Evaluation Index System and Development Path for High-Quality Development of Red Tourism: A Case Study of Red Tourism Cities (Postprint)

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Date: 2023-02-02T00:00:00+00:00

Abstract

Based on the five major development concepts, a high-quality development evaluation system for red tourism was constructed, selecting 12 key red tourism cities as case studies to explore the evolutionary characteristics of their high-quality red tourism development, and proposing cultivation paths for high-quality development through multi-case qualitative comparative analysis and network text analysis of typical cases. The results show: (1) The overall level of high-quality development of red tourism in the case areas is generally low, with significant regional differences; among the six subsystems, the increases in growth drivers, growth structure, and growth mode are particularly notable. (2) The high-quality development of red tourism in the case areas exhibits polarization characteristics. Specifically, the obstacle systems causing mismatches in various development types differ, and their dominant obstacle factors demonstrate a transformation process from internal resource advantages to external environmental coordination. (3) Analysis of the driving mechanisms across multiple case areas reveals that high-quality development of red tourism is the result of joint action among six subsystems, wherein growth drivers constitute the core factor, growth structure the symbiotic factor, growth mode the non-sensitive factor, growth form the sensitive factor, growth outcomes the external factor, and growth foundation the supporting factor. (4) Content analysis of typical cases has distilled three key cultivation paths: comprehensively expanding the positive externalities of red tourism, optimizing the symbiotic environment for red tourism under the digital economy pattern, and stimulating mass tourism market demand for red study tours.

Full Text

Preamble

Evaluation Index System and Cultivation Path of High-Quality Development of Red Tourism: A Case Study of Red Tourism Cities

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Abstract: Based on the five development concepts, this study constructs an evaluation system for the high-quality development of red tourism, selects key red tourism cities as research cases, explores their evolutionary characteristics of high-quality development, and proposes cultivation paths using multi-case qualitative comparative analysis and network text analysis of typical cases. The results indicate that: (1) The overall level of high-quality development of red tourism in the case cities is relatively low, with significant regional differences, and the subsystems of growth dynamics, growth structure, and growth mode show particularly notable upward trends. (2) The high-quality development of red tourism exhibits polarized characteristics. The specific obstacle systems causing mismatches in various development types differ, and the dominant obstacle factors demonstrate a transformation process from internal resource advantages to external environmental coordination. (3) Analysis of the driving mechanisms across multiple cases reveals that high-quality development of red tourism results from the joint action of six subsystems, among which growth dynamics is the core factor, growth structure is the symbiotic factor, growth mode is the non-sensitive factor, growth form is the sensitive factor, growth outcome is the externality factor, and growth foundation is the supporting factor. (4) Content analysis of individual cases identifies three key cultivation paths: comprehensively expanding the positive externality effects of red tourism, optimizing the symbiotic environment of red tourism under the digital economy pattern, and stimulating the mass tourism market demand for red study tours.

Keywords: red tourism; high-quality; index system; cultivation path

1 Evaluation Index System for High-Quality Development of Red Tourism

1.1 Analytical Framework for High-Quality Development of Red Tourism

High-quality development aims to meet people' s ever-growing real needs and represents the concentrated embodiment of the five new development concepts: innovation, coordination, green development, openness, and sharing. This study

posits that innovative development serves as the primary growth driver for high-quality red tourism development, encompassing human capital, innovation capacity, and environment, and reflecting the enhancement of red tourism product development and new business format cultivation. Coordinated development addresses internal industrial development and external system coordination issues within red tourism, representing the growth structure. Green development improves the ecological quality of regional red tourism through continuous environmental governance investment, representing the growth mode. Open development expands regional red tourism influence by shifting from "bringing in" to balancing "going out," representing the growth form. Shared development demonstrates the public welfare aspect of red tourism development and enhances people's wellbeing, representing the growth outcome. Cultural tourism resources serve as the carrier for red tourism activities and red gene transmission, representing the growth foundation (Fig. 1).

