

The Evolutionary Pattern of Economic Resilience in Tourism-Dominated Economies

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Abstract

As a conceptual theoretical paper, this study focuses on the dynamic impact of tourism dominance on economic resilience—a research gap insufficiently addressed in existing literature. Tourism-driven development represents a prevalent growth strategy adopted by numerous small island nations worldwide. By integrating specialization theory, path dependence theory, and industrial lock-in theory, this paper constructs an analytical framework delineating the linkage between tourism dominance and economic resilience, and systematically unpacks the evolutionary logic of economic resilience within tourism-dominated economies. Theoretically, this study proposes a theoretical hypothesis of an inverted U-shaped nonlinear relationship between tourism dominance and economic resilience: as tourism dominance rises, economic resilience evolves across two qualitatively distinct stages. During the early phase of tourism expansion, three positive mechanisms—resource agglomeration effects, knowledge spillover effects, and institutional adaptation effects—jointly generate specialization dividends, which strengthen the economic system's resistance and recoverability. Once tourism dominance surpasses a critical threshold, three countervailing mechanisms (industrial structural rigidity, asset specificity traps, and institutional-cognitive lock-in) trigger path dependence and trigger a sustained decline in economic resilience. This paper further identifies three heterogeneous post-shock recovery trajectories: rapid V-shaped recovery, slow U-shaped recovery, and prolonged L-shaped recession. It also disentangles the divergent evolutionary characteristics of economic resilience across its three core dimensions: resistance, recoverability, and transformability. This theoretical framework offers a systematic interpretation for the sustainable development of tourism-dependent economies, while providing analytical support for setting early-warning thresholds of tourism reliance and designing forward-looking industrial diversification strategies.

Keywords

Tourism Dominance, Economic Resilience, Inverted U-Shaped Relationship

1. Introduction

Tourism has become the core engine for economic take-off in many countries, especially small island nations with relatively homogeneous resource endowments. From African island states and Caribbean island nations to Mediterranean coastal countries in Europe, from Southeast Asian tourist destinations to Pacific islands, the tourism-dominated economic model has created growth miracles for many late-developing economies. However, the COVID-19 outbreak in 2020 dealt a devastating blow to the global tourism industry. Countries highly dependent on the tourism economy generally experienced far deeper recessions than other countries. This extremely natural experiment formed by an exogenous shock, has profoundly exposed the structural vulnerabilities of tourism-dominated economies, triggering fundamental reflections in academic and policy circles on the tourism-led development model.

Existing research has long been divided over the economic effects of tourism dominance. Optimistic views emphasize the positive contributions of tourism such as export earnings, job creation and infrastructure improvement, arguing that tourism dominance is an effective path for late-developing economies to achieve economic catch-up. Pessimistic views focus on negative effects such as the “Dutch disease” effect, factor crowding-out and price distortion, warning that excessive dependence on tourism may fall into the “resource curse” trap.

This paper aims to construct an analytical framework for the evolutionary pattern of economic resilience in tourism-dominated economies, and answers three core theoretical questions: First, what is the internal mechanism by which tourism dominance affects economic resilience? Through which channels do positive and negative effects exert their influence respectively? Second, is there a phased transition between tourism dominance and economic resilience? Third, what differentiated characteristics do the three dimensions of economic resilience (resistance, recoverability and transformability) present in different development stages?

It should be noted that this paper is a purely conceptual theoretical study based on theoretical deduction and systematic literature synthesis. All propositions and evolutionary trajectories proposed herein are theoretical hypotheses that await further empirical testing. In terms of scope of applicability, this framework is primarily applicable to small island developing states and medium-sized coastal economies where tourism serves as a pillar industry of the national economy. It may also be extended to regional economies within larger countries that rely on tourism development, with necessary adjustments to be made according to differences in economic scale and initial industrial endowments.

2. Literature Review and Theoretical Foundation

2.1. Research on the Concept of Economic Resilience

The evolution of the concept of economic resilience forms the theoretical cornerstone of this paper. [Holling \(1973\)](#) introduced resilience into ecology, distinguishing between “engineering resilience” (the speed at which a system returns to its pre-disturbance equilibrium) and “ecological resilience” (the magnitude of disturbance a system can absorb before changing structure and entering a new equilibrium). Subsequently, [Walker et al. \(2004\)](#) proposed “evolutionary resilience,” emphasizing a system’s capacity for change, adaptation, and transformation in response to pressures.

[Reggiani et al. \(2002\)](#) were the first to introduce resilience into spatial economics, employing the concept of multiple equilibria from ecological resilience theory to explain agglomeration phenomena in real economies. [Martin \(2012\)](#), drawing on complex adaptive systems theory, defined regional economic resilience as a region’s capacity to mitigate the impact of shocks and maintain development through adaptive restructuring of its industrial, technological, and institutional structures. [Martin and Sunley \(2015\)](#) further decomposed resilience into four dimensions: vulnerability, resistance, adaptability, and recoverability. [Simmie and Martin \(2010\)](#) emphasized resilience as a dynamic process rather than a static attribute. [Boschma \(2015\)](#), from an evolutionary economic geography perspective, argued that resilience encompasses not only the capacity to buffer shocks but also the long-term capacity to develop new growth paths.

[Li et al. \(2019\)](#) systematically sorted out the evolution of the resilience concept from engineering resilience to ecological resilience and then to evolutionary resilience, noting that evolutionary resilience abandons equilibrium assumptions and emphasizes a system’s dynamic adjustment to environmental change and sustained growth. [Zeng \(2020\)](#) proposed three paradigms—engineering resilience (single equilibrium), ecological resilience (multiple equilibria), and evolutionary resilience (dynamic non-equilibrium).

Regarding measurement approaches, [Martin et al. \(2016\)](#) employed sensitivity indices and peak-to-peak methods to measure regional resilience across different UK regions. [Liu et al. \(2021\)](#) constructed risk absorption intensity and absorption duration indicators to measure China’s macroeconomic resilience. [Chen and Ding \(2020\)](#) developed a five-dimensional evaluation framework encompassing industrial agglomeration, economic growth, inequality, industrial structure optimization, and economic sensitivity.

