

Research on the Measurement and Evaluation of the Development Performance of the Red Cultural Tourism Space in Hadapu Town based on AHP and Fuzzy Comprehensive Evaluation Method

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Abstract

As an important supply strategic position during the Long March of the Chinese Workers' and Peasants' Red Army, Hadapu Town has obvious red cultural characteristics, and its red cultural tourism development has a certain source of customers. However, since the red cultural tourism in the town is still in its early stages, in view of a series of problems such as unreasonable industrial structure, lagging infrastructure, insufficient development funds, single homogeneous tourism products, and insufficient interaction between urban and rural areas, this paper selects the evaluation indicators of the spatial development performance of red cultural tourism in Hadapu Town based on national standards, relevant specifications and expert consultation, and constructs a relevant evaluation system on this basis. By introducing the AHP hierarchical analysis method, the criterion layer, indicator layer and factor layer of Hadapu Town are weighted and calculated to obtain indicators at all levels. At the same time, the fuzzy comprehensive evaluation method is introduced to construct a fuzzy evaluation set. On the basis of single-factor evaluation of secondary indicators, the fuzzy evaluation of the indicator factors at different levels of the development performance of Hadapu Town is carried out layer by layer, and the results of the assignment of indicators at four levels of the development performance of red cultural tourism in Hadapu Town are summarized in combination with the grade assignment. Through the comparative analysis of various indicators, the comprehensive level of the overall development performance of Hadapu Town is finally evaluated and obtained. It is hoped that it will point out the direction for further enhancement and improvement of the red cultural tourism space in Hadapu Town, and at the same time serve as a demonstration to drive the sustained, healthy development and vitality of other towns with red cultural tourism resources, provide more optimized strategies, and explore the establishment of a long-term mechanism for the protection and transformation of red cultural tourism towns.

Key Words: AHP; Fuzzy Comprehensive Evaluation Method; Hadapu Town; Red Cultural Tourism; Urban Development Performance

Introduction

The construction of characteristic small towns is an inevitable path for China's urbanization process. Its development is based on a comprehensive consideration of the social and economic level. It promotes characteristic development by tapping the value of urban resources, which conforms to the law of urbanization in the new era. In order to promote its standardized and healthy development, a number of policy documents have been issued at the national and provincial levels to improve the quality of development and make it an important carrier of regional economy. At present, many provinces have formulated construction standards, covering qualitative and quantitative indicators such as infrastructure, ecological protection, cultural excavation, industrial scale and social influence; the academic community is also conducting research on the evaluation system of characteristic small towns.

Hadapu Town is a small town located in the northwest of Dangchang, Gansu. It has been a key point of Gansu-Sichuan trade since ancient times. It was named after the post station established during the Ming and Qing Dynasties. It was once a medicinal material distribution center on the ancient Tea-Horse Road. As a "gas station" and an important decision-making turning point during the Long March of the Chinese Workers' and Peasants' Red Army, it carries the red gene of the great rejuvenation of the Chinese nation. In modern times, it has been recorded in history for its key role in the Long March: In September 1935, the Central Red Army broke through the natural barrier of Lazikou and entered Hadapu, where they rested, replenished supplies and obtained key intelligence. Mao Zedong convened a meeting of cadres above the regiment level at Guandi Temple and clearly put forward the strategic policy of "going to northern Shaanxi" for the first time, laying the foundation for the victory of the Long March. This historical moment not only reversed the revolutionary situation, but also made Hadapu one of the core symbols of the spirit of the Long March.

The core resource of Hadapu, Red Army Street (formerly known as “ The First Street of the Long March of the Chinese Workers’ and Peasants’ Red Army ”), is the most complete cluster of revolutionary sites in China: 382 original shops are distributed on the 1,200-meter street, including more than 10 national cultural relics such as Yihechang Pharmacy (Former Residence of Mao Zedong), Postal Agency (Site of Intelligence Discovery), Guandi Temple (Former Site of Decision-making Meeting). Its unique value lies in the protection of authenticity and dynamic inheritance: the street continues its commercial function to this day, integrating historical memory into contemporary life with innovative forms such as “ Red Army Guokui ” and “ Red Army Liangfen ” and the live-action drama “Red Star Shining over Hadapu”.

In recent years, Hadapu has achieved revitalization by relying on the “ red-green integration ” model (red cultural tourism + Guan’egou ecological scenic spot). The opening of the Lanzhou-Yuxi Railway in 2017 broke the traffic bottleneck, the number of tourists surged, and the memorial hall received more than 3 million people in total; in 2021, it was selected as a key construction area of the “ Long March National Cultural Park ”, and Shangjie Village was rated as a pilot for red beautiful villages. Through cooperatives, it developed Red Army courtyards, homestays, and cultural and creative products to drive villagers’ income. Its development results were listed as “National Red Tourism Typical Cases ” . In 2020, it became the only town selected in Shaanxi Province, confirming the feasible path of red resources empowering rural revitalization. However, the rapid urbanization development has also faced many challenges for Hadapu . For example, the lack of interaction between urban and rural areas and the regional linkage bottleneck: the “ point linkage ” with the Guan’egou scenic spot is significant, but the full-area integration mechanism is not yet mature ; Hadapu Town’s infrastructure lags behind: it is manifested in insufficient carrying capacity, which restricts the upgrade of tourism experience ; insufficient development funds , imbalance between protection and development, and insufficient innovation momentum ; tourism products are single and homogeneous , the industrial chain is shallow, and competitiveness is declining . Under so many challenges , Hadapu Town urgently needs to guide construction with scientific planning concepts and optimize spatial layout by utilizing its own resource endowments. Based on the theory of new urbanization , this paper analyzes the current development characteristics of red cultural tourism in Hadapu Town , and based on practical problems, constructs a red cultural tourism development performance evaluation index system and evaluation model in Hadapu Town from a multi-dimensional level . After conducting empirical research, it proposes a suitable development model and corresponding planning improvement strategy for the red cultural tourism space in Hadapu Town . It aims to provide reference and practical basis for the further improvement of the red cultural tourism space in Hadapu Town (Rogersons. 2019) .

