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Innovation Mechanisms of Rural Tourism Under the Digital Economy: Platform–Scenario Synergy and County-Level Governance Resilience an Empirical Study in the Policy Context of China’s “Digital Commerce Empowering Agriculture” Initiative

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Abstract: As the digital economy increasingly penetrates rural space, rural tourism is shifting from a “resource-driven” development model—largely determined by natural endowments and location advantages—to a “digitally enabled” innovation model characterized by platform mechanisms, digitally mediated scenarios, and institutional coordination. In practice, however, digital transformation in rural tourism has produced sharply divergent outcomes. While some regions have achieved value upgrading and industrial renewal, others face a problematic combination of short-lived traffic booms, rapid homogenization through imitation, and governance disorder. Explaining this divergence has become a central issue in research on the digital economy and rural revitalization.

Situated within China’s “Digital Commerce Empowering Agriculture” policy agenda, this study develops a tripartite analytical framework integrating digital platforms, scenario-based innovation, and county-level governance resilience to examine the mechanisms through which the digital economy drives rural tourism innovation. The analysis yields three main findings. First, digital platforms reduce



transaction costs and information asymmetries through algorithmic recommendation, credit-based evaluation, and two-sided market dynamics. In doing so, they activate long-tail demand oriented toward interests, culture, and lifestyle preferences, while reshaping market access conditions and competition rules in rural tourism. Second, supported by digital technologies, scenario-based innovation reconstructs fragmented rural resources, production processes, and cultural memory into experiential products with narrative coherence and immersive qualities. This facilitates a value shift from “selling scenery” to “selling ways of life” and constitutes a core pathway for escaping homogenized competition. Third, county-level governance resilience functions as an institutional anchor in digital transformation. Through standard setting, public data coordination, and risk early-warning arrangements, it buffers traffic shocks, mediates multi-actor interests, and provides institutional conditions for sustained innovation.

Comparative analysis of Anji County (Zhejiang Province) and Wuyuan County (Jiangxi Province) further shows that digitalization does not automatically generate high-quality rural tourism development. Development outcomes depend on whether platform mechanisms, scenario innovation, and county governance form a positive coupling. Traffic expansion without governance constraints may lead to the “digital erosion” of rural ecological capacity and social structure, while governance systems lacking platform and scenario support often fail to translate policy intentions into tangible development momentum.

This study contributes theoretically by moving beyond linear, technology-centered explanations and advancing a coupling perspective that integrates technology, space, and institutions. Practically, it offers policy implications for county governments seeking to prevent “traffic bubbles,” strengthen digital governance capacity, and guide rural tourism toward endogenous and sustainable development.

Keywords: digital economy; rural tourism; innovation mechanisms; platform economy; scenario-based innovation; county-level governance resilience; digital commerce empowering agriculture

1. Introduction

1.1. Research Background and Significance



1.1.1 The Strategic Convergence of the Digital Economy and Rural

Revitalization

Since the early twenty-first century, the digital economy has become a key force reshaping economic structures and social organization. Technologies such as big data, artificial intelligence, cloud computing, blockchain, and mobile internet have transformed production organization, resource allocation, and public governance, with impacts extending far beyond firm-level efficiency gains to broader institutional and spatial restructuring (Vial, 2019; Nambisan et al., 2017). In China, one of the most active arenas of digital economic development, digitalization has expanded continuously from urban centers into counties and rural areas, becoming increasingly embedded in governance practices and territorial reorganization (China Academy of Information and Communications Technology (CAICT), 2024).

In parallel, China has advanced a national strategy of rural revitalization. Historically, the urban–rural dual structure, one-way factor flows, and uneven public service provision constrained rural development (Liu, 2018; Li and Ye, 2019). Rural revitalization represents a shift toward a development model emphasizing two-way factor mobility, endogenous rural development, and integrated urban–rural relations. Within this macro context, digital technologies are expected to reduce spatial barriers, lower transaction costs, and enhance governance capacity at the local level (Sun and Zhang, 2021).

Rural tourism occupies a distinctive position in the rural revitalization strategy because it directly connects urban demand with rural resources. It integrates agriculture, rural culture, and service industries to generate employment and income, while simultaneously relying on ecological systems, public space, and local cultural practices (Lane and Kastenholtz, 2015). Consequently, rural tourism is not merely an industrial issue but also a matter of governance, community structure, and cultural reproduction.