2.2. The Relationship between Industrial Structure and Economic Resilience

[Frenken et al. \(2007\)](#) proposed the concept of “related variety,” arguing that diversity among related industries facilitates knowledge spillovers and economic growth, while unrelated variety fails to generate such benefits due to excessive cognitive distance. [Boschma and Iammarino \(2009\)](#) empirically demonstrated that

related variety promotes innovation and enhances regional capacity to cope with shocks by strengthening inter-industrial linkages.

Xu and Zhang (2019) employed a GMM-SL-SAR-RE model to measure the economic resilience of 230 Chinese cities and found that large cities with diversified industrial structures were better able to withstand risks, and that more diversified cities demonstrated stronger adjustment capabilities during recovery periods, achieving more robust resilience through the development of “new economy” sectors. Hu (2019) noted that industrial diversity and specialization each have advantages and disadvantages, with diversity facilitating risk diversification and innovation, while specialization promotes efficiency and deeper knowledge accumulation.

Hu and Zhang (2022), using shift-share analysis to decompose urban economic resilience into industrial structure resilience and regional competitiveness resilience, found that educational human capital influences industrial structure resilience through collaborative innovation and labor mobility effects, while health human capital operates through labor productivity effects. Li et al. (2022), analyzing dozens of cities, demonstrated that related variety, specialization, government governance, and the share of tertiary industry significantly promote economic resilience, while traditional development models impede resilience enhancement.

2.3. Tourism Economic Resilience

Wang et al. (2020) defined tourism economic resilience as a tourism economic system’s capacity to maintain stability and recover after shocks, constructing an evaluation system across four dimensions—resistance, recoverability, reconstruction capacity, and renewal capacity—and found that China’s tourism economic resilience showed a slow upward trend and its spatial pattern showed a “ π -shape” with significant regional disparities. Sheng and Chen (2026) empirically demonstrated that opening-up enhances tourism economic resilience by upgrading the natural and humanistic environments. Xing et al. (2025), employing an undesirable output SBM model and system GMM estimation, found an inverted U-shaped relationship between tourism economic efficiency and resilience. Yang et al. (2025) constructed an analytical framework revealing the macro and micro mechanisms through which new quality productive forces affect regional tourism resilience.

2.4. Research Gaps

Despite these substantial contributions, three systematic theoretical gaps persist in the existing literature:

First, the predominant research perspective remains static and comparative, treating economic resilience as an inherent attribute of systems rather than revealing its dynamic evolution with changes in tourism dominance, thus making it difficult to answer the core question of what the influence mechanisms are.

Second, existing studies generally assume linear relationships, implicitly treat-

ing the relationship between tourism dominance and economic resilience as monotonic, overlooking the directional shift in marginal effects and the existence of critical thresholds, and thus unable to explain the logic of phase transitions.

Third, there is insufficient systematic decomposition of heterogeneous effects across different dimensions of economic resilience, failing to distinguish the differentiated impacts of tourism dominance on resistance, recoverability, and transformability.

To address these gaps, the present study draws on a growing body of empirical literature that has begun to examine the nonlinear effects of tourism specialization. Notably, [Zheng and Pan \(2026\)](#) document a U-shaped relationship between tourism openness and poverty vulnerability, suggesting that tourism dependence may generate opposing effects across different intensity intervals. [Xing et al. \(2025\)](#) directly test an inverted-U relationship between tourism economic resilience and efficiency using Chinese coastal city data. These empirical findings provide indirect yet valuable support for our theoretical conjecture that tourism dominance and economic resilience are nonlinearly related.

2.5. Theory-Building Approach

The theoretical construction process of this paper follows three steps:

First, a systematic literature review. This paper reviews and integrates three major theoretical strands—specialization theory, path dependence theory, and industrial structure lock-in theory—and extracts core explanatory variables and causal mechanisms from existing empirical studies, thereby laying the theoretical foundation for the analytical framework.

Second, logical deduction and mechanism decomposition. Drawing on the pattern of marginal effects that first increase and then decrease, this paper decomposes the impact of tourism dominance on economic resilience into two stages with diametrically opposite dominant effects. By comparing the relative strength of positive and negative mechanisms, it deduces an inverted-U-shaped relationship between the two.

Third, dimensional extension and scenario inference. On the basis of decomposing economic resilience into three dimensions—resistance, recoverability, and transformability—this paper further infers the differentiated recovery patterns corresponding to different intervals of tourism dominance under homogeneous external shocks, ultimately forming a complete multi-level analytical framework.

All propositions derived from this framework are theoretical hypotheses that await further empirical testing in subsequent research.

3. Theoretical Mechanisms of Tourism Dominance Affecting Economic Resilience

3.1. Core Concepts Defined

This paper defines economic resilience as the dynamic capacity of an economy to resist risks (resistance), recover quickly (recoverability), and realize sustainable

development path transformation through structural adjustment (transformability) when subjected to external shocks. The specific connotations of the three dimensions are as follows:

- 1) Resistance: The ability of the economic system to withstand negative impacts when shocks occur;
- 2) Recoverability: The speed and ability of the economy to return to its pre-shock growth path after the shock;
- 3) Transformability: The capacity of the economic system to carry out structural adjustment, path creation, and transformation and upgrading after shocks, which is a key dimension for measuring the long-term development potential of the system.

Tourism dominance refers to the dominant position of tourism in an economy, with the proportion of tourism output value in GDP as the core indicator, supplemented by dimensions such as the proportion of tourism employment in total employment and the proportion of tourism foreign exchange earnings in total exports.