1. New Urbanization Theory and Red Culture Tourism Planning

1.1 New urbanization theory

Urbanization is a development process involving multi-dimensional transformation of social structure, system, culture, etc (Mandelbaum, 1996). After the reform and opening up, extensive urbanization has intensified the contradiction between urban and rural areas, giving rise to economic and ecological problems, prompting the country to propose a new urbanization strategy with people as the core. This strategy regards characteristic small towns as urban-rural connection hubs and regional transformation platforms, and promotes coordinated urban and rural development and factor agglomeration through differentiated industry cultivation (avoiding experience copying) and resource integration to build a characteristic system, ultimately achieving the goal of livable, green and sustainable urbanization (Mc Gehee & Andereck. 2004).

1.2 Coupling of new urbanization and red cultural tourism planning

The new urbanization strategy and the national red cultural tourism planning are coupled through the “space-industry-governance” triple achieve coordinated development . In terms of spatial coupling , red resources are mostly distributed in small towns in old revolutionary areas (such as the Dabie Mountain area). New urbanization uses characteristic towns as nodes, integrates scattered sites to form regional cultural and tourism belts (such as the Huanggang-Xinyang-Lu’an red tourism circle), and simultaneously improves urban functions. For industrial coupling , the focus is on breaking through the traditional ticket economy, extending the red industry chain (cultural and creative, homestay, digital experience), driving agricultural product sales and employment (such as

Hong'an County's "red IP + specialty" model), and promoting urban industrial upgrading. In terms of governance coupling, through cross-departmental coordination (such as the provincial red tourism special team) and revenue sharing (community dividends) and other mechanisms, the problem of resource division is solved to achieve a win-win situation for cultural inheritance and improvement of people's livelihood. The essence of the two is to use culture and tourism as a link to transform the soft power of red culture into hard support for urban development, and promote the revitalization of old areas and urban-rural integration.

2. Current status of red cultural tourism development in Hadapu Town

2.1 Insufficient interaction between urban and rural areas, and the overall integration mechanism is not yet mature

Green Ecological Scenic Area in Hadapu Town has formed a preliminary linkage with the Hadapu Red Cultural Town. Tourists often visit the Hadapu Memorial Hall after visiting Guanegou, but the reverse diversion effect is weak. For example, Hadapu receives nearly 3 million tourists per year, but most tourists only stay for a short time and fail to effectively attract consumption links such as accommodation and catering in Guanegou.

The industry collaboration is shallow and the value chain integration has not been formed. The specific manifestation is that the two places only stay at the route recommendation level in the combination of "red and green resources" and have not built an industrial complementary chain. For example, the traditional Chinese medicine industry in Hadapu (such as the Qikun Logistics Base) focuses on planting and warehousing, and has not been deeply integrated with the health tourism in Guanegou; the local specialties sold in Guanegou homestays are mostly from other places, and local agricultural products (such as Hadapu traditional Chinese medicine) have not been included in the tourism commodity system.

Deep-seated institutional and planning obstacles, brand marketing is done independently. Guan'egou focuses on "health and wellness secrets", Hadapu emphasizes "red gas station", but no unified IP has been established in the county. Take the "May Day" event in 2025 as an example: Guan'egou launched cable car discounts and traditional Chinese medicine therapy; Hadapu held a food festival alone. The two themes are unrelated and failed to form a "red and green integration" package product.

2.2 Lagging infrastructure and insufficient carrying capacity restrict the upgrade of tourism experience

Weak transportation connection. Although the opening of Lanzhou-Chongqing Railway in 2017 significantly improved external accessibility, the internal transportation system of the scenic area is still imperfect. For example, the railway station to the core scenic area (Red Army Street, Memorial Hall) relies on sightseeing trains for transportation, with limited trains and tight capacity during peak seasons, and tourists are often stranded; the internal pedestrian path of Red Army Street is narrow (5-6 meters wide), and the flow of people is congested during peak hours, affecting evacuation efficiency and tour comfort.

Accommodation and service facilities are in short supply. During the peak tourist season, the hotel occupancy rate exceeds 100%, but the town has less than 2,000 standardized accommodation beds, forcing tourists to travel back and forth on the same day or to go to the county seat, weakening their consumption potential; the coverage rate of public toilets, rest areas, and barrier-free facilities along Hongjun Street is low, limiting the reception capacity for elderly tourists and groups.

Smart construction lags behind. There is a lack of real-time passenger flow monitoring and online reservation and tour guide systems around the scenic area, and management relies on manual scheduling, resulting in chaos on peak days such as July 1st when more than 3,000 individual tourists pour in every day.

2.3 Insufficient development funds, imbalance between protection and development, and insufficient innovation momentum

First, there is a gap in the funds for the protection of revolutionary resources. For example, although the renovation of the appearance of 443 households on Hongjun Street has been completed, some shops in the

late Qing Dynasty have structural problems due to disrepair. Special repair funds rely on allocations from higher authorities, and local supporting capacity is weak; the digital protection of revolutionary cultural relics (such as the original copy of the Ta Kung Pao and Red Army equipment) is slow, and the coverage rate of constant temperature and humidity equipment is less than 30%.