Under the “Digital Commerce Empowering Agriculture” initiative and related digital rural development agendas, platforms, data, and algorithms are reshaping the market structure and value chain of rural tourism (The Central People’s Government of the People’s Republic of China, 2024; National Development and Reform Commission of the People’s Republic of China, 2023). However, rural tourism differs



fundamentally from urban tourism and mature scenic destinations. Suppliers are highly dispersed, products are often non-standardized, and development depends heavily on public resources and collective action (Ding and Liu, 2020). These characteristics create both substantial opportunities and significant risks during digital transformation.

1.1.2 From “Resource-Driven” Development to “Digitally Enabled”

Innovation: Practical Significance

Traditional rural tourism development largely relied on static resources such as natural landscapes, cultural heritage, and geographic location. Within this framework, resource endowments were treated as decisive determinants of development outcomes, and disparities were often attributed to “innate conditions” (Lane and Kastenzholz, 2015). Under the rise of the digital economy, however, this resource-centered explanation has become increasingly insufficient.

Empirical evidence from China shows that some rural areas with relatively modest resource advantages have achieved rapid upgrading through platform operation, digital marketing, and institutional coordination, while some resource-rich destinations have experienced recurrent “internet-famous-then-decline” cycles (Wang and Wang, 2020; Ctrip Research Institute, 2023). This divergence suggests that the key question is no longer simply what resources exist, but how resources are organized, narrated, and governed under digital conditions.

The digital economy does not merely amplify existing resource value. It reconfigures market linkages through platform mechanisms, reshapes spatial experience through digitally mediated scenarios, and modifies institutional operation through data-driven governance tools (Sigala, 2018; Gretzel et al., 2015). In practice, three structural problems have become particularly visible.

First, some destinations become excessively dependent on platform traffic and short-video exposure, resulting in short popularity cycles that fail to accumulate long-term development capabilities (Meituan Research Institute, 2023). Second, algorithmic recommendation systems and template-based content production accelerate homogenization, weakening local distinctiveness and cultural depth (Zuboff, 2019). Third, rapid traffic inflows may exceed the carrying capacity of counties and villages with limited governance capability, triggering congestion,



environmental pressure, and inequitable benefit distribution (Ministry of Culture and Tourism of the People's Republic of China, 2024).

Accordingly, this research has practical significance in two respects: explaining the mechanisms through which the digital economy reshapes innovation in rural tourism, and providing actionable governance insights for county authorities and local actors seeking sustainable development paths.

1.2. Problem Statement: Structural Dilemmas Beneath Digital Prosperity

Despite continuous improvements in rural digital infrastructure, innovation outcomes in rural tourism remain highly uneven. This divergence cannot be explained solely by the availability of technology; rather, it reflects deeper imbalances among market mechanisms, spatial production of experience, and institutional regulation (Chen and Huang, 2021).

First, in platform-dominated markets, rural tourism is increasingly embedded in algorithm-shaped competition. Recommendation systems, rating regimes, and traffic allocation mechanisms determine visibility and market access (Buhalis and Law, 2008; Sigala, 2018). Actors who rapidly adapt to platform rules and produce high-engagement content tend to benefit, whereas rural experiences centered on everyday rhythms, slow living, and local cultural texture may be marginalized. Although this selection process may improve short-term efficiency, it risks aesthetic convergence and a narrowing of value orientations (Zuboff, 2019).

Second, scenario innovation exhibits strong polarization. Some destinations construct sustainable tourism products through digital storytelling, immersive experience design, and the integration of production and consumption contexts (Gretzel et al., 2015). Others remain at a superficial level of digitalization, replicating standardized “check-in” attractions or installing symbolic facilities without substantive experience design. This indicates that digital technology does not automatically generate high-quality scenarios.

Third, county-level governance capacity constitutes a critical variable. Rural tourism relies heavily on public resources and collective coordination, and development boundaries are shaped by infrastructure, ecological carrying capacity, and social organization (Liu, 2018). When platform-driven traffic exceeds these



boundaries, short-term gains can rapidly turn into long-term costs. Governance disorder undermines visitor experience and may erode local trust and community stability (Anji County People's Government, 2022).

Accordingly, this study advances the core argument that innovation in rural tourism under the digital economy does not stem from a single technological factor. Instead, it emerges from interactions among platform mechanisms, scenario-based innovation, and county-level governance resilience.

1.3. Research Design: Approach, Methods, and Technical Route

This study adopts “platform–scenario–governance” as the core analytical thread and constructs an integrated framework to explain rural tourism innovation under the digital economy. It shifts from a single-technology perspective to a systems perspective that simultaneously incorporates market structure, spatial experience, and institutional environment (Nambisan et al., 2017).