3.2. Theoretical Framework and Core Propositions

Based on the finding of [Zheng and Pan \(2026\)](#) that an inverted U-shaped relationship exists between tourism development and poverty vulnerability, this paper integrates specialization theory, path dependence theory and industrial structure trap theory to construct an analytical framework. Its core argument holds that there is a nonlinear relationship between tourism dominance and economic resilience: as the dominant position of tourism continues to strengthen, the relative magnitudes of positive and negative effects shift in opposite directions, ultimately forming an inverted U-shaped evolutionary relationship ([Figure 1](#)).

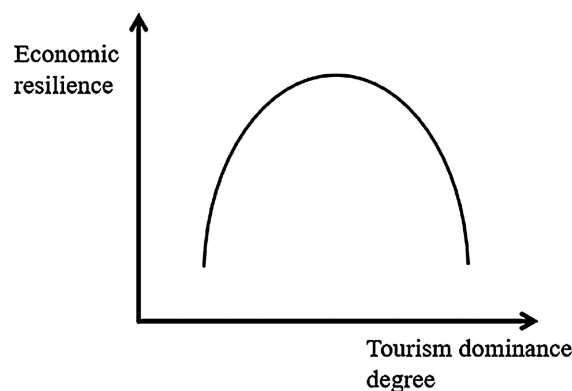


Figure 1. Conceptual schematic diagram of the inverted U-shaped relationship between tourism dominance and economic resilience.

Several existing empirical studies further corroborate this theoretical hypothesis. [Xing et al. \(2025\)](#) verify that tourism economic resilience and efficiency exhibit an inverted-U evolutionary trajectory among coastal cities in China. [Ni et al. \(2026\)](#) find that tourism intensity undermines economic resilience by inhibiting indus-

trial rationalization and upgrading, which is consistent with the industrial lock-in mechanism proposed in this paper. In addition, early cross-country empirical evidence (Figini & Vici, 2010; Adamou & Clerides, 2009) likewise reveals that the growth-promoting effect of tourism specialization only holds below a specific critical threshold; once this threshold is exceeded, the effect turns negative. Empirical findings from diverse contexts collectively confirm the plausibility of the inverted-U hypothesis advanced in this study.

This process can be divided into two qualitatively distinct stages: the specialization dividend stage and the path lock-in stage. Based on this, this paper proposes three core theoretical propositions:

Proposition 1: There exists an inverted-U-shaped nonlinear relationship between tourism dominance and economic resilience. When tourism dominance is below the critical threshold, economic resilience increases with rising tourism dominance; when tourism dominance rises beyond the critical threshold, economic resilience weakens with further increases in tourism dominance.

Proposition 2: The inverted-U-shaped relationship between tourism dominance and economic resilience corresponds to a phase transition from specialization dividends to path lock-in. In the low-dominance stage, the specialization dividend mechanism plays the dominant role; in the high-dominance stage, the path lock-in mechanism plays the dominant role.

Proposition 3: The three dimensions of economic resilience exhibit heterogeneous responses to changes in tourism dominance. Both resistance and recoverability display an inverted-U-shaped evolutionary pattern, while transformability remains relatively weak throughout the entire development cycle, constituting an inherent deficiency of the tourism specialization model.

3.3. The Specialization Dividend Phase: Three Mechanisms Enhancing Economic Resilience

In the early stage of tourism development, when tourism dominance remains relatively low, positive effects of specialization dominate, enhancing economic resilience through three mechanisms: resource agglomeration effects, knowledge spillover effects, and institutional adaptation effects.

3.3.1. Resource Agglomeration Effects

In the early stage of tourism development, factors of production—capital, labor, and land—rapidly concentrate in the tourism sector, generating significant economies of scale and economies of scope. First, tourism infrastructure exhibits typical public good characteristics... Second, factor agglomeration promotes the formation and improvement of the tourism industrial chain, with hotels, catering, transportation, entertainment, and related industries clustering spatially, reducing transaction costs and deepening specialization. Third, resource agglomeration solidifies the material foundation for economic systems to withstand shocks; the foreign exchange earnings and fiscal revenues generated by tourism provide governments with foreign exchange reserves and fiscal buffers, offering greater pay-

ment capacity and policy space when facing external shocks. Fang et al. (2025) provide empirical evidence from China's urban agglomerations demonstrating that agglomeration effects are most prominent when the share of the tourism industry falls within a moderate range. This finding supports the argument of this study that resource concentration can strengthen the capacity to withstand external shocks.

3.3.2. Knowledge Spillover Effects

International tourism is, to a significant extent, a knowledge-intensive industry, and the arrival of international tourists is accompanied by substantial knowledge spillovers. First, international tourists bring advanced consumption concepts and service standards, compelling local tourism practitioners to improve service quality and management levels, promoting the standardization and normalization of tourism services. Second, the entry of multinational tourism enterprises brings advanced management experience and technology, generating significant knowledge spillovers through personnel mobility and demonstration effects, enhancing local human capital levels. Third, the open nature of the tourism industry promotes information exchange between local and international markets; tourist destinations must continuously monitor international market trends and adjust their product mix accordingly. This continuous learning process enhances the adaptability and flexibility of the economic system. Portella-Carbó et al. (2023) find that tourism-led growth effects are stronger during expansionary phases, partly because knowledge spillovers from international visitors and foreign operators are more intense when tourism intensity is still moderate. This provides macro-level support for the knowledge spillover mechanism we identify.

3.3.3. Institutional Adaptation Effects

In the early stage of tourism development, governments typically undertake institutional innovation and policy optimization around tourism, forming an institutional environment aligned with tourism development. First, governments increase investment in tourism infrastructure, improving the hardware environment and lowering barriers to tourism development. Second, governments implement institutional reforms conducive to tourism development, including visa facilitation, investment liberalization, and tax incentives, significantly reducing operating costs for tourism enterprises and attracting substantial international investment. Third, governments establish specialized tourism management agencies and industry regulatory systems to ensure the healthy and orderly development of tourism. In the specialization dividend phase, institutional innovation is forward-looking and adaptive, with governance capacity highly aligned with tourism development needs. UNCTAD (2026) documents that small island developing states with well-designed tourism governance structures initially benefit from fiscal windfalls and policy learning, which enhance their capacity to cope with external shocks. This observation is consistent with the institutional adaptation mechanism we propose.