Secondly, the industry investment channels are single . For example, cultural tourism projects mainly rely on government subsidies (for example, the start-up capital of the village-run cooperative is only 830,000 yuan), and the participation of social capital is low, resulting in the long-term shelving of planned projects such as the Red Theater and the Long March Theme Hotel; specialty stores (Red Army Shoe Factory, Liangfen Shop) are small in scale and lack brand incubation funds. Gao Yueju Cloth Shoe Factory produces 20,000 pairs of shoes a year but is unable to expand its production line, which restricts the employment-driven effect.

In addition, investment in innovation and research and development is insufficient . Live-action dramas such as "Red Star Shining over Hadapu" rely on villagers' amateur rehearsals, and professional upgrades such as editing, directing, lighting, and special effects are difficult to advance due to lack of funds, weakening cultural expression.

2.4 Tourism products are homogeneous , the industrial chain is shallow, and competitiveness is declining

The sightseeing-oriented products are similar . For example, the core experience is still limited to site visits (Yihechang Medicine Store, Guandi Temple) and static exhibitions, which are highly similar to the red scenic spots in the surrounding areas, and tourists stay for only 2-3 hours; the live performances are concentrated on historical scenes such as "Go to Northern Shaanxi" and "Welcome Relatives in Hada Puli", lacking technological empowerment (such as AR battlefield restoration and immersive narrative), making it difficult to attract young customers.

Product development is rudimentary . Specialties are mainly snacks such as " Red Army Liangfen " and " Guokui " and handmade cloth shoes. The design lacks in-depth IP exploration and is highly homogenized. Cultural and creative products are limited to low value-added categories such as badges and manuals, and the " Hadapu " brand system has not been formed.

The industry linkage is superficial . For example, the " red + green " model only stays in the promotion of Guanegou joint tickets, and no cross-scenic area theme routes (such as " Long March Trail + Ecological Hiking ") are designed, and the tourist conversion rate is less than 20%; the integration of agriculture and tourism is weak, and local medicinal materials such as angelica and astragalus have not been transformed into special health products, missing the opportunity to experience " red study + traditional Chinese medicine culture " .

3. Measurement and evaluation of the development performance of the red cultural tourism space in Hadapu Town based on AHP and fuzzy comprehensive evaluation method

In view of the problems existing in the planning of the red cultural tourism space in Hadapu Town , this paper attempts to quantitatively examine the problems by constructing an evaluation system for the red cultural tourism space in Hadapu Town, so as to comprehensively evaluate its development quality level, clarify the specific reasons that affect the development results, and provide direction for the future tourism development strategy of the town. Specifically, a development performance evaluation index system for the red cultural tourism space in Hadapu is constructed from the aspects of town construction, tourism development, human settlement environment and policy environment, in order to systematically analyze its development deficiencies.

3.1 Selection of evaluation system indicators

3.1.1 Basis for indicator selection

(1) National, provincial and municipal standards and assessment criteria

In 2016, the State issued the document "Guiding Opinions on Accelerating the Construction of Beautiful Characteristic Towns (Cities)", which mentioned that the development and reform departments at all levels should learn from the experience of Zhejiang Province's characteristic towns and strive to create a number of

beautiful characteristic towns (cities) with emerging industry clusters, traditional industry upgrades, flexible systems and mechanisms, strong cultural atmosphere, and beautiful ecological environment. The “National Tourism Standardization Development Plan (2016-2020)” deepened and standardized the standards for tourism development from the national, local, and industry levels. Subsequently, various provinces and cities successively issued plans and standards for the evaluation of characteristic towns. The Zhejiang Provincial Quality Supervision Bureau issued the “Characteristic Town Evaluation Standards” and took the lead in issuing local standards for the evaluation of characteristic towns. It clearly stipulates the development, creation and naming standards of characteristic towns, and proposes a characteristic town evaluation index system including common indicators and characteristic indicators. Starting from the four dimensions of industry, function, form and system of characteristic towns, three-level indicators for the evaluation of characteristic towns are set for different industrial types of tourism towns, and the assessment content and standards of indicators at all levels are clarified. Chongqing has proposed the “3+3” construction and development goals in the construction of characteristic towns. The “3 characteristics” refer to the characteristics of industry, style and function, plus the “3 clusters” refer to the clustering of space, industry and population. Sichuan Province has issued detailed standards for evaluating the development quality of cultural tourism towns. The scoring criteria involve resources, industry, planning, management, and the construction and comprehensive benefits of the town’s tourism image, which can conduct a more comprehensive and systematic quality assessment of tourism towns. In terms of tourism evaluation, according to the normative information mastered by this study, it also includes the classification and evaluation standards of the quality level of tourist attractions and the construction and service level of smart tourism, which also provide a standard basis for the selection of performance evaluation indicators for the development of Hadapu Red Cultural Tourism Town.

(2) Research on the evaluation system of tourist towns

At present, some scholars have conducted research on the evaluation index system of characteristic small towns, including research on ecological construction evaluation , maturity evaluation , core competitiveness , and sustainable evaluation of characteristic small towns. The research on relevant rating index systems will provide a theoretical basis for the construction of this study on the performance evaluation system for the development of tourist small towns (Han, 2023).