Methodologically, the study employs a multiple-case research design, selecting Anji County (Zhejiang Province) and Wuyuan County (Jiangxi Province) as focal cases. These counties are representative in terms of resource endowments, development trajectories, and governance arrangements, while exhibiting distinct emphases in digital practice (Anji County People's Government, 2022; Wuyuan County People's Government, 2021).

The research combines three methodological components. First, policy documents, development plans, and regulatory texts are analyzed to establish the institutional and policy context of digital rural tourism development (The Central People's Government of the People's Republic of China, 2024). Second, publicly available platform indicators and market reports are examined to observe changes in traffic patterns, product structure, and innovation orientation (China Internet Network Information Center (CNNIC), 2024; Ctrip Research Institute, 2023). Third, case deconstruction and cross-case comparison are conducted to reveal how differences in governance arrangements shape digital transformation outcomes.

2. Theoretical Foundations and Literature Review



This chapter provides the theoretical grounding for analyzing innovation mechanisms in rural tourism under the digital economy. By reviewing research on digital transformation, the platform economy, scenario-based innovation, and governance resilience, it clarifies the conceptual foundations of this study, identifies limitations in existing literature, and establishes the theoretical entry points for the proposed coupling framework.

2.1. Digital Transformation: From Technology Adoption to Structural Reconfiguration

Digital transformation has become a central theme across economics, management, and sociology. Early studies often conceptualized digital transformation as the adoption and diffusion of information technologies within organizations, emphasizing efficiency gains, cost reduction, and process optimization. In this view, digitalization was largely treated as a technical upgrade layered onto existing organizational structures.

More recent research emphasizes that digital transformation entails deeper structural reconfiguration rather than mere technology adoption. Digital technologies reshape organizational boundaries, decision-making processes, institutional arrangements, and power relations (Vial, 2019; Nambisan et al., 2017). Through datafication and algorithmization, decision bases shift from experience and hierarchy toward real-time data and automated analytics, generating spillover effects on market structure and governance mechanisms.

In tourism studies, the concept of “smart tourism” highlights information integration, real-time feedback, and intelligent service provision (Gretzel et al., 2015; Sigala, 2018). However, rural contexts differ markedly from urban tourism systems. Rural tourism suppliers are fragmented, enterprises are often small-scale, and governance conditions vary significantly across regions (Lane and Kastenholtz, 2015). As a result, technology adoption alone cannot explain divergent development outcomes. What matters is how digital technologies become embedded in local social structures, spatial forms, and institutional environments.

2.2. Platform Economy: Algorithmic Intermediation and Power



Redistribution

Platform economy theory explains how digital platforms connect heterogeneous actors through modular architectures, standardized interfaces, and rule-based coordination. By reducing search costs and enabling multi-sided interactions, platforms can lower entry barriers and expand market access for peripheral or remote actors, including rural tourism destinations (Buhalis and Law, 2008).

In tourism, online travel agencies, short-video platforms, and social media function as key intermediaries linking rural supply with urban demand. Through recommendation systems, ratings, and content dissemination, platforms amplify market reach and activate long-tail demand oriented toward niche interests and lifestyle preferences (Sigala, 2018).

However, platforms are not neutral intermediaries. Algorithmic recommendation, reputation systems, and traffic allocation mechanisms operate as forms of implicit governance that reshape competition rules and redistribute power (Zuboff, 2019). Control over visibility, ranking, and data increasingly concentrates in platform operators. In rural tourism, where products rely heavily on online exposure and reputation, algorithmic preferences can steer innovation toward standardized, visually optimized formats, accelerating homogenization and concentrating value capture (Wang and Wang, 2020). These dynamics indicate that platform effects are conditional and mediated by governance capacity.

2.3. Scenario Theory: The Production of Experience Through Space and Narrative

Scenario theory emphasizes that consumption is embedded in specific spatial, social, and symbolic contexts. Consumers do not merely purchase goods or services; they engage with meanings, narratives, and experiential settings. In tourism, value creation increasingly depends on immersive experience design rather than on physical attractions alone (Sigala, 2018).

In rural tourism, scenario-based innovation involves reconstructing fragmented rural resources, production processes, and cultural practices into coherent experiential products. Lifestyle imaginaries, cultural narratives, and everyday rural practices become central to value creation (Lane and Kastenholz, 2015). Digital



technologies—such as immersive media, livestreaming, and interactive content—expand the capacity to produce, circulate, and reproduce such scenarios across time and space (Gretzel et al., 2015).