3.4. The Path Lock-In Phase: Three Mechanisms of Resilience Decline

When tourism dominance exceeds the critical threshold, the marginal returns of specialization continue to decline and may even turn from positive to negative, with path lock-in effects beginning to dominate. Economic resilience declines through three mechanisms: industrial structure rigidity, asset specificity traps, and institutional-cognitive lock-in.

3.4.1. Industrial Structure Rigidity

Industrial structure rigidity represents the most direct manifestation of path lock-in. When tourism dominance exceeds critical levels, economic resources become excessively concentrated in tourism, causing other industries to gradually shrink or even disappear due to lack of resources. Capital, labor, and land continuously flow toward tourism, distorting factor prices and raising development costs for other industries. The direct consequence of a highly homogeneous industrial structure is that the economic system lacks alternative industry support when facing demand-side shocks; when tourism is impacted by external shocks, no other industry can compensate for the output and employment gaps caused by tourism decline. This structural vulnerability accelerates as tourism dominance continues to rise. [Ni et al. \(2026\)](#) empirically confirm that tourism intensity impedes industrial rationalization and upgrading, thereby lowering economic resilience. Their mediation analysis directly validates the industrial structure rigidity channel we theorize.

3.4.2. The Asset Specificity Trap

Asset specificity, a core concept in path dependence theory, refers to the extent to which assets can be redeployed to alternative uses without loss of value. Tourism assets exhibit a high degree of specificity: resorts, tourist attractions, dedicated tourism transportation facilities, and similar assets, once constructed, are difficult to convert to other uses. This specificity creates substantial sunk costs that impede resource reallocation.

The asset specificity trap extends to human capital as well: long-term tourism specialization causes a large portion of the labor force to develop highly specialized skills, such as hotel services, tour guiding, and attraction management, which are industry-specific and difficult to transfer to other sectors. When tourism suffers shocks, specific assets fall idle, and specialized human capital exacerbates unemployment and social disruption.

The sunk-cost nature of tourism-related fixed assets has been highlighted in the regional resilience literature (e.g., [Martin & Sunley, 2015](#)). Recent studies on tourism dependence ([Watson & Deller, 2021](#)) demonstrate that a larger share of non-transferable tourism capital correlates with slower employment recovery after external shocks, which offers empirical support for the asset specificity perspective proposed in this paper.

3.4.3. Institutional and Cognitive Lock-In

Institutional lock-in represents the deepest mechanism of path dependence. As

tourism dominance becomes entrenched, the entire policy system gradually becomes tourism-centric, generating strong institutional inertia. First, government fiscal revenues become highly dependent on tourism; the tax structure tilts toward tourism, and fiscal expenditures primarily serve tourism development. This fiscal dependence reduces governments' incentives to advance industrial diversification. Second, tourism developers, hotel owners, tourism practitioners, and other vested interest groups acquire significant political influence, shaping policy-making processes to maintain policy bias toward tourism. Third, long-term tourism specialization fosters a widespread collective belief across society that "tourism is the only viable development path". Even after the severe vulnerabilities of tourism become evident, stakeholders remain inclined to restore the original development trajectory rather than pursue fundamental transformation.

These three layers of lock-in reinforce one another, creating a strong tendency for the economy to maintain its existing structure rather than explore diversified development paths. Numerous studies in evolutionary economic geography have documented path dependence in tourism-dominated regions (Boschma, 2015), which corroborates the institutional-cognitive dual lock-in mechanism elaborated in this paper.

3.5. Transition Mechanisms and Critical Conditions

The transition from specialization dividends to path lock-in does not occur instantaneously; rather, it is a gradual process that unfolds as tourism dominance rises. The core logic of this transition follows the law of diminishing marginal returns: as tourism dominance rises, constrained by resource carrying capacity and market size, the marginal output generated by agglomeration and spillover effects declines continuously. At the same time, as economic resources flow persistently into a single industry, the marginal negative effects of structural imbalance and factor distortion steadily intensify. When the marginal positive effect of tourism dominance equals its marginal negative effect, the critical threshold is reached. Once this threshold is crossed, negative effects dominate, and economic resilience begins to decline.

Theoretically, the "critical threshold" refers to the turning point at which the dominant mechanism through which tourism dominance affects economic resilience shifts from dividend effects to lock-in effects. Although this paper does not estimate a specific numerical threshold, the transition from the specialization dividend stage to the lock-in stage can be identified through the following observable indicators:

1) Industrial structure indicators: The share of tourism value-added in GDP rises persistently, the number of pillar industries outside tourism shrinks, and industrial diversification indices (e.g., the Herfindahl-Hirschman Index for industrial structure) decline continuously.

2) Factor allocation indicators: The share of tourism employment in total employment reaches a relatively high level, capital formation is highly concentrated in tour-

ism-related fixed assets, and factor prices in non-tourism industries continue to rise.

3) Fiscal and institutional indicators: Tourism-related taxes account for more than half of local fiscal revenue, policy innovation is largely confined to the tourism sector, and industrial diversification policies remain limited.

4) External shock response indicators: When facing exogenous shocks of equivalent intensity, the depth of economic recession is significantly greater than in the previous cycle, and the recovery period begins to lengthen.

Although the exact threshold varies across economies, recent empirical studies offer suggestive references. For instance, [Xing et al. \(2025\)](#) find that when tourism economic efficiency exceeds 0.5969, the relationship between resilience and efficiency turns negative. [UNCTAD \(2026\)](#) suggests that an overly high tourism economic dependence index may imply a substantial rise in the economy's vulnerability to external shocks. These quantitative clues, while not universally applicable, provide useful benchmarks for identifying the proximity to the critical threshold in practice.