1.2 Evaluation Index System

This study employs text-based grounded theory analysis to subdivide the various systems of high-quality red tourism development through three-level coding. Specific procedures involve retrieving the keyword "red tourism high-quality" on Baidu webpages, CNKI, and WeChat official accounts. After removing duplicate samples and irrelevant texts, 1,142 articles were obtained. Open coding was performed on these texts to extract subcategories (secondary indicators) through keyword refinement. On this basis, axial coding and selective coding clarified the internal relationships between different categories, ultimately extracting main categories as primary indicators (Table 1).

1.3 Case Selection and Data Sources

This study selected 12 cities from the National Red Tourism Innovation Development City Alliance established in Changsha in 2019 (Table 2). To improve sample representativeness, cities with low-ranked red scenic spots were excluded, resulting in 12 case cities. Data acquisition pathways include: (1) Municipal statistical materials supplemented by the *China City Statistical Yearbook*; (2) Baidu Index, retrieving historical data through keyword searches; (3) Web-scraped data. Red training programs and the number of red tourism-related academic conferences were obtained through Baidu website searches. Red tourism laws and regulations were sourced from the Peking University Law Database, with policy intensity scores calculated through comprehensive measurement. Social media dissemination indices were obtained by searching "city name + red tourism"on WeChat, with article reading volumes and likes weighted 0.5 each for comprehensive calculation. All data indicators were standardized, and weights were assigned using the entropy method, with results shown in Table 1.

1.4 Research Methods

1.4.1 Health Distance Model The health distance model represents the deviation trend of system operation from its original vacuum state after external interference. The calculation formula is as follows:

$$D_i = \sqrt{\sum_{i=1}^{n} K_i (x_{bi} - x_{ai})^2}$$

where D_i represents the distance between the actual operating state (M_b) and the optimal high-quality operating state (M_a) of red tourism; x_{bi} and x_{ai} are the actual value b and standard value a of city i' s red tourism development, respectively; K_i is the weight. Mismatch degrees are classified into matching type [0, 0.4], transitional type (0.4, 0.8], and high mismatch (0.8, 1.0].

1.4.2 Qualitative Comparative Analysis Qualitative Comparative Analysis (QCA) can identify concurrent effects of multiple antecedent variables while avoiding multicollinearity issues. Specific calculations include consistency and coverage, with formulas as follows:

$$\text{Consistency}(X_i < Y_i) = \frac{\sum \min(x_i, y_i)}{\sum x_i}$$

$$\text{Coverage}(X_i < Y_i) = \frac{\sum \min(x_i, y_i)}{\sum y_i}$$

where X and Y are sets of antecedent and outcome variables, respectively; x_i and y_i represent the degree to which variable i belongs to combinations X and Y, respectively. Generally, when consistency of a single variable exceeds 0.8 and coverage exceeds 0.3, the necessary and sufficient conditions for the outcome variable are considered established. Additionally, a four-value fuzzy set calibration method is adopted as the quantitative standard for variables.

2 Results and Analysis

2.1 Spatiotemporal Evolution Characteristics of High-Quality Development

2.1.1 System Evolution Trends As shown in Fig. 2, the comprehensive index of high-quality red tourism development ranges from 0.186 to 0.301, which can be divided into three stages: 2010–2015 fluctuation development period, 2016–2019 rapid rise period, and 2020–2021 slow rise period, coinciding with national five-year planning cycles. Stage 1 represents the transition from spontaneous to conscious development, with gradually awakening market demand. Stage 2 marks the deepening transition period, with the *2016–2020 National Red*

Tourism Development Plan guiding continuous deepening and consolidation of development achievements from business integration, scenic spot services, and personnel perspectives, leading to significant scale expansion. Stage 3 represents the quality improvement period, with the *2021–2025 National Red Tourism Development Plan* proposing connotative and standardized development, shifting from quantitative scaling to quality upgrading, resulting in slowed growth rates.