At the same time, scenario innovation is not value-neutral. When detached from local social practices and cultural logic, digital scenarios may transform rural life into staged spectacle, producing symbolic representations of “rurality” that alienate residents (Zuboff, 2019). This tension highlights the need to analyze scenario innovation not only as a creative process but also as an institutional and governance issue.

2.4. Governance Resilience: The County Level as an Institutional Anchor

Governance resilience refers to the capacity of institutions to absorb shocks, adapt to change, and transform under conditions of uncertainty. In tourism development, resilience is critical because tourism systems are sensitive to demand volatility, environmental constraints, and social externalities (Lane and Kastenholz, 2015).

In China’s administrative structure, counties occupy a pivotal position linking national policy implementation with local development practice. County governments coordinate infrastructure provision, land use, ecological protection, public services, and market regulation (Liu, 2018; Li and Ye, 2019). In the context of digital transformation, county governance must simultaneously enable digital empowerment and constrain the over-extraction of public resources by platform traffic and capital (Chen and Huang, 2021).

Governance resilience at the county level therefore shapes whether digital platforms and scenario innovation can translate into sustainable development outcomes. Through standard setting, data coordination, risk monitoring, and cross-actor coordination, resilient governance provides institutional stability and buffers against the negative externalities of rapid digital expansion (Sun and Zhang, 2021).

2.5. Review Summary and Research Implications



Existing research has generated valuable insights into digital transformation, platform dynamics, scenario-based experience production, and governance. However, the literature remains fragmented. Many studies focus on technology adoption, platform effects, or experiential design in isolation, while institutional mediation effects are often under-theorized. Moreover, county-level governance in China is insufficiently foregrounded in analyses of digital rural development (Chen and Huang, 2021).

This study addresses these gaps by proposing a “platform–scenario–governance” coupling framework. Rather than treating digitalization as a single technological variable, it conceptualizes rural tourism innovation as a system-level process whose outcomes depend on interactions among market mechanisms, spatial experience production, and institutional resilience. This framework provides the theoretical coordinate for the analytical model developed in Chapter 3 and the empirical examination in subsequent chapters.

3. Core Analytical Framework: Coupling Mechanisms of Platforms, Scenarios, and County Governance

This chapter develops an integrated analytical framework to explain how the digital economy drives innovation in rural tourism. Rather than treating digitalization as a single technological variable, the framework conceptualizes rural tourism transformation as a system-level process whose outcomes depend on the coupling among platform mechanisms, scenario-based innovation, and county-level governance resilience. This coupling perspective provides the analytical bridge between macro digital transformation and micro-level innovation outcomes.

3.1. Platform Mechanisms: Dual Roles as “Market Amplifier” and “Selection Device”

Digital platforms function as key gateways connecting rural tourism supply with broader and more diversified demand. Through search functions, algorithmic recommendation, reputation systems, and social dissemination, platforms significantly expand market reach and reduce transaction costs for geographically remote rural



destinations (Buhalis and Law, 2008; Sigala, 2018). In this sense, platforms act as market amplifiers, activating long-tail demand oriented toward niche interests, cultural preferences, and lifestyle consumption.

At the same time, platforms operate as selection devices. Algorithmic recommendation systems, ranking rules, and traffic allocation mechanisms continuously filter actors and products according to engagement metrics, visibility performance, and platform-defined standards. This algorithmic governance reshapes competition rules by privileging responsiveness, content compatibility, and short-term engagement (Zuboff, 2019).

In rural tourism, where products are highly experience-based and reputation-sensitive, platform selection can mitigate trust deficits by translating service quality into reputational signals. However, it can also incentivize imitation, format convergence, and short-term traffic chasing, thereby narrowing innovation trajectories (Wang and Wang, 2020). Consequently, platform empowerment is inherently conditional and depends on whether governance and scenario depth can counterbalance algorithmic selection pressures.

3.2. Scenario Innovation: Digital Reconstruction of Spatial Value

Scenario innovation determines what tourists actually consume and how value is created. Under digital mediation, rural tourism competitiveness increasingly depends on whether fragmented rural resources—landscapes, agricultural activities, cultural practices, and everyday life—can be reconstructed into coherent and immersive experiences with narrative continuity (Lane and Kastenholz, 2015).

Digital storytelling, immersive media, livestreaming, and interactive content enable rural tourism destinations to shift value creation from “selling scenery” toward “selling ways of life,” integrating production and consumption contexts into experiential systems (Gretzel et al., 2015; Sigala, 2018). Through scenario-based innovation, rural tourism products become differentiated not only by physical attributes but also by symbolic meaning and emotional engagement.