It should be emphasized that the specific magnitude of the critical threshold is subject to structural heterogeneity across different economies. Therefore, the application of this framework requires adjustments to account for control variables such as economic scale, initial industrial base, and resource endowment.

4. Phase Characteristics of Resilience Evolution and Recovery Patterns

Building on the inverted U-shaped evolutionary framework and the dual mechanisms identified above, we further deduce that economies at different levels of tourism dominance exhibit significantly heterogeneous resilience performance and recovery patterns when faced with homogeneous external shocks (particularly demand-side shocks).

4.1. Specialization Dividend Phase: V-Shaped Rapid Recovery

In this phase, tourism dominance stays within the optimal range. The specialization dividend mechanism functions effectively, the marginal effect of rising tourism dominance remains positive, and the tourism economic system boasts a solid material foundation, strong learning capacity, and ample room for policy adjustment. When external shocks strike, although the system experiences a short-term recession, alternative industries still exert a buffering effect, and market and public confidence in tourism prospects remain strong, enabling rapid recovery of investment and consumption.

More importantly, asset specificity remains relatively low at this stage, providing flexibility for the reconstruction and adaptation of damaged facilities. Governments also maintain sound fiscal positions, with the capacity to implement countercyclical policies. Consequently, the economic system can achieve a rapid V-shaped rebound, with a relatively short recovery period from shock onset to full recovery. This V-shape pattern is consistent with the findings of [Portella-Carbó et](#)

al. (2023), who observe that tourism-specialized economies tend to rebound quickly from mild recessions when dependence remains moderate, as market confidence and policy space are still intact (**Figure 2**).

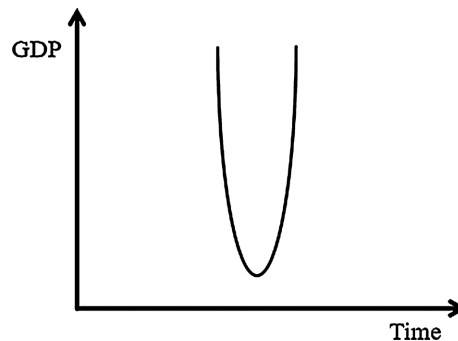


Figure 2. Conceptual schematic diagram of V-shaped recovery pattern.

4.2. Critical Threshold Expansion Phase: U-Shaped Slow Recovery

As tourism dominance approaches the critical threshold, specialization dividends begin to weaken while path lock-in effects start to emerge. The industrial structure has not yet fully rigidified, but the costs of structural adjustment have risen significantly. Asset specificity begins to constrain factor mobility, and policy adjustment space narrows.

Under these conditions, external shocks trigger deeper recessions, and recovery is no longer as rapid as in the specialization dividend phase. The system requires time to make localized adjustments to source markets or product structures; fiscal space for governments begins to shrink, and policy responsiveness declines. Public confidence in tourism development prospects becomes divided, and investment turns cautious. As a result, the recovery process entails a relatively prolonged downturn, presenting a gentle U-shaped pattern and requiring a longer period for full recovery (**Figure 3**). **Watson and Deller (2021)** empirically show that U.S. counties with higher tourism dependence experienced slower employment recovery after the Great Recession, consistent with the U-shaped scenario we describe.

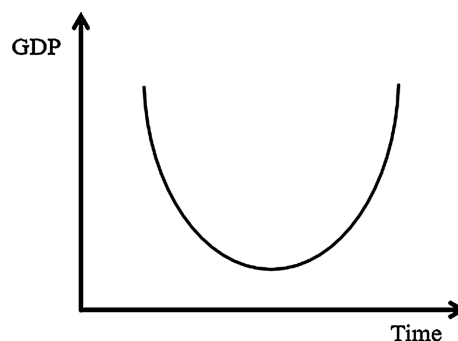


Figure 3. Conceptual schematic diagram of U-shaped recovery pattern.

4.3. Path Lock-In Phase: L-Shaped Deep Recession

When tourism dominance far exceeds the critical threshold, path lock-in effects

fully dominate. Industrial structure rigidity causes external shocks to transmit directly throughout the entire economic system, leading to a precipitous decline in GDP. The asset specificity trap prevents large volumes of capital and labor from shifting to other sectors, resulting in prolonged idle capacity and unemployment.

Institutional and cognitive lock-in mean that both governments and markets lack incentives for fundamental change; policy focus remains confined to restoring the original development path rather than creating new ones. The widespread societal belief that “there is no alternative to tourism” severely undermines incentives to explore new development paths. As a result, even when external demand recovers, the economy struggles to achieve genuine recovery and transformation, presenting an L-shaped recovery pattern. Full recovery takes significantly longer, and may even involve the permanent loss of some growth potential.

The L-shaped pattern echoes the “persistent recession” documented in [Ni et al. \(2026\)](#), where destinations with excessive tourism intensity fail to regain pre-shock output levels for extended periods due to the combined effects of structural rigidity and institutional inertia ([Figure 4](#)).



Figure 4. Conceptual schematic diagram of L-shaped recovery pattern.

4.4. Heterogeneous Characteristics of the Three Dimensions of Economic Resilience

The three dimensions of economic resilience exhibit significant heterogeneity in their responses to changes in tourism dominance.

Resistance follows a typical inverted U-shaped evolutionary trajectory. In the specialization dividend stage, the sustained agglomeration of economic factors and continuous accumulation of physical capital steadily strengthen the economic system’s capacity to withstand shocks. Stable fiscal revenues and foreign exchange reserves generated by tourism development provide governments with ample buffer space against external shocks; as a result, resistance rises steadily alongside increasing tourism dominance. However, once tourism dominance exceeds the critical threshold and the economy enters the path lock-in stage, the homogeneous industrial structure renders the economy highly sensitive to tourism demand shocks. Owing to the lack of alternative industries, external shocks are rapidly transmitted to all facets of economic activity, leading to a substantial decline in resistance.

