*, 105, Article 104976. <https://doi.org/10.1016/j.tourman.2024.104976>
- Checkland, K., Bramwell, D., Hammond, J., Bailey, S., & Warwick-Giles, L. (2025). Tackling health inequalities: What exactly do we mean? Evidence from health policy in England. *Journal of Health Services Research & Policy*, 30(4), 236–246. <https://doi.org/10.1177/13558196251334571>
- Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). Sage.
- Danzi, L., Orchiston, C., & Higham, J. (2025). Effectiveness and sustainability of collaborative networks in tourism disaster management. *International Journal of Disaster Risk Reduction*, 129, Article 105775. <https://doi.org/10.1016/j.ijdr.2025.105775>
- Dredge, D. (2022). Regenerative tourism: Transforming mindsets, systems and practices. *Journal of Tourism Futures*, 8(3), 269–281. <https://doi.org/10.1108/JTF-01-2022-0015>
- Farrell, B. H., & Twining-Ward, L. (2004). Reconceptualizing tourism. *Annals of Tourism Research*, 31(2), 274–295. <https://doi.org/10.1016/j.annals.2003.12.002>
- Farsari, I. (2023). Exploring the nexus between sustainable tourism governance, resilience and complexity research. *Tourism Recreation Research*, 48(3), 352–367. <https://doi.org/10.1080/02508281.2021.1922828>
- González-Rodríguez, M. R., Díaz-Fernández, M. C., Bilgihan, A., Okumus, F., & Shi, F. (2022). The impact of eWOM source credibility on destination visit intention and online involvement: A case of Chinese tourists. *Journal of Hospitality and Tourism Technology*, 13(5), 855–874. <https://doi.org/10.1108/JHTT-11-2021-0321>
- González-Rodríguez, M. R., Díaz-Fernández, M. C., & Pulido-Pavón, N. (2023). Tourist destination competitiveness: An international approach through the Travel and Tourism Competitiveness Index. *Tourism Management Perspectives*, 47, Article 101127. <https://doi.org/10.1016/j.tmp.2023.101127>
- Gorji, A. S., & Seyfi, S. (2026). Theorizing wounded destinations: Rethinking tourism harms. *Annals of Tourism Research*, 116, Article 104076. <https://doi.org/10.1016/j.annals.2025.104076>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed., Vol. 1). Sage.
- Herrmann, T. (2026). Organizational practices and socio-technical design of human-centered AI. In *Handbook of human-centered artificial intelligence* (pp. 1–45). Springer Nature.
- Huang, S. (2025). Theory and theoretical contribution in tourism research: Confusions and clarifications. *Tourism Planning & Development*, 22(6), 837–847. <https://doi.org/10.1080/21568316.2025.2557781>
- Huruta, A. D., Sasongko, G., Wahyudi, Y., Kawuryan, I. S. S., & Lu, C. Y. (2024). Sustainability and community-based tourism nexus: A mediation role of consumer satisfaction. *Cogent Business & Management*, 11(1). <https://doi.org/10.1080/23311975.2024.2421418>
- Jørgensen, M. T., Fuglsang, L., & Sundbo, J. (2024). Tourism transitions, complex challenges and robust destination development in peri-urban areas: A case study of Zealand, Denmark. *Journal of Destination Marketing & Management*, 33, Article 100905. <https://doi.org/10.1016/j.jdmm.2024.100905>
- Karwowski, W., Salvendy, G., Endsley, M., Rouse, W., Salmon, P., Stanney, K., ... Stanton, N. (2025). Grand challenges for human factors and ergonomics. *Theoretical Issues in Ergonomics Science*. <https://doi.org/10.1080/1463922X.2024.2431336>
- Laesser, C., Reinhold, S., & Beritelli, P. (2025). The 2024 consensus on advances in destination management. *Journal of Destination Marketing & Management*, 38, Article 101038. <https://doi.org/10.1016/j.jdmm.2025.101038>
- Liang, Z., Luo, H., & Bao, J. (2021). A longitudinal study of residents' attitudes toward tourism development. *Current Issues in Tourism*, 24(23), 3309–3323. <https://doi.org/10.1080/13683500.2021.1874314>
- Lundén, A., Saarinen, J., & Hall, C. M. (2025). Institutional limits of sustainability in tourism governance: Changing governance rationalities in protected area tourism in Finland. *Journal of Ecotourism*, 24(4), 461–481. <https://doi.org/10.1080/14724049.2025.2458536>
- Luongo, S., Sepe, F., & Del Gaudio, G. (2023). Regional innovation systems in tourism: The role of collaboration and competition. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(4), Article 100148. <https://doi.org/10.1016/j.joitmc.2023.100148>
- Martins, L. P., & Ribeiro, S. (2023). The enduring political viability of governance models in tourist destinations and their implications for people and planet. *Worldwide Hospitality and Tourism Themes*, 15(6), 669–676. <https://doi.org/10.1108/WHATT-09-2023-0115>
- Matteucci, X., Nawijn, J., & von Zumbusch, J. (2022). A new materialist governance paradigm for tourism destinations. *Journal of Sustainable Tourism*, 30(1), 169–184. <https://doi.org/10.1080/09669582.2021.1924180>
- McLeod, M. (2023). Tourism policy networks in four Caribbean countries. *Annals of Tourism Research: Empirical Insights*, 4(2), Article 100113. <https://doi.org/10.1016/j.annale.2023.100113>
- McLoughlin, E., & Hanrahan, J. (2023). Evidence-informed planning for tourism. *Journal of Policy Research in Tourism, Leisure and Events*, 15(1), 1–17. <https://doi.org/10.1080/19407963.2021.1931257>