However, scenario innovation also carries structural risks. When driven primarily by platform aesthetics or external design logics, scenarios may become superficial representations detached from local social practice. Such staged authenticity can transform rural space into spectacle and weaken community participation (Zuboff,



2019). This highlights that scenario innovation must be institutionally anchored to function as a sustainable innovation mechanism rather than a symbolic overlay.

3.3. County Governance: Institutional Foundations and Shock Absorption

County-level governance provides the institutional environment within which platform mechanisms and scenario innovation operate. In China's administrative system, counties are responsible for coordinating infrastructure provision, land use regulation, ecological protection, public services, and market supervision, making them the primary institutional anchor for rural tourism development (Liu, 2018; Li and Ye, 2019).

Governance resilience at the county level refers to the capacity to absorb shocks, manage uncertainty, and coordinate multiple actors under conditions of rapid digital expansion. Through standard setting, digital regulation, public data coordination, and cross-departmental collaboration, county governments can reduce uncertainty and establish minimum trust conditions for market participation (Chen and Huang, 2021).

In the context of volatile platform traffic, governance resilience is particularly critical. Traffic surges may strain infrastructure, ecological systems, and community life. Effective governance enables early warning, boundary setting, and risk mitigation, preventing extractive overuse of rural space and transforming short-term popularity into long-term development capacity (Sun and Zhang, 2021).

3.4. Coupling Model and Analytical Propositions

Based on the above analysis, this study proposes a coupling model in which platforms, scenarios, and county governance interact to shape rural tourism innovation outcomes. Platforms provide market linkage and selection logic; scenario innovation generates experiential value and differentiation; county governance supplies institutional stability and boundary conditions.

Sustainable innovation emerges only when these three dimensions are positively coupled. Strengthening any single dimension in isolation is insufficient. Platform expansion without governance constraints may lead to traffic-driven disorder; scenario innovation without platform support may struggle to reach markets;



governance capacity without platform and scenario integration may fail to translate policy intent into development momentum.

Accordingly, the framework advances three analytical propositions. First, the innovation effects of digital platforms in rural tourism are conditional on governance and scenario embedding (Buhalis and Law, 2008; Sigala, 2018). Second, scenario-based innovation is the core mechanism for value upgrading but requires institutional anchoring to remain sustainable (Gretzel et al., 2015). Third, county-level governance resilience determines whether digital transformation produces endogenous development or short-lived traffic cycles (Chen and Huang, 2021).

This coupling framework provides the analytical coordinate for the empirical analysis in Chapter 4 and underpins the subsequent discussion of risks and policy implications.

4. Empirical Evidence: Case Deconstruction and Comparative Validation

Building on the coupling framework developed in Chapter 3, this chapter examines empirical evidence from typical county-level cases to test the explanatory plausibility of the proposed “platform–scenario–governance” model. Through comparative case analysis, it demonstrates how differences in coupling configurations shape divergent innovation outcomes in rural tourism under the digital economy.

4.1. Macro Context: Structural Features of Rural Tourism

Digitalization

In recent years, continuous improvements in rural digital infrastructure—including broadband coverage, mobile internet penetration, and platform accessibility—have created favorable conditions for the digitalization of rural tourism (China Internet Network Information Center (CNNIC), 2024; China Academy of Information and Communications Technology (CAICT), 2024). Online travel platforms, short-video applications, and social media have become dominant channels through which rural destinations reach potential visitors.



At the macro level, the structure of rural tourism consumption is gradually shifting. National monitoring data indicate that revenue composition in many counties has moved away from ticket-based income toward diversified sources such as accommodation, catering, experiential activities, and cultural products, reflecting a transition from sightseeing-oriented tourism toward experience-based consumption (Ministry of Culture and Tourism of the People's Republic of China, 2024).

However, despite broadly similar infrastructure conditions, performance divergence across counties remains pronounced. Some destinations achieve sustained upgrading and brand consolidation, while others experience boom-and-bust cycles driven by transient platform traffic (Ctrip Research Institute, 2023). This divergence suggests that infrastructure and technology availability alone do not determine outcomes; rather, differences in platform use, scenario design, and governance capacity play decisive roles.

4.2. Case 1: Anji County—Governance-Led Platform Synergy and Scenario Deepening

Anji County represents a governance-led digital transformation pathway. Rather than prioritizing rapid traffic growth, Anji has focused on constructing an institutional framework that integrates platform mechanisms with regulatory coordination and scenario development (Anji County People's Government, 2022).