From the subsystem evolution perspective, growth dynamics shows a steady upward trend, with increasing emphasis on integration and innovation between red tourism and related business formats. For instance, Yan' an has conducted diversified extension innovation attempts around red resources, including cultural and creative incubation, themed performances, and entertainment consumption, while Linyi has innovatively established the "Study Tour City" brand image. Growth structure shows the highest development level but exhibits a fluctuating downward trend after 2018, revealing internal structural contradictions and coordination issues with external systems during rapid development, with growth only gradually recovering by 2021. Ganzhou, as a typical case of red tourism symbiotic coordinated development, has built a "1+2+N" spatial pattern centered on the Southern Jiangxi Soviet Area, with Ruijin as the leader and Xingguo and Yudu as key areas, forming an integrated large red tourism market. Growth mode maintains a 平缓上升态势, indicating that the stability and sustainability effects of green development are gradually being released. For example, Ji' an was successfully selected as a "National Ecological Civilization Construction Demonstration City" through the establishment of the Jinggangshan National Nature Reserve. Growth outcome shows significant improvement, demonstrating the continuous release of red tourism' s public welfare. For instance, Jiaxing has focused on stimulating the driving role of the South Lake Tourism Area red base, creating a "wall-less Jiangnan water town city museum" that greatly enhances the positive externality effects of red tourism development. Growth form remains at a low level, indicating that the open cooperation pattern of regional red tourism development has not yet matured. Some red tourism cities seek alliance development, such as Changshu, which has carried out "Walking the Red Road Together, Touring Jiangsu, Zhejiang, and Shanghai" through going out, and then introduced external resources by hosting the National Red Tourism Guide Competition to promote interactive development between regions. However, overall, a star-level red tourism image has not yet been formed. Growth foundation shows a significant upward trend, with the incremental market space of red tourism rising and red tourism products gradually enriching. For example, Xiangtan has focused on 梳理 red tourism-related industries such as training, arts, film and television, cultural creativity, and cultural relics, forming a multi-business symbiotic modern red cultural system. However, most regions suffer from product, service, and business format convergence in red resource development, lacking differentiation and highlights, resulting in low conversion levels from potential to actual market demand.

2.1.2 Regional Development Differences This study uses the Gini coefficient to reflect relative differences in high-quality red tourism development levels across regions. A smaller value indicates more balanced development, while a larger value indicates greater disparities. The results show a maximum value of 0.42 and minimum of 0.31, with a small decline amplitude, indicating relatively large disparities between cities. Drawing on Chen et al.' s research, red tourism development levels are divided into four types: leading, progressive, catching-up, and lagging. Yan' an, Changshu, and Jiaxing consistently remain in the leading type during the observation period. Zunyi and Ganzhou developed rapidly, with their categories advancing to progressive and leading types, respectively, due to their efforts in improving integration depth with red tourism development during new urbanization promotion. Ji' an, Guang' an, Baise, Anyang, and Longyan consistently remain below average, indicating substantial room for future catch-up.

2.1.3 System Mismatch Analysis Health distance calculations reveal that in leading regions, all subsystems except growth outcome and growth form are in the transitional type, while growth structure and growth foundation are in the transitional type in progressive regions. All subsystems in catching-up and lagging types are in the mismatch type. The analysis of secondary indicator obstacles (Table 3) identifies cultural creativity, market demand, transportation services, cultural undertakings, regional cooperation, and product development as common obstacle factors, mostly originating from external development environment systems. Beyond these common factors, leading types need improvement in marketing promotion, progressive types urgently need strengthening in institutional mechanisms and study tour education, catching-up types show deficiencies in economic coordination, industrial agglomeration, and urbanization coordination, while lagging types have room for improvement in protection systems. This indicates that at lower development levels, high-quality red tourism is more constrained by internal factors such as development level and industrial structure, while at higher levels, it is more influenced by external environmental factors like open development and shared development, with dominant obstacle factors showing a transformation from internal resource advantages to external environmental coordination.

2.2 Cultivation Path Analysis for High-Quality Red Tourism Development

Based on the above analysis, it is necessary to employ multi-case qualitative comparative analysis to identify common improvement models promoting regional high-quality red tourism development and explore the mechanism of each subsystem within combination models. Furthermore, through content analysis of typical cases, key factors are identified and refined to integrate theoretical experience from combination models with practical development cases, ultimately extracting key cultivation paths for high-quality development.