Recoverability also follows an inverted U-shaped evolutionary trajectory, although its turning point occurs slightly later than that of resistance. In the specialization dividend stage, strong market confidence, flexible factor allocation, and ample policy space enable the economy to quickly return to its pre-shock growth path after external shocks, exhibiting a V-shaped rapid rebound. When tourism dominance approaches the critical threshold, the system can still achieve economic recovery by adjusting its product mix and source markets, although recovery slows noticeably. After entering the lock-in stage, the asset specificity trap and industrial structure rigidity significantly prolong factor reallocation time, while declining fiscal capacity restricts the scope for implementing countercyclical economic policies. Ultimately, the recovery cycle lengthens considerably, and the economy may even fall into persistent recession.

Transformability differs fundamentally from the other two dimensions in its evolutionary characteristics. Throughout the entire cycle of rising tourism dominance, transformability remains persistently low, which constitutes an inherent deficiency of the tourism specialization model. Even in the specialization dividend stage, economic factors continuously shift toward tourism, steadily eroding the foundation for industrial diversification. Meanwhile, the knowledge and skills accumulated under the tourism specialization system are difficult to transfer to emerging industries.

The weakness of transformability implies that the tourism-led development model is essentially a form of “fragile growth”: it can deliver rapid short-term growth and strong short-term recovery capacity, but lacks long-term structural transformation capability. This insight effectively explains why numerous tourism-dominated economies tend to revert to their original development paths after each crisis, and struggle to achieve genuine industrial transformation and upgrading.

5. Theoretical Implications

The theoretical framework constructed in this paper provides new perspectives and tools for understanding the development resilience of tourism-dominated economies. The principal theoretical implications are as follows:

First, economic resilience changes nonlinearly. Policymakers must abandon the simplistic view that “specialization is always beneficial or always harmful”, and recognize the inverted U-shaped relationship between tourism dominance and resilience. This implies the existence of an “optimal tourism dominance range”, where either excessively high or excessively low tourism dominance may undermine resilience.

Second, there exists a “strategic window period” for structurally enhancing economic resilience. The specialization dividend phase is not only a golden period for economic growth, but also a strategic window for implementing proactive diversification strategies. During this phase, fiscal strength is robust, and social consensus is relatively strong, making it the optimal time to cultivate alternative industries, invest in general-purpose infrastructure, and enhance general human

capital. Once path lock-in sets in, transition costs and resistance increase substantially.

Third, transformability is the key to long-term sustainable development. While resistance and recoverability primarily concern the short-term condition of the economy, transformability concerns long-term prosperity. The theoretical analysis in this paper demonstrates that specialization dividends primarily enhance the first two dimensions, with limited impact on transformability. Therefore, government intervention through institutional design is required to build and strengthen the economic system's transformability, and proactively break the potential path lock-in that accompanies rising tourism dominance.

Fourth, establish tourism dominance early warning mechanisms. It is recommended to develop an early warning threshold system using core indicators such as tourism value-added as a share of GDP and tourism employment as a share of total employment. While tourism dominance remains low and specialization dividends are fully realized, industrial diversification strategies should be deployed in advance. Establishing such early warning mechanisms is critical, because once the critical threshold is exceeded, the economy's transition costs escalate sharply.

6. Conclusion and Research Limitations

6.1. Main Conclusion

By integrating specialization theory, path dependence theory, and industrial structure lock-in theory, this paper constructs a conceptual analytical framework for the evolutionary pattern of economic resilience in tourism-dominated economies. The main conclusions are as follows:

First, there exists a hypothetical inverted U-shaped nonlinear relationship between tourism dominance and economic resilience. As tourism dominance increases, economic resilience successively passes through two qualitatively distinct stages: the specialization dividend stage and the path lock-in stage. In the low-dominance stage, three mechanisms, resource agglomeration, knowledge spillovers, and institutional adaptation, jointly drive the enhancement of economic resilience. In the high-dominance stage, after the critical threshold is exceeded, industrial structure rigidity, the asset specificity trap, and institutional-cognitive lock-in lead to a persistent decline in economic resilience.

Second, economies at different levels of tourism dominance exhibit differentiated recovery patterns in response to the same external shock. Economies in the specialization dividend stage display V-shaped rapid recovery; those approaching the critical threshold exhibit U-shaped slow recovery; and economies in the path lock-in stage manifest L-shaped deep recession.

Third, the three dimensions of economic resilience exhibit heterogeneous evolutionary characteristics. Both resistance and recoverability follow an inverted U-shaped trajectory, while transformability remains at a persistently low level throughout the entire cycle, which constitutes the inherent vulnerability of the tourism specialization model.

6.2. Research Limitations and Future Directions

This study has several limitations. First, this paper is a purely conceptual theoretical study; the proposed inverted U-shaped relationship and phase transition logic are theoretical hypotheses that have not yet been empirically tested. Future research may empirically test our propositions using cross-country panel data or in-depth case studies of typical economies.

Second, this paper has not yet developed a quantitative method for identifying the critical threshold. Subsequent studies could adopt system dynamics methods or econometric threshold models to quantitatively estimate the critical threshold of tourism dominance under different economic scales and industrial contexts.

Third, the analytical framework of this paper focuses primarily on demand-side external shocks, and has not yet explored differences in resilience evolution under supply-side shocks such as natural disasters. Future research could further extend the analysis to account for shock heterogeneity.