At the governance level, Anji has established cross-departmental coordination mechanisms to integrate data related to tourism operations, environmental protection, public services, and market supervision. Digital monitoring systems are used to track visitor flows, accommodation capacity, and ecological indicators, enabling pre-emptive regulation and boundary setting before traffic surges occur (Ministry of Culture and Tourism of the People's Republic of China, 2024).

Platform mechanisms in Anji are embedded within this governance framework. Credit-based evaluation systems link compliance with environmental standards, service quality, and safety requirements to market visibility and platform access. This arrangement reduces trust costs and aligns platform incentives with long-term quality improvement rather than short-term traffic maximization (Wang and Wang, 2020).

Scenario innovation in Anji emphasizes depth and continuity. Tourism products are designed to encourage longer stays and diversified experiences, integrating rural



lifestyles, ecological values, and cultural practices into coherent experiential narratives. As a result, Anji has extended visitor duration, increased per-capita spending, and maintained relatively stable demand across seasons (Ctrip Research Institute, 2023).

4.3. Case 2: Wuyuan County—Platform-Driven Cultural Scenario Reconstruction

Wuyuan County illustrates a pathway characterized by strong platform engagement and cultural scenario reconstruction. Faced with dispersed resources and pronounced seasonality, Wuyuan has actively leveraged digital platforms to expand market reach and segment audiences (Wuyuan County People’s Government, 2021).

Through cooperation with online travel platforms and content-based social media, Wuyuan uses algorithmic matching to connect niche cultural interests with specific tourism products. Traditional architecture, farming rituals, and folk customs are reconstructed into recognizable narrative assets, enabling scenario “IP-ization” and year-round communicability (Meituan Research Institute, 2023).

Scenario innovation in Wuyuan focuses on symbolic coherence and cultural storytelling. Digital content, themed festivals, and curated routes integrate multiple villages and attractions into unified experiential scenarios. This has enhanced brand recognition and mitigated the limitations imposed by geographic dispersion (Ctrip Research Institute, 2023).

At the same time, heavy reliance on platform traffic creates governance pressure during peak periods. Sudden demand surges strain infrastructure and public services, highlighting the limits of platform-driven growth without sufficiently robust governance coordination (Ministry of Culture and Tourism of the People’s Republic of China, 2024). This case underscores the importance of strengthening institutional mediation alongside platform and scenario innovation.

4.4. Comparative Case: Village M—The Traffic Trap and Governance Failure

Village M provides a contrasting example of a traffic-driven development path characterized by weak coupling among platforms, scenarios, and governance. The



village achieved rapid visibility through short-video virality and aggressive price competition, attracting large visitor flows within a short period (Meituan Research Institute, 2023).

However, scenario innovation remained superficial. Tourism offerings largely replicated standardized “check-in” attractions and visual symbols without substantive experience design or integration with local life. Service quality varied widely, and price disorder became common as demand surged (Wang and Wang, 2020).

Governance capacity in Village M was insufficient to manage the rapid influx. Infrastructure congestion, environmental pressure, and conflicts over benefit distribution emerged quickly. As negative reviews accumulated and reputational signals deteriorated, algorithmic exposure declined, leading to a rapid collapse in traffic (Ctrip Research Institute, 2023).

In this case, benefits were captured disproportionately by external operators, while local households gained limited sustainable income. The village illustrates how traffic expansion without scenario depth and governance resilience can generate short-lived prosperity followed by structural decline.

4.5. Comparative Analysis: Coupling Degree and Innovation Performance

Comparative analysis across the cases reveals clear patterns. Where platform mechanisms are embedded within governance frameworks and combined with deep scenario innovation, digitalization supports sustained upgrading. Where one dimension dominates while others remain weak, outcomes are unstable.

Anji’s governance-first approach buffers traffic shocks and aligns platform incentives with long-term quality. Wuyuan’s platform–scenario synergy enhances differentiation but exposes governance bottlenecks. Village M’s traffic-only path lacks both institutional anchoring and experiential depth, resulting in boom-and-bust dynamics (Wang and Wang, 2020; Meituan Research Institute, 2023).

These findings support the central proposition of the coupling framework: innovation performance in rural tourism under the digital economy is determined by the degree and quality of coupling among platforms, scenarios, and county-level governance.



4.6. Empirical Summary and Implications

The empirical evidence demonstrates that digitalization does not automatically generate high-quality rural tourism development. Platform traffic is neither inherently beneficial nor inherently harmful; its effects depend on how it is mediated by scenario innovation and governance resilience.