3.1.2 Indicator selection

Tourism towns are a comprehensive development system, involving many and complex factors affecting urban development. The purpose of constructing the index system in this study is to evaluate the development performance level of tourism towns. The characteristics and laws of urban development should be followed in the construction of the evaluation system for the current status of urban construction, and the selection of indicators should be able to reflect the personality and characteristics of tourism towns. Therefore, based on the understanding of the development characteristics of tourism towns through questionnaire surveys and data collection and reading, this study mainly takes the evaluation rules of cultural tourism towns in Sichuan Province as the main basis, combines the existing national and local relevant standards and the theoretical achievements of the academic community on the evaluation system of tourism towns, and proposes a preliminary Hadapu tourism town development performance evaluation index system. After consulting the expert questionnaire, the original evaluation system content is adjusted to finally determine the overall framework of the Hadapu tourism town development performance evaluation system. The overall framework consists of four layers. The first layer is the target layer, namely the performance evaluation of the development of the red cultural tourism space in Hadapu Town ; the second layer is the criterion layer, which is divided into four dimensions: resource value , tourism development level , economic and social benefits, management and sustainability ; the third layer is the indicator layer, which is mainly a further refinement of the criterion layer, including 10 indicator layers: tourism resources, cultural protection, infrastructure, transportation facilities, tourism supporting functions, human living environment, industrial development, social impact, government support and planning management; the fourth layer is the element layer, which is composed of specific element contents.

Table 1 Judgement System of of Hadapu Red Culture Tourism

Target layer	Criteria Level A	Indicator layer B	Feature layer C
Performance evaluation of red cultural tourism space development in Hadapu Town	A1 Resource Value	B1 Tourism Resources	C1 The richness of red culture themed tourism activities
			C2 Variety and richness of red cultural tourism products
			C3 Construction of Hadapu Red Town and Guanegou Special Scenic Spot
		B2 Cultural Protection	C4 Protection level of tangible cultural heritage
			C5 Inheritance level of intangible cultural heritage
			C6 Continuity and integrity of cultural space
	A2 Tourism Development Level	B3 Surrounding Infrastructure	C7 Number of red cultural facilities
			C8 Number of red cultural tourism service facilities
			C9 red culture theme guide system settings
		B4 Surrounding transportation facilities	C10 Traffic accessibility
			C11 Parking convenience
			Construction status of C12 scenic sightseeing road, etc.
		B5 Tourism Support Function	C13 B&B/Hotel Service Level
			C14's professionalism and service level
			C15 Construction level of smart scenic spots
		B6 Living Environment	C16 Landscape greening coverage of built-up areas in towns
			C17 Waste transfer and treatment rate
			C18 Rainwater and sewage treatment rate
	A3 Economic and social benefits	B7 Industrial Development	C19 Number of people employed in the tourism industry
			C20 Annual income from tourism
			C21 Average length of stay of tourists
		B8 Social Impact	C22 Popularity of tourist attractions
			C23 Community participation in tourism projects
	A4 Management and Sustainability	B9 Policy Support	C24 Tourist growth rate after the opening of Lanzhou-Chongqing Railway
			C25 Special Fund Investment
		B10 Planning and Management	C26 Completeness of planning documents
			C27 Balance between development intensity and ecological carrying capacity
			C28 Planning Innovation

3.2 Evaluation technology path

3.2.1 Model building

Regarding the development performance evaluation of the red cultural tourism space in Hadapu Town, since the evaluation index system involves multiple indicators, most of the indicators tend to be qualitative and the factor information is fuzzy, that is, the indicators are easily affected by the subjective cognitive level of the respondents. Therefore, in order to improve the scientificity and objectivity of the evaluation process, this study uses the fuzzy comprehensive evaluation method to obtain the fuzzy membership of each factor indicator through the hierarchical analysis method, and then conducts a comprehensive evaluation of the index system based on this result, which can more scientifically and reasonably determine the development of the red cultural tourism in Hadapu Town.

3.2.2 Determination of index weights based on analytic hierarchy process

The analytic hierarchy process (AHP) is a multi-objective decision-making method proposed by T.L. Saaty in the 1970s and is suitable for complex system evaluation. Its core is to decompose the decision system into a multi-level structure, compare factors pairwise by constructing a judgment matrix, calculate the weights of factors at each level and test the consistency, and finally obtain the comprehensive weight ranking of each factor. The main steps include: establishing a hierarchical model, constructing a judgment matrix, single-level ranking and

consistency test, and combining weight calculation and ranking.

The main steps of the hierarchical analysis method are: (1) Establish a hierarchical structure of goals ; (2) Construct a judgment matrix: Use the 1-9 scaling method to compare the indicators at the same level in pairs to form a judgment matrix that reflects the relative importance; (3) Calculate the weight coefficient: Calculate the eigenvector of the judgment matrix and normalize it to obtain the weight of each indicator; (4) Single-level sorting and consistency test: Calculate the maximum eigenvalue, consistency index CI and consistency ratio CR ($CR=CI/RI$, RI is obtained by looking up the table). When $CR \leq 0.1$, the judgment logic is considered reasonable (consistency is acceptable), otherwise the matrix needs to be adjusted; (5) Overall hierarchical sorting and consistency test**: Calculate the composite weight of each level of indicators to the overall goal, and perform a similar consistency test.

3.2.3 Comprehensive evaluation of tourist towns based on fuzzy comprehensive evaluation method

The fuzzy comprehensive evaluation method is based on the membership theory of fuzzy mathematics and is applicable to problems where the evaluation factors are fuzzy and difficult to quantify. Its core steps are: ① Determine the factor set U: including all evaluation indicators (multiple levels can be set).

