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Formation Mechanism and Theoretical Model of Resilience in Small and Medium-Sized Tourism Towns

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Abstract: Small and medium-sized tourism towns are characterized by high tourism dependence, limited economic scale, dense actor relationships, and sensitive ecological and cultural assets. Their resilience therefore cannot be assessed solely through the recovery of visitor numbers or tourism revenue. Using conceptual analysis and theoretical deduction, this study integrates social-ecological systems theory, evolutionary resilience, dynamic capabilities, and social capital to explain how resilience is formed at the town scale. Resilience is defined as the dynamic capacity of a tourism-town system to maintain critical functions, adjust its structure, and renew its development path under sudden shocks and cumulative pressures. This capacity does not arise directly from the stock of available resources. External shocks and cumulative pressures are first filtered through vulnerabilities such as tourism dependence, concentrated source markets, and infrastructure bottlenecks. Risk perception and collective sensemaking then activate dispersed resources. Resource bricolage, cross-actor coordination, and experimental governance convert those resources into adaptive action, while institutionalized learning promotes organizational and developmental-path adjustment. Performance in resistance, recovery, adaptation, and transformation feeds back into resource reserves, risk perception, and governance rules. Tourism dependence, shock characteristics, spatial accessibility, and the fit between governance and risk scales constitute the principal boundary conditions. The resulting cyclical model offers an analytical framework for understanding resilience formation across different types of tourism towns.

Keywords: Tourism Town; Tourism Resilience; Social-Ecological System; Collaborative Governance; Dynamic Capability

1. Introduction

Tourism is highly sensitive to public-health emergencies, natural hazards, market volatility, and transport disruption. In small and medium-sized tourism towns, this sensitivity is often intensified by reliance on a narrow visitor market, seasonal employment, limited fiscal capacity, and dependence on a core attraction or heritage asset. A disturbance may therefore spread beyond a decline in visitor numbers through interconnected accommodation, food service, transport, retail, household livelihood, and local-government revenue systems. Whether a town has recovered cannot be judged only by the speed of revenue rebound. Continuity of basic services, livelihood stability, protection of ecological and cultural assets, and changes in the development path are also relevant outcomes.

The concept of resilience originated in ecological research on system persistence and subsequently entered the study of social-ecological systems and regional economies. This literature has progressively moved beyond an engineering emphasis on returning to a previous state toward evolutionary understandings centered on adaptation, learning, and transformation [7][13][14][15][18](Boschma, 2015; Folke, 2006; Gunderson & Holling, 2002; Holling, 1973; Martin, 2012; Walker et al., 2004). Tourism scholars have applied these ideas to destination responses to climate change, disasters, public-health emergencies, and long-term decline[1][3][6][16][22][25] (Amore et al., 2018; Becken, 2013; Bec et al., 2016; Biggs et al., 2012; Lew, 2014; Ritchie, 2004; Tyrrell & Johnston, 2008).

Three limitations remain. First, much research focuses on countries, regions, large cities, or individual firms, leaving the town as an intermediate unit connecting enterprises, communities, local government, and environmental resources insufficiently explained.

Second, indicator-based assessment often outweighs process explanation: economic, social, ecological, and institutional factors are listed as capacities without showing how they are activated under stress. Third, resistance, recovery, adaptation, and transformation are frequently treated as alternative outcomes, with limited attention to how emergency action becomes a long-term capability through learning and feedback.

This article defines small and medium-sized tourism towns functionally rather than solely by administrative rank. They are incorporated towns and small county-level cities in which tourism has a substantial role in employment, public revenue, or spatial functions, while population size, economic scale, and governance resources remain limited. Through conceptual synthesis and theoretical deduction, the study first defines the system and its resilience outcomes, then identifies explanatory mechanisms from four theoretical traditions, and finally develops a cyclical model organized around resources, action, learning, and outcomes.

2. Concepts and Research Context

2.1 System Characteristics of Small and Medium-Sized Tourism Towns

A tourism town is not simply a smaller version of a large city. Tourism services and residents' everyday lives overlap within a limited space: attractions, commercial streets, transport nodes, and public services jointly shape the visitor experience and bear peak-period pressure. The business population is dominated by small and micro enterprises, family operations, and seasonal labor, so formal institutions and personal networks influence resource allocation simultaneously. Local public revenue, employment, and commercial property may depend heavily on tourism cycles, making prosperity inseparable from structural vulnerability. Local culture, natural landscapes, and community life function both as attractions and as production assets that cannot be replaced quickly.