2.2.1 Improvement Models from a Multi-Case Perspective Using city-level red tourism quality as the dependent variable and six subsystems as independent variables, combination models for high-quality red tourism development are constructed. As shown in Fig. 5, all combinations meet consistency threshold requirements, ensuring statistical reliability.

(1) Combination Model Analysis

For the leading combination model Y_1, simultaneous improvement in growth structure, growth outcome, growth form, and growth foundation necessarily leads to high-quality development outcomes. In the progressive combination model Y_2, the relative weakening of growth structure becomes the distinguishing feature from leading types. Low growth structure development inevitably constrains coordinated development between red tourism and other systems, making it difficult to generate long-term stable symbiotic interest groups. In the catching-up combination model Y_3, obvious weakening of growth dynamics exists, which is unfavorable for diversified development capabilities of red culture and tourism products, constraining vertical extension of the red tourism industry chain and compressing market demand elasticity space. In the lagging combination model Y_4, significant weakening of growth form occurs, with these regions showing shortcomings in "bringing in" and "going out," indicating they have not yet formed star-level red tourism images, resulting in small tourist flow scales. Moreover, their own socio-economic development levels are often not high, leaving them with insufficient momentum to attract external capital inflows and regional cooperative marketing, falling into a vicious development cycle.

(2) Mechanism Analysis

Growth dynamics serves as the core factor, whose importance is not prominent in the initial development stage but becomes a major obstacle for progressive development. It only emerges as a basic variable in leading types, indicating that the role of growth dynamics requires specific condition support and represents the manifestation of mature red tourism development. Growth structure is relatively weakened in driving progressive, catching-up, and lagging development, indicating that symbiotic groups have not yet formed in these regions, making it a symbiotic factor. Growth mode can generate positive externality effects through hidden cross-compensation paths, but these effects have certain time lags, making it a non-sensitive factor that only gradually becomes apparent in the second cycle for catching-up and lagging types. Growth form is a sensitive factor, always serving as a basic variable in leading types but emerging in the second cycle for progressive and catching-up types, and becoming an insignificant variable in lagging types. This indicates that growth form plays a guiding role in the initial stage of red tourism development. Implementation of "bringing in" and "going out" strategies creates push-pull effects on red tourism destinations. Higher open growth forms inevitably lead to benign pull effects, while lower ones cause malignant push effects. Growth outcome is considered a common core condition in all four combination models, indicating that red tourism

development stimulates positive externality effects, effectively expands public welfare effects, and achieves effective balance between market development and public welfare, making it an externality factor. Growth foundation is significant in the first cycle and initial stage of lagging types, but its influence gradually weakens over time. These regions rapidly achieve scaled growth by leveraging late-mover advantages under relatively mature red culture and tourism resource development models, improving red cultural relic protection systems, tourism development models, route design, and market demand, making it a supporting factor.

2.2.2 Key Path Analysis from Individual Cases (1) Sample Selection and Network Text Processing

First, leading types and category-advancing types were selected as case sites. Cross-retrieval was conducted using "city name + red tourism" on Baidu, academic websites, CNKI, and local government websites, yielding 2,136 network texts after screening. Next, three researchers independently read the texts sentence by sentence and extracted keywords. Finally, the three researchers cross-verified the extracted keywords to ensure objectivity (Fig. 6).

(2) Key Path Analysis

First, comprehensively expand the positive externality effects of red tourism. On one hand, terms like "public service,""public welfare and profitability," and "cultural relic protection" are closely associated with "tourism poverty alleviation," indicating that red tourism development adheres to balanced socio-economic benefits, forming agglomeration effects through positive externality benefits and achieving transformation of growth form from "unbalanced" to "inclusive sharing." On the other hand, terms centered on "development model" such as "planning formulation," "tourism projects," and "health tourism" are closely related, indicating that red tourism' s positive externality effects should integrate red tourism into regional macro-cultural tourism industries, comprehensively unlocking "red tourism +" development models and launching more differentiated products.