② Determine the comment set V: define the evaluation level and its score (usually 3-5 levels). ③ Determine the weight vector W: obtain the weight of each factor by methods such as hierarchical analysis. ④ Construct the membership matrix R: element r_{ij} represents the degree of membership of factor u_i to level v_j (0-1). ⑤ Perform fuzzy synthesis: calculate the comprehensive evaluation vector $C = W \cdot R$. ⑥ Calculate the evaluation results: the weighted average method is often used to calculate the final score P.

3.3 Comprehensive evaluation of overall development performance

3.3.1 Calculation of indicator weights

According to the idea of analytic hierarchy process, a hierarchical model of the evaluation object is constructed. The Delphi method is used to obtain the importance of the indicator elements of the evaluation hierarchy. The Delphi method is an expert scoring method. It divides the relative importance of the indicator elements based on the scaling method, designs an expert scoring consultation questionnaire, and sends questionnaires to experts and scholars in the research topic field. The questionnaires are divided into two channels: online and offline. According to the distribution and collection of questionnaires, a total of 18 valid questionnaires were obtained. Because the invited scoring experts have studied and published relevant research results in the fields involved in the research topic of this study, the questionnaire data obtained has a certain authority and can support the empirical research of this study on the research object. Using the analytic hierarchy process auxiliary tool, the recovered questionnaire data on the indicator element scoring questionnaire are statistically classified, and the data are sorted and consistency tested to obtain the indicator weight coefficients corresponding to the indicators at each level.

1. Criteria layer weight calculation

At the criterion level, through the auxiliary calculation of the hierarchical analysis method software tool, the weight coefficients of the judgment matrix of the four levels of indicators, namely resource development, urban construction, comprehensive benefits and institutional management, in the performance evaluation index system of Hadapu tourism small town development are calculated, and a consistency test is carried out.

Table 2 Judgment matrix and weight values of criterion level indicators

index	Resource Value	Tourism development level	Economic and social benefits	Management and Sustainability	Weight
Resource Value	1	3	3	4	0.5082
Tourism development level	1/3	1	3	1	0.2121
Economic and social benefits	1/3	1/3	1	1/2	0.1061
Management and Sustainability	1/4	1	2	1	0.1735
When the maximum eigenvalue $\lambda_{\max}=4.1550$ and $n=4$, $CR=0.0580 < 0.10$, the consistency test of the judgment matrix passes, and the obtained weight is valid.					

2. Indicator layer weight calculation

Through the auxiliary calculation of the hierarchical analysis method software tool, the weight coefficients of the judgment matrix of the two indicators of tourism construction and cultural protection in the resource development level are calculated, and the consistency test is carried out.

Table 3. Indicator layer (resource value) judgment matrix and weight value

Resource value (A1)	Tourism resources	Cultural Protection	Weight
Tourism resources	1	2/3	0.4
Cultural Protection	3/2	1	0.6
When the maximum eigenvalue $\lambda_{\max}=2$ and $n=2$, $CR=0.0000 < 0.1$, the consistency test of the judgment matrix passes, and the obtained weight is valid.			

Table 4. Judgment matrix and weight values of indicator layer (urban construction)

Tourism development level A2)	Surrounding infrastructure	Surrounding transportation facilities	Tourism supporting functions	Living Environment	Weight
Surrounding infrastructure	1	3	3	1/2	0.3092
Surrounding transportation facilities	1/3	1	2	1/3	0.1501
Tourism supporting functions	1/3	1/2	1	1/3	0.1056
Living Environment	2	3	3	1	0.4351
When the maximum eigenvalue $\lambda_{\max}=4.1222$ and $n=4$, $CR=0.0458 < 0.10$, the consistency test of the judgment matrix passes, and the obtained weight is valid.					

Table 5. Judgment matrix and weight values of indicator layer (economic and social benefits)

Economic and social benefits (A3)	Industry Development	Social Impact	Weight
Industry Development	1	3	0.75
Social Impact	1/3	1	0.25
When the maximum eigenvalue $\lambda_{\max}=2.0000$ and $n=2$, $CR=0.0000 < 0.10$, the consistency test of the judgment matrix passes, and the obtained weight is valid.			

Table 6. Judgment matrix and weight values of indicator layer (management and sustainability)

Economic and social benefits (A4)	Policy support	Planning Management	Weight
Policy support	1	2	0.6666
Planning Management	1/2	1	0.3334
When the maximum eigenvalue $\lambda_{\max}=2.0000$ and $n=2$, $CR=0.0000 < 0.10$, the consistency test of the judgment matrix passes, and the obtained weight is valid.			

Through the auxiliary calculation of the hierarchical analysis method software tool, the weight coefficients of the judgment matrix of 28 element indicators in the four levels of resource value, tourism development level, economic and social benefits, management and sustainability were calculated, and the consistency test was carried out.

Table 7. Indicator layer (resource value) judgment matrix and weight value

Tourism resources (B1)	The richness of red culture themed tourism activities	The variety and richness of red cultural tourism products	Construction status of Hadapu Red Town and Guanegou characteristic scenic spot	Weight
The richness of red culture themed tourism activities	1	7	5	0.7235
The variety and richness of red cultural tourism products	1/7	1	1/3	0.0833
Construction status of Hadapu Red Town and Guanegou characteristic scenic spot	1/5	3	1	0.1932
When the maximum eigenvalue $\lambda_{\max}=3.0658$ and $n=3$, $CR=0.0633 < 0.10$, the consistency test passes and the obtained weight is valid.				