These characteristics make resilience intrinsically cross-level. Responses by individuals and firms accumulate into community and destination outcomes, while local-government decisions reshape the action space of businesses and residents. Indicators such as visitor numbers or firm survival may conceal the redistribution of risk within the system-for example, when financial recovery is achieved through ecological overuse or when business upgrading depends on the displacement of residents.

2.2 Definition and Dimensions of Resilience

Resilience in a small or medium-sized tourism town is defined here as the capacity of a coupled tourism-town system-comprising government, businesses, community organizations, residents, visitors, and ecological and cultural resources-to absorb losses, maintain critical functions, adjust organizational and industrial structures, and develop a renewed pathway through learning when exposed to sudden shocks or cumulative pressures. The definition specifies the system, disturbance, function, and time horizon, thereby addressing the basic question of resilience "of what, to what, for what, and over what period" [25][26](Tyrrell & Johnston, 2008; Walker et al., 2004).

Resilience performance includes four related but non-substitutable dimensions. Resistance concerns the magnitude of initial loss. Recovery concerns the speed and completeness with which critical functions are restored. Adaptation concerns adjustments in products, markets, organizations, and governance. Transformation concerns more fundamental changes in industries, institutions, and human–environment relations when the previous path is no longer viable. Rapid recovery does not necessarily indicate strong resilience if it depends on excessive debt, ecological depletion, or the transfer of costs to vulnerable groups.

2.3 Explanatory Limits of Existing Research

Tourism-resilience research has followed three broad approaches. Capacity-based studies identify infrastructure, economic diversity, social capital, governance, and information technology as key resources. Stage-based studies organize crisis management around preparation, response, recovery, and learning. Evolutionary studies emphasize adaptation and reorganization under disturbance[1][3][4][20] (Amore et al., 2018; Becken, 2013; Bec et al., 2016; Prayag, 2023). Research has also extended resilience analysis to protected-area communities, destination vulnerability, multi-scalar tourism governance, the sustainability–resilience nexus, and integrated destination and disaster

management [8][11][12][17][23](Calgaro et al., 2014; Espiner et al., 2017; Filimonau & De Coteau, 2020; Luthe & Wyss, 2014; Strickland-Munro et al., 2010). These studies identify important components, but the presence of a resource is not equivalent to the formation of a capability. The same social network may support mutual aid or restrict external knowledge, while specialization may improve efficiency in normal periods but amplify shared exposure. A process explanation must therefore distinguish resource foundations, activation conditions, conversion mechanisms, and learning feedback.

3. Theoretical Foundations

3.1 Social-Ecological Systems Theory

Social-ecological systems theory is useful here because tourism production and the local environment cannot be separated analytically. Landscapes, cultural practices, and public space help generate tourism income, while construction, visitor flows, and everyday operating decisions alter those resources in return [13][5][26](Folke, 2006; Gunderson & Holling, 2002; Walker et al., 2004). Some effects are immediately visible, but others accumulate through slow changes in carrying capacity, land use, or community participation. A town may therefore appear to have recovered economically while moving closer to an ecological or social threshold. This perspective directs attention to the functions that must be maintained and to the feedback that may undermine them over time.

3.2 Evolutionary Resilience and the Adaptive Cycle

An evolutionary view shifts the question from whether a destination returns to its former state to how disturbance alters its subsequent trajectory. Regional economies carry the imprint of earlier investments, skills, and institutions, so recovery is path dependent rather than a return to a neutral equilibrium [7][18](Boschma, 2015; Martin, 2012). The adaptive-cycle literature further suggests that disruption can weaken established connections and release resources for reorganization, although such an opening does not ensure a better outcome [14][15][26](Gunderson & Holling, 2002; Walker et al., 2004). For tourism towns, renewed visitor growth may coexist with continued dependence on a single market or attraction. Changes in products, sources of income, or governing arrangements may thus be more informative than the restoration of aggregate demand alone.