Finally, the figures in this paper are conceptual illustrations designed to elucidate the theoretical logic, and do not reflect the specific quantitative relationships of real-world economies. Future research could develop more rigorous simulation models and empirical visualizations.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- Adamou, A., & Clerides, S. (2009). Prospects and Limits of Tourism-Led Growth: The International Evidence. *SSRN Electronic Journal*.
<https://doi.org/10.2139/ssrn.1495747>
- Boschma, R. (2015). Towards an Evolutionary Perspective on Regional Resilience. *Regional Studies*, 49, 733-751. <https://doi.org/10.1080/00343404.2014.959481>
- Boschma, R., & Iammarino, S. (2009). Related Variety, Trade Linkages, and Regional Growth in Italy. *Economic Geography*, 85, 289-311.
<https://doi.org/10.1111/j.1944-8287.2009.01034.x>
- Chen, Y. W., & Ding, G. L. (2020). Measurement of Economic Resilience of Prefecture-Level Cities in China. *Statistics & Decision*, 36, 102-105. (In Chinese)
<https://d.wanfangdata.com.cn/periodical/tjyc202021021>
- Fang, Y., Huang, J., Huang, Z., & Li, Y. (2025). Tourism Economic Resilience and Its Influence Factors in China's Three Major Urban Agglomerations Based on Threshold Effect. *Humanities and Social Sciences Communications*, 12, Article No. 615.
<https://doi.org/10.1057/s41599-025-04973-y>

- Figini, P., & Vici, L. (2010). Tourism and Growth in a Cross Section of Countries. *Tourism Economics*, 16, 789-805. <https://doi.org/10.5367/te.2010.0009>
- Frenken, K., Van Oort, F., & Verburg, T. (2007). Related Variety, Unrelated Variety and Regional Economic Growth. *Regional Studies*, 41, 685-697. <https://doi.org/10.1080/00343400601120296>
- Holling, C. S. (1973). Resilience and Stability of Ecological Systems. *Annual Review of Ecology and Systematics*, 4, 1-23. <https://doi.org/10.1146/annurev.es.04.110173.000245>
- Hu, S. G. (2019). Regional Economic Resilience: A New Idea Supporting Industrial Structure Diversity. *Regional Economic Review*, No. 1, 143-149. (In Chinese) https://kns.cnki.net/kcms2/article/abstract?v=IHKEv291v2gGkrb2LFb2d71VBqZ-QyapWIdH7NlEXi246lCr54jg0NIqz3H7olVdxNz6Cun-ZhyPIMiE92cn36cB8C1FWDSWSASO_FOwnDIvVeyOVpJLYRbBmNX-Prpg9CkYYGyGPv2zh1XSOWKJQ8ddXqFp-plhwo9JnD_5mSV_tNMiPV8rM0GVg==&uniplatform=NZKPT&language=CHS
- Hu, Y., & Zhang, A. W. (2022). How Does Human Capital Enhance Urban Economic Resilience. *Economic Survey*, 39, 121-134. (In Chinese) <https://www.cnki.com.cn/Article/CJFDTotat-CJKX202208009.htm>
- Li, L. G., Zhang, P. Y., Cheng, Y. et al. (2022). Spatio-Temporal Evolution and Influencing Factors of Economic Resilience in the Yellow River Basin. *Scientia Geographica Sinica*, 42, 557-567. (In Chinese) <https://d.wanfangdata.com.cn/periodical/dlxx202204001>
- Li, L. G., Zhang, P. Y., Tan, J. T. et al. (2019). Review on the Evolution of Resilience Concept and Research Progress on Regional Economic Resilience. *Human Geography*, 34, 1-7+151. (In Chinese) https://kns.cnki.net/kcms2/article/abstract?v=IHKEv291v2iRzMa63UK1QLu4EIfB-BRsX6ub7RBjNEMazL2OZfSnparS8-5y3N-ICk9ApKvQmA3xgStYHRrc4kdFTL-LEBsxxvZQrPphcEId5TSpoX8N6WqXsz-koxOp5NuMKsbZ_AK9qgbsKem15P9vyLsXoV22gUmDVZPFVg8OT-gGHw_2Wk4Tw==&uniplatform=NZKPT&language=CHS
- Liu, X. X., Zhang, X., & Li, S. W. (2021). Measurement of China's Macroeconomic Resilience: A Systemic Risk Perspective. *Social Sciences in China*, No. 1, 12-32+204. (In Chinese) https://kns.cnki.net/kcms2/article/abstract?v=IHKEv291v2itXKVYm17BrdF4niFBCA1sgZQ7RYuCyxqt1wxMlcPoHXdvHwFOrryLdnTHy_kThZICYE4gbtywBBFZBZzdN-tUnVL60f4AwSQnSTDURzypIN0V5jvN3dAMtNo-sA0ccALApCbstZ9NQuKIoyH2U8qBtji2-p0wpVGZlgRwaHXGUA==&uniplatform=NZKPT&language=CHS
- Martin, R. (2012). Regional Economic Resilience, Hysteresis and Recessionary Shocks. *Journal of Economic Geography*, 12, 1-32. <https://doi.org/10.1093/jeg/lbr019>
- Martin, R., & Sunley, P. (2015). On the Notion of Regional Economic Resilience: Conceptualization and Explanation. *Journal of Economic Geography*, 15, 1-42. <https://doi.org/10.1093/jeg/lbu015>
- Martin, R., Sunley, P., Gardiner, B., & Tyler, P. (2016). How Regions React to Recessions: Resilience and the Role of Economic Structure. *Regional Studies*, 50, 561-585. <https://doi.org/10.1080/00343404.2015.1136410>
- Ni, X., Liu, Y., & Zhao, H. (2026). Impact of Tourism Intensity on Destination Economic Resilience: Quasi-Natural Experiments Based on Double Machine Learning. *Tourism Management*, 113, Article 105353. <https://doi.org/10.1016/j.tourman.2025.105353>
- Portella-Carbó, F., Pérez-Montiel, J., & Ozcelebi, O. (2023). Tourism-Led Economic Growth