Second, optimize the symbiotic environment of red tourism under the digital economy pattern. Terms associated with "digital services" include "tourism enterprise cultivation," "department collaboration," and "institutional reform," indicating that digital layout has extensively involved red tourism infrastructure, support platforms, innovation, governance capacity, and emerging business formats. This reflects how digital technology reactivates red tourism consumer markets and catalyzes new symbiotic development spaces to compensate for red tourism market "leakage." Specifically: (1) Focus on digital advantages to extend red tourism industry chains, integrate with new online economic models, and promote red tourism business format integration; (2) Cultivate a batch of tourism enterprises with innovative willingness and capabilities to form branded benchmark effects as the main force driving red tourism digital devel-

opment; (3) Transform development concepts, skillfully apply digital thinking, and strengthen organizational leadership and digital governance capabilities of cultural and tourism administrative departments to provide support for red tourism development.

Third, stimulate mass tourism market demand for red study tours. Terms closely associated with "red study tours" include "exchange training," "tourism image," and "red education." Study tours and training are unique models formed during long-term red tourism development and represent the main source market for regional red tourism "bringing in," indicating how to expand the study tour market to the mass tourism market has become key for red tourism "going out." Specifically: (1) Establish specialized study tour institutions to effectively integrate study education with local characteristic culture, inheriting red culture while expanding the influence of regional characteristic cultural tourism industries; (2) Develop red cultural tourism experience projects, including red blocks, red towns, and performances, to build branded dissemination power for regional red tourism; (3) Strengthen regional red study tour training exchange cooperation to form star-level regional red cultural tourism images.

Additionally, government support is a necessary guiding force for promoting high-quality red tourism development. "Government support" shows significant associations in all three keyword network structures. By balancing interest distribution among government, enterprises, and communities, a multi-stakeholder cooperation mechanism involving government, market, and community can be constructed to rationalize management systems, leverage multi-agent synergistic effects, and form joint forces to jointly promote high-quality red tourism development.

3 Discussion

Previous research has focused on theoretical understanding of elements, structures, systems, connotations, and extensions of high-quality red tourism development, but lacks a corresponding quantitative evaluation system, making it difficult to extract unique development mechanisms and cultivation paths. This study summarizes six systems of high-quality red tourism development based on the five development concepts, specifically forming a complex giant system comprising: an innovative development system representing red tourism development dynamics, a coordinated development system examining the relationship between red tourism and socio-economic systems, a green development system addressing red tourism externalities and ecological symbiosis, an open development system reflecting internal and external linkages of regional red tourism, a shared development system investigating the public welfare nature of red tourism, and a cultural tourism resource system embodying red tourism characteristics and development foundations.

Combined with the functional positioning of the six systems, development

should focus on: (1) Adhering to innovation-driven development, improving the experiential and technological aspects of red tourism, optimizing online spatial experiences, and forming new consumption formats integrating red culture with digital technology; (2) Establishing a modern red tourism industry system to achieve integrated symbiotic development with digital, ecological, and scientific-educational sectors; (3) Establishing low-carbon development concepts to create "red with green" and "green promoting red" low-carbon demonstration zones; (4) Reshaping red tourism promotion systems, strengthening regional cooperation and image promotion in conjunction with major regional strategic layouts; (5) Strengthening red tourism' s educational functions to build a new red study tour education system with national, contemporary, and scientific characteristics; (6) Extending red tourism' s connotations and denotations to continuously explore new development models, break away from path dependence on resource development, and revitalize red cultural resources.

4 Conclusions

1) The overall level of high-quality red tourism development is relatively low but shows a fluctuating upward trend, with gaps between cities. Subsystem development shows particularly significant upward trends in growth dynamics, growth structure, and growth mode, while growth form remains consistently low.

2) Polarized characteristics exist in urban high-quality red tourism development, with relatively few category advancements. System mismatch analysis reveals that higher-quality red tourism development is more influenced by external environmental factors, with dominant obstacle factors showing a transformation from internal resource advantages to external environmental coordination.

3) Cultivation path analysis indicates that growth dynamics is the core factor, growth structure is the symbiotic factor, growth mode is the non-sensitive factor, growth form is the sensitive factor, growth outcome is the externality factor, and growth foundation is the supporting factor. Content analysis of typical cases extracts three key cultivation paths: comprehensively expanding positive externality effects of red tourism, optimizing the symbiotic environment of red tourism under the digital economy pattern, and stimulating mass tourism market demand for red study tours.