Table 8. Judgment matrix and weight values of indicator layer (cultural protection)

Cultural Protection (B2)	Protection level of tangible cultural heritage	Inheritance level of intangible cultural heritage	Continuity and integrity of cultural space	Weight
Protection level of tangible cultural heritage	1	5	4	0.685
Inheritance level of intangible cultural heritage	1/5	1	3/2	0.1729
Continuity and integrity of cultural space	1/4	2/3	1	0.1424
When the maximum eigenvalue $\lambda_{\max}=3.0444$ and $n=3$, $CR=0.0427 < 0.10$, the consistency test passes and the obtained weight is valid.				

Table 9 refers to the judgment matrix and weight values of the element layer (surrounding infrastructure)

Surrounding infrastructure (B3)	Number of red cultural facilities	Number of red cultural tourism service facilities	Guide system settings under the red culture theme	Weight
Number of red cultural facilities	1	3	2	0.5131
Number of red cultural tourism service facilities	1/3	1	1	0.2381
Guide system settings under the red culture theme	1/2	1	1	0.2488
When the maximum eigenvalue $\lambda_{\max}=4.0341$ and $n=3$, $CR=0.0128 < 0.10$, the consistency test passes and the obtained weight is valid.				

Table 10 refers to the judgment matrix and weight value of the element layer (surrounding transportation facilities)

Surrounding transportation facilities (B4)	Transportation accessibility	Parking convenience	Construction status of scenic sightseeing trails, etc.	Weight
Transportation accessibility	1	3	5	0.6333
Parking convenience	1/3	1	3	0.2650
Construction status of scenic sightseeing trails, etc.	1/5	1/3	1	0.1062
When the maximum eigenvalue $\lambda_{\max}=3.0387$ and $n=3$, $CR=0.0656 < 0.10$, the consistency test passes, and the obtained weight is valid.				

Table 11 Judgment matrix and weight values of the index element layer (tourism supporting functions)

Surrounding transportation facilities (B5)	B&B/hotel service level	Professionalism and service level of interpretation	The level of smart scenic spot construction	Weight
B&B/hotel service level	1	2	1/3	0.2461
Professionalism and service level of interpretation	1/2	1	1/4	0.1975
The level of smart scenic spot construction	3	4	1	0.5564
When the maximum eigenvalue $\lambda_{\max}=4.0818$ and $n=3$, $CR=0.0360 < 0.10$, the consistency test passes, and the obtained weight is valid.				

Table 12 refers to the judgment matrix and weight value of the element layer (human living environment)

Surrounding transportation facilities (B6)	Landscape greening coverage degree of town built-up area	Waste transfer and treatment rate	Rainwater and sewage treatment rate	Weight
Landscape greening coverage degree of town built-up area	1	3	3	0.5961
Waste transfer and treatment rate	1/3	1	2/3	0.229
Rainwater and sewage treatment rate	1/3	2/3	1	0.1749
When the maximum eigenvalue $\lambda_{\max}=3.0183$ and $n=3$, $CR=0.0176 < 0.10$, the consistency test passes and the obtained weight is valid.				

Table 13 refers to the judgment matrix and weight values of the factor layer (industrial development)

Surrounding transportation facilities (B7)	Number of people employed in the tourism industry	Annual income from tourism	Average length of stay of tourists	Weight
Number of people employed in the tourism industry	1	1/6	1/3	0.096
Annual income from tourism	6	1	3	0.653
Average length of stay of tourists	3	1/3	1	0.251
When the maximum eigenvalue $\lambda_{\max}=3.0183$ and $n=3$, $CR=0.0176 < 0.10$, the consistency test passes and the obtained weight is valid.				

Table 14 refers to the judgment matrix and weight values of the factor layer (social impact)

Social Impact (B8)	Popularity of tourist attractions	Community participation in tourism projects	Tourist growth rate after the opening of Lanzhou-Chongqing Railway	Weight
Popularity of tourist attractions	3/2	1	1/2	0.2854
Community participation in tourism projects	1	2/3	1/2	0.218
Tourist growth rate after the opening of Lanzhou-Chongqing Railway	2	2	1	0.4966
When the maximum eigenvalue $\lambda_{\max}=3.0183$ and $n=3$, $CR=0.0176 < 0.10$, the consistency test passes and the obtained weight is valid.				

Table 15 refers to the judgment matrix and weight values of the factor layer (policy support)

Economic and social benefits (B9)	Special fund investment	Completeness of planning documents	Weight
Special fund investment	1	2	0.6666
Completeness of planning documents	1/2	1	0.3334
When the maximum eigenvalue $\lambda_{max}=2.0000$ and $n=2$, $CR=0.0000 < 0.10$, the consistency test of the judgment matrix passes, and the obtained weight is valid.			

Table 16 refers to the judgment matrix and weight values of the element layer (planning management)

Economic and social benefits (B10)	Balance between development intensity and ecological carrying capacity	Planning innovation	Weight
Balance between development intensity and ecological carrying capacity	1	2	0.6666
Planning innovation	1/2	1	0.3334
When the maximum eigenvalue $\lambda_{max}=2.0000$ and $n=2$, $CR=0.0000 < 0.10$, the consistency test of the judgment matrix passes, and the obtained weight is valid.			

According to the above method, the indicators at each level in the performance evaluation index system of tourism small towns development are analyzed.