- Minoia, P., & Jokela, S. (2022). Platform-mediated tourism: Social justice and urban governance before and during COVID-19. *Journal of Sustainable Tourism*, 30(5), 951–965. <https://doi.org/10.1080/09669582.2021.1922426>
- Nguyen, B. (2022). Does local environmental governance improve tourism companies' performance? Evidence from Vietnam. *Journal of Travel Research*, 61(4), 747–761. <https://doi.org/10.1177/00472875211002653>
- Nunkoo, R., & Armbrecht, J. (2025). What theory is and is not? The need for theorizing in tourism research. *Tourism Management*, 109, Article 105150. <https://doi.org/10.1016/j.tourman.2025.105150>
- Okada, N., & Renn, O. (2025). Coping with persistent disruptive stressors and polycrisis: Community-based policymaking and local empowerment. *International Journal of Disaster Risk Science*, 16(4), 560–574. <https://doi.org/10.1007/s13753-025-00654-1>
- Parappallil Mathew, B., & Bangwal, D. (2024). People-centric governance model for smart cities development: A systematic review, thematic analysis, and findings. *Research in Globalization*, 9, Article 100237. <https://doi.org/10.1016/j.resglo.2024.100237>
- Parra-Lopez, E., Bilgihan, A., & Barrera Martínez, A. M. (2025). Human innovation and regenerative futures in tourism: A bibliometric mapping towards 2050. *Journal of Open Innovation: Technology, Market, and Complexity*, 11(4), Article 100663. <https://doi.org/10.1016/j.joitmc.2025.100663>
- Pramudita, A., Sukoco, B. M., Supriharyanti, E., Usman, I., & Wu, W.-Y. (2025). Managerial capabilities, paradoxical leaders and the outcomes: A multi-level approach. *Journal of Asia Business Studies*, 19(6), 1276–1293. <https://doi.org/10.1108/JABS-04-2025-0211>
- Prayitno, G., Auliah, A., Ari, I. R. D., Effendi, A., Hayat, A., Delisa, A., Siankwilimba, E., & Hiddlestone-Mumford, J. (2024). Social capital for sustainable tourism development in Indonesia. *Cogent Social Sciences*, 10(1). <https://doi.org/10.1080/23311886.2023.2293310>
- Prayitno, G., Fikriyah, F., Rahmawati, R., Dinanti, D., Nisak, F. F., Wijayati, W. P., & Nugraha, A. T. (2025). Does governance matter? Social pathways from reciprocity to sustainable tourism in rural Java, Indonesia. *Cogent Social Sciences*, 11(1). <https://doi.org/10.1080/23311886.2025.2572348>
- Ramkissoon, H. (2023). Perceived social impacts of tourism and quality-of-life: A new conceptual model. *Journal of Sustainable Tourism*, 31(2), 442–459. <https://doi.org/10.1080/09669582.2020.1858091>
- Reina-Usuga, L., Camino, F., Gomez-Casero, G., & Jara Alba, C. A. (2024). Rural tourism initiatives and their relationship to collaborative governance and perceived value: A review of recent research and trends. *Journal of Destination Marketing & Management*, 34, Article 100926. <https://doi.org/10.1016/j.jdmm.2024.100926>
- Reindrawati, D. Y. (2023). Challenges of community participation in tourism planning in developing countries. *Cogent Social Sciences*, 9(1). <https://doi.org/10.1080/23311886.2022.2164240>
- Seyfi, S., Hall, C. M., & Saarinen, J. (2024). Rethinking sustainable substitution between domestic and international tourism: A policy thought experiment. *Journal of Policy Research in Tourism, Leisure and Events*, 16(4), 560–574. <https://doi.org/10.1080/19407963.2022.2100410>
- Sharpley, R. (2023). Sustainable tourism governance: Local or global? *Tourism Recreation Research*, 48(5), 809–812. <https://doi.org/10.1080/02508281.2022.2040295>
- Suyatna, H., Indroyono, P., Yuda, T. K., & Firdaus, R. S. M. (2024). How community-based tourism improves community welfare? A practical case study of governing the commons in rural Nglanggeran, Indonesia. *The International Journal of Community and Social Development*, 6(1), 77–96. <https://doi.org/10.1177/25166026241228717>
- Tejeida-Padilla, R., Pérez-Matamoros, Z., Rodríguez-Escalona, M. L., & Hernández-Simón, L. M., Badillo-Piña, I. (2025). Social entrepreneurship and SDGs in rural tourism communities: A systemic approach in Yecapixtla, Morelos, Mexico. *World*, 6(2), 71. <https://doi.org/10.3390/world6020071>
- Volgger, M., Pechlaner, H., & Pforr, C. (2023). Location: Tourism. In *Encyclopedia of Tourism* (pp. 1–2). Springer.
- Wang, H., Zhang, B., & Qiu, H. (2022). How a hierarchical governance structure influences cultural heritage destination sustainability: A context of red tourism in China. *Journal of Hospitality and Tourism Management*, 50, 421–432. <https://doi.org/10.1016/j.jhtm.2022.02.002>
- Wu, M.-Y., Wu, X., Li, Q.-C., & Tong, Y. (2022). Community citizenship behavior in rural tourism destinations: Scale development and validation. *Tourism Management*, 89, Article 104457. <https://doi.org/10.1016/j.tourman.2021.104457>
- Zhang, T., Chen, Y., Wei, M., & Dai, M. (2022). How to promote residents' collaboration in destination governance: A framework of destination internal marketing. *Journal of Destination Marketing & Management*, 24, Article 100710. <https://doi.org/10.1016/j.jdmm.2022.100710>
- Zhang, X., Zhang, S., He, J., & Zhong, L. (2025). Driving mechanism and adaptive governance of the protected area tourism system: A panarchy perspective. *Current Issues in Tourism*, 1–21. <https://doi.org/10.1080/13683500.2025.2602879>