References

[1] Carbone F. t look back in anger . War museums role in the post conflict tourism peace nexus[J]. Journal of Sustainable Tourism, 2022, 30(2-3): 565-583.

[2] Prayag G, Buda D M, Jordan E J. Mortality salience and meaning in life for residents visiting dark tourism sites[J]. Journal of Sustainable Tourism, 2021, 29(9): 1508-1528.

[3] Zhang Xincheng, Liang Xuecheng, Gao Nan, et al. An analysis of the spatial network structure and formation mechanism of the attention degree of Long March themed red tourism resources[J]. Tourism Science, 2021, 35(3): 1-23.

[4] Fokin V I, Elts E E. The role of museums in Russia s and China cultural diplomacies[J]. Rudn Journal of Russian History, 2019, 18(4): 865-882.

[5] Gao Nan, Zhang Xincheng, Wang Linyan. Spatio temporal characteristics and influencing factors of Chinese red tourism network attention[J]. Journal of Natural Resources, 2020, 35(5): 1068-1089.

[6] Song Changyao, Li Xinjian, Zhang Qi. High quality development of red tourism[J]. Tourism Tribune, 2021, 36(6): 3-5.

[7] Lin Baomin, Lin Derong. The development of red tourism under the guidance of three news[J]. Tourism Tribune, 2021, 36(6): 5-7.

[8] Zhang Xincheng, Liang Xuecheng, Song Xiao, et al. Spatial pattern of the mismatch degrees of the high quality development of tourism industry in the Yellow River Basin[J]. Journal of Arid Land Resources and Environment, 2020, 34(12): 201-208.

[9] Xu Chunxiao, Tang Hui, Meng Yuanyuan, et al. Symbiosis potential energy of red tourism resources in Hunan[J]. Journal of Natural Resources, 2021, 36(7): 1718-1733.

[10] Lei Ying, Yang Hong. Research on factors influencing the high quality development of red tourist attractions: Based on the DEMATEL MICMAC method[J]. Journal of Yunnan University of Finance and Economics, 2021, 37(6): 100-110.

[11] Ji Chenfei, Wu Qun. Evaluation of the efficiency of city land intensive utilization policy based on policy quantification in Nanjing City[J]. Resources Science, 2015, 37(11): 2193-2201.

[12] Wu Ruoshan. Broken and Established in the development of red tourism[J]. Tourism Tribune, 2021, 36(6): 1-3.

[13] Deng Wei, Tan Lin, Yang Cai, et al. Types, distribution and high quality exploitation of Chinese mountain red tourism resources[J]. Mountain Research, 2021, 39(2): 163-173.

[14] Wang Xiongqing, Hu Changsheng. Research on the high quality development path of red cultural tourism under the background of cultural and tourism integration: Based on the perspective of Jiangxi[J]. Enterprise Economy, 2020, 39(11): 100-107.

[15] Zou Yafeng, Li Yajing, Yuan Zhihong. Comprehensive research on new urbanization level of provincial capital cities in western China[J]. Arid Land Geography, 2020, 43(6): 1612-1621.

[16] Li Hengji, Qu Jiansheng, Pang Jiaying, et al. Spatial coordination and sustainable development of population economy society resource environment system in Gansu Province[J]. Arid Land Geography, 2020, 43(6): 1622-1634.

[17] Zhang Xincheng, Gao Nan, Wang Linyan. Spatiotemporal evolution and function of the coordination level of the multisystem of rural tourism public service in China[J]. Arid Land Geography, 2022, 45(1): 298-309.

[18] Yang Guoliang, Ling Lianxin, Xu Nannan. A study on the integrative development of red tourism and rural tourism in the southwest ethnic regions under the new social background: Taking Guangxi as an example[J]. Guangxi Ethnic Studies, 2020(5): 151-157.

[19] Chen Jinghua, Chen Yao, Chen Minmin. China' s high quality economic development level, regional differences and dynamic evolution of distribution[J]. The Journal of Quantitative & Technical Economics, 2020, 37(12): 108-126.

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Note: Figure translations are in progress. See original paper for figures.