3.3 Dynamic Capabilities and Resource Bricolage

Dynamic-capabilities theory draws attention to what actors do with resources when conditions change: they notice emerging threats, commit to a response, and reconfigure what is available [24](Teece et al., 1997). In a small tourism town, however, these activities seldom take the form of a planned corporate program. Local government may repurpose a public facility, firms may share equipment or labor, and residents may rely on informal knowledge to solve immediate problems. The notion of bricolage captures this practical recombination under constraint. Read together, the two perspectives clarify why an apparently limited resource base may still support effective action, and why a larger stock of assets may remain idle when no actor can assemble it around the problem at hand.

3.4 Social Capital and Collaborative Governance

Social capital matters because much of a town's response depends on information and cooperation that cross organizational boundaries. Trust and repeated interaction can lower the cost of reaching agreement and make mutual assistance more credible [9][21](Coleman, 1988; Putnam, 1993). Evidence from community-resilience research likewise links collective response to communication, networks, and access to usable resources[10][19] (Cutter et al., 2008; Norris et al., 2008). Yet dense ties have an ambivalent effect: they can speed local mobilization while insulating established groups from outside knowledge or less powerful residents. Collaborative governance therefore concerns more than the number of participating organizations. It concerns who enters the discussion, how information is shared, and whether public, commercial, and community actors can make and revise joint decisions [2](Ansell & Gash, 2008).

4. Formation Mechanisms of Tourism-Town Resilience

4.1 Disturbance Activation and Vulnerability

Filtering

Disturbance initiates the process, but it does not act on an empty setting. The same transport interruption or fall in demand can produce very different consequences depending on the town's visitor-market structure, fiscal position, infrastructure, and ecological condition. These features filter the shock before any organized response begins. Timing is equally important. Warning signs may be available yet remain scattered across agencies and firms, or they may be interpreted as temporary fluctuations. Mobilization begins when relevant actors recognize that ordinary routines are no longer adequate and develop a sufficiently shared account of what is happening. Complete agreement is unnecessary, but incompatible diagnoses can delay action and direct scarce resources toward competing priorities.

4.2 Resource Foundations and Redundancy

The resources available to tourism towns are heterogeneous and unevenly controlled. Public agencies may hold emergency funds and regulatory authority; firms control premises, equipment, and market information; residents and community organizations contribute local knowledge, labor, and networks. Infrastructure redundancy keeps essential services operating when one component fails, whereas diversity in products, visitor markets, and household livelihoods provides alternatives when demand changes. Digital systems can shorten the time needed to locate needs and coordinate supplies, but their value depends on data quality and organizational capacity. No single category is sufficient. A platform cannot compensate for an exhausted emergency budget, and strong neighborhood ties cannot maintain a prolonged response without access to formal resources. The relevant question is therefore not how many resources a town possesses, but whether they can be combined at the time and scale required.

4.3 Resource Mobilization and Collaborative Adaptation

Resources matter only after they are put to use. During the first stages of a crisis, this often involves improvised arrangements: premises acquire temporary functions, labor is reassigned, and supply relationships are renegotiated. Such improvisation addresses immediate gaps, but it can also create duplication or shift burdens onto actors with little capacity to absorb them. Coordination is needed to reconcile these local responses with decisions about finance, mobility, public space, and visitor management. Under conditions in which neither the problem nor the solution is fully known, small and reversible policy trials may be preferable to a comprehensive intervention adopted at once. Their usefulness depends on monitoring and on a willingness to stop or alter measures that do not work. Bricolage, coordination, and experimentation are thus overlapping practices rather than a fixed sequence.

4.4 Learning, Reconfiguration, and Path Renewal

Emergency measures do not automatically become lasting capabilities. Much of the knowledge produced during a crisis is tacit and can disappear when staff change or temporary partnerships dissolve. Some lessons require only an operational correction, such as revising an evacuation route or visitor-flow plan. Others challenge the assumptions behind local development, including dependence on ticket revenue or continued expansion in environmentally sensitive areas. Review procedures, retained data, training, and budget changes help preserve what has been learned, but institutionalization is selective and contested. Measures that worked temporarily may be too costly or inequitable to maintain. Conversely, pressure to restore revenue quickly may close the opportunity for deeper change and return the town to the conditions that amplified the original loss.