The weight coefficients are calculated, w_1 represents the weight coefficient of the criterion layer, w_2 represents the weight coefficient of the indicator layer, and w_3 represents the weight coefficient of the factor layer. The actual weight calculation formula of each indicator element in the performance evaluation index system for the development of tourist towns is: $w_j = w_1 \cdot w_2 \cdot w_3$. The final weight table of indicators at all levels in the performance evaluation index system for the development of tourist towns is obtained.

Table 17

Target layer	Criteria Layer	Indicator layer	Feature layer	Weight
Performance evaluation of red cultural tourism space development in Hadapu Town	Resource Value 0.5082	Tourism resources 0.3049	The richness of red culture themed tourism activities	0.2089
			The variety and richness of red cultural tourism products	0.0527
			Construction status of Hadapu Red Town and Guanegou characteristic scenic spot	0.0433
		Cultural Protection 0.2033	Protection level of tangible cultural heritage	0.1471
			Inheritance level of intangible cultural heritage	0.0169
			Continuity and integrity of cultural space	0.0393
	Tourism development level 0.2121	Surrounding infrastructure 0.0656	Number of red cultural facilities	0.0324
			Number of red cultural tourism service facilities	0.0191
			Guide system settings under the red culture theme	0.0141
		Surrounding transportation facilities 0.0318	Transportation accessibility	0.0202
			Parking convenience	0.0083
			Construction status of scenic sightseeing trails, etc.	0.0034
		Tourism supporting functions 0.0224	B&B/hotel service level	0.0114
			Professionalism and service level of interpretation	0.0078
			The level of smart scenic spot construction	0.0032
		Living Environment 0.0923	Landscape greening coverage degree of town built-up area	0.055
			Waste transfer and treatment rate	0.0211
			Rainwater and sewage treatment rate	0.0161
	Economic and social benefits 0.1061	Industry Development 0.0796	Number of people employed in the tourism industry	0.052
			Annual income from tourism	0.0076
			Average length of stay of tourists	0.02
		Social Impact 0.0265	Popularity of tourist attractions	0.0058
			Community participation in tourism projects	0.0076
	Management and Sustainability 0.1735	Policy support 0.1157	Tourist growth rate after the opening of Lanzhou-Chongqing Railway	0.0131
			Special fund investment	0.0771
		Planning Management 0.0578	Completeness of planning documents	0.0386
			Balance between development intensity and ecological carrying capacity	0.0169
			Planning innovation	0.0143

Judging from the weight of the evaluation system, the core of the development of tourist towns is resource development (with the highest proportion), which is the foundation of tourism development. The key lies in exploring resource value and cultural connotation. The second is the level of tourism development, whose material space level directly affects the tourist experience and environmental quality. The third is management and sustainability. As an operational guarantee, efficient macro-management can improve service quality and tourism image. Finally, economic and social benefits reflect the fundamental purpose of developing tourism - improving economic benefits, industrial vitality and social influence. Overall, the weight and importance of resource development and town construction are significantly higher than institutional management and comprehensive benefits.

3.3.2 Fuzzy comprehensive evaluation

In order to ensure the data accuracy of the fuzzy evaluation matrix of the development performance of Hadapu Red Cultural Tourism Space, this study selected four types of evaluation subjects: master and doctoral students in related fields, local government staff, business operators and tourists, and balanced subjective bias through multi-perspective combination. The fuzzy comprehensive evaluation method was used to first conduct a single factor evaluation on the secondary indicators, and then synthesize them step by step, and finally obtain the comprehensive level of overall development performance.

(1) Determine the review set V

In order to make the research evaluation results more intuitive, this study defines the evaluation set of tourism town development performance as

$U = \{\text{very good, good, average, poor, bad}\}$, that is, the evaluation results are divided into five levels according to the development status of the town in each indicator factor:

Table18: Fuzzy evaluation comments

Rating	Level connotation description
very good	Meeting development requirements
better	Basically meet the development requirements
generally	Partially meet development requirements
Poor	Many parts have not yet met the development requirements
Difference	Development requirements not met

(2) Single factor fuzzy relationship evaluation

Through online and offline questionnaires and interviews with experts, business operators, tourists and some government staff, the data results were sorted and classified, and the initial quantitative values of various indicators of urban tourism development performance were obtained. A total of 142 questionnaires (or interviews) were issued, and 120 valid content was collected. The following is a summary of the corresponding content and the final data normalization.

Table19:

Indicator layer	Feature layer	very good	better	generally	Poor	Difference
B1 Tourism Resources	C1 The richness of red culture themed tourism activities	0.2	0.4	0.6	0	0
	C2 Variety and richness of red cultural tourism products	0	0.2	0.5	0.3	0
	C3 Construction of Hadapu Red Town and Guanegou Special Scenic Spot	0.3	0.4	0.3	0	0
B2 Cultural Protection	C4 Protection level of tangible cultural heritage	0.3	0.4	0.3	0	0
	C5 Inheritance level of intangible cultural heritage	0.05	0.3	0.6	0.05	0
	C6 Continuity and integrity of cultural space	0.1	0.6	0.2	0.1	0