Counties that prioritize governance capacity and scenario depth are better positioned to transform digital opportunities into endogenous development momentum. Conversely, neglecting institutional and experiential dimensions increases vulnerability to volatility, homogenization, and social costs. This chapter thus provides empirical grounding for the risk reflection in Chapter 5 and the policy implications discussed in Chapter 6.

5. Risk Reflection: Algorithmic Hegemony, the Digital Divide, and Rural Alienation

Digital transformation offers substantial opportunities for innovation in rural tourism, but it also generates structural risks when the coupling among platform mechanisms, scenario-based innovation, and county-level governance becomes imbalanced. This chapter reflects on three interrelated risks—algorithmic hegemony, the digital divide, and rural alienation—and analyzes their underlying mechanisms and governance implications within the digital economy context.

5.1. Algorithmic Hegemony

As digital platforms increasingly mediate market access and visibility, algorithmic systems play a decisive role in shaping what becomes visible, valuable, and profitable in rural tourism. Recommendation algorithms, engagement metrics, and ranking rules operate as implicit governance mechanisms that privilege certain content formats, aesthetics, and behavioral patterns (Buhalis and Law, 2008; Sigala, 2018).

In practice, algorithmic preference often favors visually striking, standardized, and easily consumable content. Rural destinations are incentivized to imitate viral



templates and optimize for short-term engagement, compressing complex local realities into simplified symbols. Over time, this process can narrow innovation trajectories and erode cultural diversity (Zuboff, 2019).

Algorithmic hegemony also influences public governance behavior. When policy evaluation and local performance assessment internalize platform indicators—such as traffic volume, exposure rankings, or online popularity—as primary measures of success, long-term public values may be crowded out. Ecological protection, cultural continuity, and community well-being risk becoming secondary to short-term visibility gains (Chen and Huang, 2021). In this sense, algorithmic hegemony extends beyond market dynamics and reshapes governance rationality.

5.2. The Digital Divide

Digital empowerment in rural tourism is unevenly distributed. Although platforms lower entry barriers in principle, effective participation requires digital skills, capital investment, and familiarity with platform rules. Digitally skilled returnees, entrepreneurial teams, and external operators are more likely to occupy high-value positions in content production, branding, and platform negotiation (Meituan Research Institute, 2023).

In contrast, older residents, small households, and actors with limited digital literacy may remain confined to low-income roles such as basic service provision or informal labor. Platform interfaces, data-driven evaluation systems, and digital governance tools can unintentionally reinforce these disparities by favoring standardized and data-intensive actors (Sun and Zhang, 2021).

The digital divide thus manifests not only as unequal access to technology but also as unequal capacity to capture value from digital transformation. Without targeted capacity building and inclusive institutional design, digitalization may solidify existing inequalities and weaken social cohesion within rural communities (Li and Ye, 2019).

5.3. Rural Alienation

Scenario-based innovation, when detached from everyday rural life, can produce forms of rural alienation. In such cases, rural space is transformed into a staged



spectacle designed primarily for external consumption rather than a living community rooted in local practices and social relations (Lane and Kastenholz, 2015).

Over-reliance on tourism and platform traffic increases vulnerability to shifts in consumer preferences and algorithmic trends. When digital popularity declines, communities that have reoriented livelihoods, land use, and social organization around tourism may face economic instability and social disruption (Wang and Wang, 2020).

Rural alienation is also reflected in cultural reproduction. When cultural practices are selectively packaged for market appeal, their meanings may be altered or diluted. Residents may experience a loss of ownership over local culture, undermining identity, participation, and long-term stewardship (Zuboff, 2019). These dynamics underscore the importance of anchoring scenario innovation in local social structure and governance arrangements.

5.4. Chapter Summary

The risks discussed in this chapter share a common root: imbalanced coupling among platform mechanisms, scenario innovation, and governance resilience. Algorithmic hegemony emerges when platform logic dominates without institutional mediation; the digital divide widens when inclusive governance and capacity building are weak; rural alienation arises when scenario innovation prioritizes spectacle over lived experience.

Addressing these risks requires a people-centered digitalization path. Strengthening county-level governance resilience, investing in inclusive digital capacity building, and embedding innovation within local culture and institutions are essential for ensuring that digital transformation supports sustainable and equitable rural tourism development (Sun and Zhang, 2021; Chen and Huang, 2021).

6. Conclusions and Outlook

6.1. Main Conclusions

This study examines the innovation mechanisms of rural tourism under the digital economy by integrating platform development, scenario-based innovation, and



county-level governance within a unified analytical framework. Moving beyond linear and technology-centered explanations, it demonstrates that digital transformation in rural tourism is a system-level process whose outcomes depend on the degree and quality of coupling among these three dimensions (Vial, 2019; Nambisan et al., 2017).