4.5 Performance Feedback and Equity

Outcomes alter the conditions under which the next disturbance will be managed. A recovery that preserves livelihoods and is regarded as reasonably fair can strengthen trust, revenue, and willingness to cooperate. If losses are repeatedly transferred to seasonal workers, small firms, or residents in vulnerable locations, the town may lose labor and local support even as headline indicators improve. Assessment must therefore trace both system performance and the distribution of costs. Economic recovery, ecological condition, public-service continuity, and participation in decision making may move in different directions. Equity is relevant because cooperation rests partly on expectations about who will be protected and whose claims will be heard.

5. Theoretical Model and Boundary Conditions

5.1 Process Model

Figure 1 summarizes the argument as a recursive process rather than a succession of predetermined stages. Disturbance is refracted through existing vulnerabilities, after which risk interpretation affects which resources are recognized and brought into use. Local improvisation and coordination produce continuity or adjustment, while subsequent review may alter routines and development choices. The observed outcome then changes the resource base and the relationships among actors before the next episode occurs. A town can therefore enter a later shock with greater room for action, but it can also emerge with depleted finances, weaker trust, or a more concentrated economy. The model joins short-term response to this slower accumulation or erosion of capability without assuming that recovery necessarily leads to adaptation.

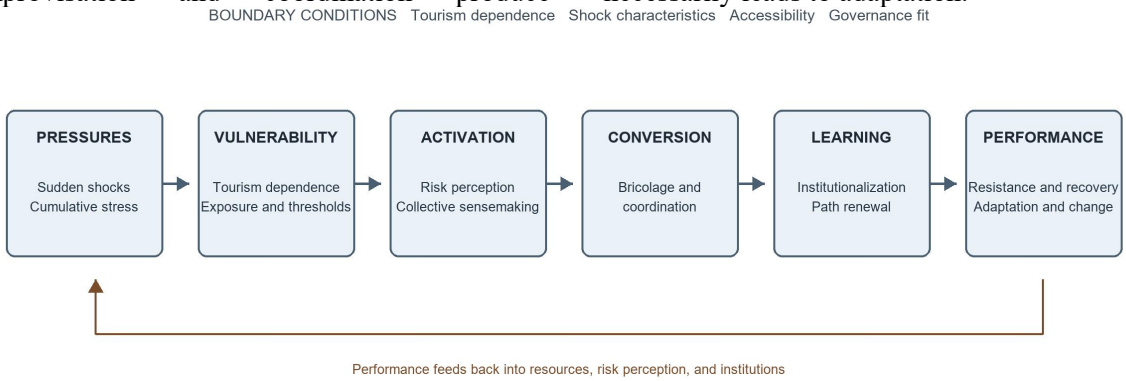


Figure 1. Cyclical Formation Model of Resilience in Small and Medium-Sized Tourism Towns

Note. The principal process runs from left to right. Performance feeds back into earlier stages through resource accumulation, risk perception, and institutional revision. Tourism dependence, shock characteristics, spatial accessibility, and governance-scale fit condition the relationships.

5.2 Boundary Conditions

The model is unlikely to operate in the same way across all tourism towns. Dependence on tourism is one source of variation. Specialization may support skills and a recognizable destination identity, but beyond a certain point it exposes employment, public finance, and services to the same demand shock. The temporal character of disruption also matters. Redundancy and rapid coordination are prominent in a short emergency, whereas a prolonged downturn tests fiscal endurance and may require changes in the local economy. Accessibility has similarly mixed effects: remoteness can delay outside assistance, while dependence on one road, port, or rail connection creates its own point of failure. Finally, some problems do not match the jurisdiction of the town. Transport systems, watersheds, labor markets, and visitor flows frequently extend across administrative boundaries. Where authority remains fragmented, local coordination may be competent yet still insufficient.

6. Directions for Empirical Research

6.1 Comparative Case Research

The model can first be refined through theoretically sampled comparative cases varying in tourism dependence, disturbance type, and governance structure. Heritage, nature-based, and resort towns may be compared, as may towns exposed to a similar shock but displaying different recovery trajectories. Evidence should cover pre-disturbance, response, and post-disturbance periods and combine policy documents, business records, mobility data, interviews, and participant observation. Process tracing can identify critical events and mechanism sequences, while cross-case synthesis can distinguish recurring mechanisms from contextual conditions.