- across the Business Cycle: Evidence from Europe (1995–2021). *Economic Analysis and Policy*, 78, 1241–1253. <https://doi.org/10.1016/j.eap.2023.05.011>
- Reggiani, A., De Graaff, T., & Nijkamp, P. (2002). Resilience: An Evolutionary Approach to Spatial Economic Systems. *Networks and Spatial Economics*, 2, 211–229. <https://doi.org/10.1023/a:1015377515690>
- Sheng, Y. C., & Chen, X. (2026). Opening-Up Boosts the Resilience of Tourism Economy: Based on the Mediating Effect of Environmental Upgrading. *Tourism Forum*, 19, 25–36. (In Chinese)
https://kns.cnki.net/kcms2/article/abstract?v=JHKEv291v2iTBDr-kd7K5I7PBgjpVdhhXBrouVcQmQJhX8-ixyHpsb-SEWZt6XwvEu5aFAR_kjcp6KzyUbrXWLT-PGLnv6DueAmMDim6LWICXND0Z02xlYfiMPB7yNd1eDBgb1mYZ0jiMw7i0kuMcDibsm4oeTPvroeA7DIXOdZ2PGRpNhFS3A==&uniplatform=NZKPT&language=CHS
- Simmie, J., & Martin, R. (2010). The Economic Resilience of Regions: Towards an Evolutionary Approach. *Cambridge Journal of Regions, Economy and Society*, 3, 27–43. <https://doi.org/10.1093/cjres/rsp029>
- UNCTAD (2026). Fragile Prosperity: Natural Disasters and Economic Growth in Small Island Developing States (Working Paper). In *United Nations Conference on Trade and Development* (p. 25). Betascript Publishers.
- Walker, B., Holling, C. S., Carpenter, S. R., & Kinzig, A. P. (2004). Resilience, Adaptability and Transformability in Social-Ecological Systems. *Ecology and Society*, 9, Article 5. <https://doi.org/10.5751/es-00650-090205>
- Wang, Q., Zhao, L., Yu, W. et al. (2020). Spatial-Temporal Evolution Characteristics and Influencing Factors of Resilience of Tourism Economic System in China. *Geography and Geo-Information Science*, 36, 113–118. (In Chinese)
https://kns.cnki.net/kcms2/article/abstract?v=JHKEv291v2gbJf4XN3fLbROD0qZVSA9vDBHAm1k5tsdO0Tlwn7XkkNsmoLAcNKbu9TumIvsCxsEv7qsoXXyBpGnaGJ_xxLgYGdu-enu63s9Gp6fK4bj2akYOPW_LsBeQe6j6xH69vXOMAWzT8IC0eVUy-xSU3tcxpbzGSy1K1pr_4BorNWKvjg==&uniplatform=NZKPT&language=CHS
- Watson, P., & Deller, S. (2021). Tourism and Economic Resilience. *Tourism Economics*, 27, Article 135481662199094. (In Chinese)
<https://ideas.repec.org/a/sae/toueco/v28y2022i5p1193-1215.html>
- Xing, L., Zhang, G. H., & Duan, R. X. (2025). The Relationship between Tourism Economic Resilience and Efficiency in China's Coastal Cities. *Journal of Ocean University of China (Social Sciences)*, No. 4, 50–61. (In Chinese)
https://kns.cnki.net/kcms2/article/abstract?v=JHKEv291v2hWxnylk9tU5f9t0SFwMu-PvfXmygqrCJT53rGdneTYehGNltgUzGEI5R2PolLag3O-QihQEOJdlHfYB0Zr0v4iJDdiRpZGmx-5LfDXd0ND_W9Ye7Ge6iJEZEYabWA6lYox-UXtKB1q0xOg8BoZrnKmQ92id1a3XCbVLjX3O7sE6QQ==&uniplatform=NZKPT&language=CHS
- Xu, Y., & Zhang, L. L. (2019). The Economic Resilience of Chinese Cities and Its Origin: From the Perspective of Diversification of Industrial Structure. *Finance & Trade Economics*, 40, 110–126. (In Chinese)
https://kns.cnki.net/kcms2/article/abstract?v=JHKEv291v2jU-vlHGBy8dvlQrM6mgcsxnvL-VUcWQdD4chHoJGtQjI2OXJBLt-KSUQuvUWjVgwPDQmPaQesSxqHulErSf1BbImP1Pjn_IiimFnPWK-miiWFKsSPIRgJT-C6kpKasT7-zTYxFI9B7GaxvT2ZJw7v_05LCSD6APTZtZauBedBhfZUQ==&uniplatform=NZKPT&language=CHS

[form=NZKPT&language=CHS](#)

Yang, X. P., Wang, Z. Y., Peng, S. C. et al. (2025). Influencing Mechanisms of New Quality Productive Forces on Regional Tourism Resilience Development and Its Dynamic Simulation in Featured Provinces. *Economic Geography*, 45, 213-225. (In Chinese)

https://kns.cnki.net/kcms2/article/abstract?v=IHKEv291v2iIuuQqcXOb8mu19t4BUXYdH5hrwxT8wGk1zSLM_ridswGlmSPgyVPLWxXvCmS4jKAW5Wx9zLV7Jo1TBxcqtAVBal9tG4tL63Yl3NiplB5sVH0PxJqXF_exIUEsJqAP6Hz0xlaB0rnkKdTslamhCM6uecXD9HhRsFU-UMNjFC4H28A==&uniplatform=NZKPT&language=CHS&uniplatform=NZKPT&language=CHS

Zeng, B. (2020). Connotation Analysis and Index System Construction of Regional Economic Resilience. *Regional Economic Review*, No. 7, 74-78. (In Chinese)

https://kns.cnki.net/kcms2/article/abstract?v=IHKEv291v2gmp7t0jI4bLI66o1StVF8li6Ue9rvxN_ZJX7elupw3mOQq-wOaubsBUdz9-bF6xAfnf2uKpgB_Hk8Pcdpu3lQ2kIJP-1NP-mL_tr7Av4H_txaP-NXcf_ADsroqip28lWybjc74RuDOyhxS6ptBMRGu2KSQhe1KpY9iN-WlgN1sow==&uniplatform=NZKPT&language=CHS

Zheng, T., & Pan, Q. (2026). Too Much of a Good Thing? Tourism's Dual Role in Poverty Vulnerability. *Finance Research Letters*, 90, Article 109413.

<https://doi.org/10.1016/j.frl.2025.109413>