First, digital platforms function as critical gateways connecting rural tourism supply with diversified demand. Through algorithmic recommendation, reputation systems, and two-sided market dynamics, platforms reduce transaction costs and activate long-tail demand oriented toward interests, culture, and lifestyle preferences (Buhalis and Law, 2008; Sigala, 2018). However, platform effects are inherently conditional. Without institutional mediation, algorithmic selection may incentivize homogenization, short-term traffic chasing, and uneven value capture (Zuboff, 2019; Wang and Wang, 2020).

Second, scenario-based innovation constitutes the core mechanism for value upgrading in rural tourism. By digitally reconstructing fragmented rural resources, production processes, and cultural practices into coherent and immersive experiences, scenario innovation enables a shift from “selling scenery” to “selling ways of life” (Gretzel et al., 2015; Lane and Kastenholz, 2015). Yet scenario innovation alone is insufficient. When detached from local social structure and cultural logic, it risks superficial imitation and rural alienation (Zuboff, 2019).

Third, county-level governance resilience serves as the institutional anchor of digital transformation. Through standard setting, data coordination, and risk monitoring, county governments buffer traffic shocks, mediate multi-actor interests, and provide boundary conditions for sustainable development (Liu, 2018; Li and Ye, 2019; Chen and Huang, 2021). Governance resilience determines whether digital opportunities are translated into endogenous development capacity or dissipated through disorderly expansion.

Overall, the study concludes that sustainable innovation in rural tourism under the digital economy emerges only when platform mechanisms, scenario innovation, and county governance form a positive and balanced coupling. Strengthening any single dimension in isolation is insufficient to generate high-quality development.

6.2. Policy Implications

The findings of this study yield several policy implications for rural tourism development and digital governance.



First, evaluation systems should shift from traffic-oriented indicators toward quality-oriented metrics. County governments should prioritize indicators such as visitor satisfaction, revisit rates, ecological carrying capacity, community participation, and income distribution, rather than relying primarily on platform exposure or visitor volume (Ministry of Culture and Tourism of the People's Republic of China, 2024).

Second, governance capacity should be strengthened to guide platform behavior. This includes integrating tourism-related data across departments, establishing early-warning mechanisms for traffic surges, and linking compliance with environmental and service standards to market access and visibility. Such measures help align platform incentives with long-term public objectives (Chen and Huang, 2021; Sun and Zhang, 2021).

Third, inclusive digital capacity building is essential. Training programs, technical support, and institutional arrangements should lower participation barriers for local residents, small operators, and vulnerable groups, reducing the risk that digital transformation exacerbates inequality (Li and Ye, 2019; Meituan Research Institute, 2023).

Fourth, scenario innovation should be guided toward authenticity and sustainability. Policies should encourage innovation rooted in local culture, everyday practices, and community participation, preventing the over-staging and commodification of rural life (Lane and Kastenholz, 2015).

6.3. Theoretical Contributions

This study contributes to existing literature in three main ways. First, it advances a coupling perspective that integrates technology, space, and institutions, enriching research on the digital economy and rural tourism beyond single-factor explanations (Vial, 2019).

Second, it extends platform economy theory by highlighting the conditional and governance-mediated nature of platform effects in rural contexts, where public resources, collective action, and ecological constraints play a decisive role (Buhalis and Law, 2008; Zuboff, 2019).

Third, it foregrounds county-level governance resilience as a critical but under-theorized variable in analyses of digital rural development, particularly within China's institutional setting (Liu, 2018; Chen and Huang, 2021). By doing so, the



study contributes to a more institutionally grounded understanding of digital transformation outcomes.

6.4. Limitations and Future Research

This study has several limitations. Empirically, it relies on comparative case analysis and qualitative reasoning, which limits generalizability. Future research could employ quantitative methods, panel data, or mixed-method approaches to test the proposed coupling framework across a larger sample of counties (Wang and Wang, 2020).

Second, the analysis is grounded in China's county governance context. While the framework has broader relevance, its applicability to other institutional environments requires further examination through cross-national comparison.

Finally, as digital technologies continue to evolve—particularly with the rise of generative artificial intelligence, digital twins, and immersive media—future research should explore how new technological forms reshape platform governance, scenario production, and institutional capacity (Gretzel et al., 2015). Attention should also be paid to long-term impacts on rural social structure, cultural reproduction, and ecological sustainability to ensure that digital transformation remains people-centered and development-oriented.

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