6.2 Quantitative Assessment

Quantitative research may adopt a longitudinal design linking pre-event capacity, shock loss, recovery trajectory, and structural change. Resistance can be measured as deviation from a counterfactual trend, recovery as time required to return to a specified performance band, and adaptation or transformation as change in source-market composition, industrial linkages, livelihood channels, ecological pressure, and

governance rules. Survey data, administrative records, and digital traces can be combined. Event-study designs, latent growth models, multilevel structural-equation models, or configurational methods may be suitable, depending on the question. Any measurement system should identify the object of resilience and disturbance type rather than treating general development performance as resilience.

6.3 Measurement Framework

The dimensions and illustrative indicators used to assess resilience performance are summarized in Table 1.

Table 1. Measurement Framework for Resilience Performance in Tourism Towns

Dimension	Operational meaning	Illustrative indicators
Resistance	Magnitude of loss in critical functions immediately after disturbance	Deviation in visitor demand and business revenue; service interruption; employment volatility
Recovery	Speed and completeness of functional restoration	Time to return to a baseline band; business reopening rate; supply-chain restoration
Adaptation	Adjustment of products, markets, organizations, and governance	Market diversification; share of new products; multiple livelihood channels; network change
Transformation	Substantive change in development paths and institutional relations	Industrial restructuring; reduced ecological pressure; changes in community rights and formal rules
Equity and sustainability	Distributional quality and durability of recovery	Resident assessment; losses among vulnerable groups; carrying capacity; fiscal burden

7. Discussion

7.1 Theoretical Contributions

The first contribution is to specify the town scale. A small tourism town is neither an individual community or firm nor a resource-rich large city with a complex departmental structure. The town scale reveals direct feedback among businesses, residents, local government, and environmental resources, thereby adding a meso-level explanation to destination-resilience research.

The second contribution is to replace a static inventory of capacities with a process model. Resources do not generate resilience automatically. Risk perception and collective sensemaking activate them; bricolage, coordination, and experimentation convert them; and institutionalized learning embeds them. This sequence explains why towns with similar apparent resource endowments may experience different outcomes.

The third contribution is to connect short-term recovery with long-term transformation. Resistance, recovery, adaptation, and transformation may coexist, and feedback explains how one crisis can strengthen or erode future capacity. Incorporating equity into the feedback mechanism also prevents a rebound in visitor demand from being mistaken for recovery of the whole system.

7.2 Governance Implications

Tourism towns should move from isolated emergency capacities toward balanced resource portfolios. Essential redundancy in infrastructure and emergency finance should be complemented by diversified visitor markets, products, and livelihood channels. Digital platforms should support interdepartmental information sharing and identification of vulnerable groups rather than functioning solely as marketing tools.

Coordination arrangements should be established before a crisis. Business associations, community organizations, and cross-department forums can maintain working relationships and define rules for the use of data, facilities, supplies, and personnel. Temporary crisis cooperation should be converted through review into plans, budgets, and training routines.

Recovery policy should incorporate equity and ecological constraints. Financial assistance, spatial regulation, and destination promotion should be assessed for their effects on resident livelihoods, labor protection, and carrying capacity. Problems extending beyond town boundaries require county-level integration and interregional coordination.

7.3 Limitations

This is a theory-building study, and the model requires refinement through evidence from different types of tourism towns and disturbance contexts. Its focus on formation mechanisms does not exhaust the roles of political power, informal institutions, and visitor behavior. Longitudinal and cross-regional research should examine mechanism sequences, thresholds, and nonlinear relationships, while determining whether improvements in resilience transfer

costs across social groups.

8. Conclusion

Resilience in small and medium-sized tourism towns is not the sum of economic, social, and ecological indicators. It is produced as resources are identified, mobilized, coordinated, and reconfigured within a particular disturbance and institutional context. The cyclical model developed here shows how pressures filtered through vulnerability trigger risk perception; how diverse resources are converted into adaptive action through bricolage, collaboration, and experimentation; how institutionalized learning renews development paths; and how performance and equity feed back into resources and actor relationships. Resilience building therefore involves more than accumulating reserves. It requires the capacity to connect resources, learn through governance, and alter the development path when existing arrangements approach ecological, fiscal, or social limits.

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