B3 Surrounding Infrastructure	C7 Number of red cultural facilities	0.1	0.6	0.3	0	0
	C8 Number of red cultural tourism service facilities	0	0.2	0.7	0.1	0
	C9 red culture theme guide system settings	0.1	0.5	0.4	0	0
B4 Surrounding transportation facilities	C10 Traffic accessibility	0.4	0.5	0.1	0	0
	C11 Parking convenience	0.2	0.5	0.3	0	0
	Construction status of C12 scenic sightseeing road, etc.	0.15	0.5	0.35	0	0
B5 Tourism Support Function	C13 B&B/Hotel Service Level	0	0.2	0.5	0.3	0
	C14's professionalism and service level	0.1	0.3	0.5	0.1	0
	C15 Construction level of smart scenic spots	0	0.2	0.7	0.1	0
B6 Living Environment	C16 Landscape greening coverage of built-up areas in towns	0.2	0.5	0.3	0	0
	C17 Waste transfer and treatment rate	0.1	0.6	0.3	0	0
	C18 Rainwater and sewage treatment rate	0.1	0.7	0.2	0	0
B7 Industrial Development	C19 Number of people employed in the tourism industry	0.05	0.4	0.35	0.2	0
	C20 Annual income from tourism	0	0	0.7	0.3	0
	C21 Average length of stay of tourists	0	0.1	0.6	0.3	0
B8 Social Impact	C22 Popularity of tourist attractions	0.2	0.4	0.2	0.2	0
	C23 Community participation in tourism projects	0.1	0.4	0.4	0.1	0
	C24 Tourist growth rate after the opening of Lanzhou-Chongqing Railway	0.1	0.5	0.4	0	0
B9 Government Support	C25 Special Fund Investment	0.1	0.6	0.3	0	0
	C26 Completeness of planning documents	0.1	0.5	0.4	0	0
B10 Planning Management	C27 Balance between development intensity and ecological carrying capacity	0.1	0.3	0.5	0.1	0
	C28 Planning Innovation	0	0	0.7	0.3	0
reason						

Based on the collected original data, the interviewees' scores were weighted and the single-factor fuzzy relationship matrix R of Nanniwan tourist town was obtained.

Table 20

Indicator layer	Feature layer	very good	better	generally	Poor	Difference
B1 Tourism Resources	C1 The richness of red culture themed tourism activities	0.1650	0.1683	0.6667	0.0000	0
	C2 Variety and richness of red cultural tourism products	0.0000	0.2083	0.4583	0.3333	0
	C3 Construction of Hadapu Red Town and Guanegou Special Scenic Spot	0.2800	0.4167	0.2933	0.0000	0
B2 Cultural Protection	C4 Protection level of tangible cultural heritage	0.0417	0.2500	0.6250	0.0833	0
	C5 Inheritance level of intangible cultural heritage	0.1905	0.4285	0.1905	0.1905	0
	C6 Continuity and integrity of cultural space	0.0417	0.6250	0.2917	0.0833	0
B3 Surrounding Infrastructure	C7 Number of red cultural facilities	0.1250	0.5833	0.2500	0.0000	0
	C8 Number of red cultural tourism service facilities	0.0833	0.1750	0.7417	0.0000	0
	C9 red culture theme guide system settings	0.0834	0.5000	0.4167	0.0000	0
B4 Surrounding transportation facilities	C10 Traffic accessibility	0.3667	0.5583	0.1750	0.0000	0
	C11 Parking convenience	0.3333	0.4167	0.2500	0.0000	0
	Construction status of C12 scenic sightseeing road, etc.	0.2017	0.5000	0.2983	0.0000	0
B5 Tourism Support Function	C13 B&B/Hotel Service Level	0.000	0.0083	0.5000	0.2917	0
	C14's professionalism and service level	0.0417	0.3750	0.5417	0.0417	0
	C15 Construction level of smart scenic spots	0.0000	0.2583	0.6167	0.0833	0
B6 Living Environment	C16 Landscape greening coverage of built-up areas in towns	0.0417	0.5417	0.3333	0.0833	0
	C17 Waste transfer and treatment rate	0.0000	0.6250	0.2500	0.1250	0
	C18 Rainwater and sewage treatment rate	0.0833	0.6250	0.2917	0.0000	0
B7 Industrial Development	C19 Number of people employed in the tourism industry	0.1676	0.3667	0.4667	0.0000	0
	C20 Annual income from tourism	0.0000	0.6800	0.3200	0.0000	0
	C21 Average length of stay of tourists	0.0000	0.1667	0.5417	0.2917	0

B8 Social Impact	C22 Popularity of tourist attractions	0.0833	0.5833	0.3333	0.0000	0
	C23 Community participation in tourism projects	0.2667	0.4 000	0.3333	0.0000	0
	C24 Tourist growth rate after the opening of Lanzhou-Chongqing Railway	0.0 832	0.5000	0.4167	0.0000	0
B9 Government Support	C25 Special Fund Investment	0.2083	0.5417	0.2500	0.0000	0
	C26 Completeness of planning documents	0.1250	0.2813	0.4687	0.1250	0
B10 Planning Management reason	C27 Balance between development intensity and ecological carrying capacity	0.0 4 33	0.2917	0.6250	0.0 4 00	0
	C28 Planning Innovation	0.0000	0.0000	0.7142	0.2858	0

According to the fuzzy relationship matrix of indicator factors, the single factor evaluation matrix of each secondary indicator in the development performance evaluation system of Hadapu tourism town can be calculated in turn. Combined with the weight coefficients of each level in the evaluation indicator system calculated in the previous article, a fuzzy comprehensive evaluation of the development performance of tourism towns is carried out. First, a fuzzy comprehensive evaluation is carried out based on the fuzzy matrix of the factor level indicator factors. Taking the single factor fuzzy relationship of the B1 indicator tourism construction as an example, the numerical matrix is arranged and calculated. According to the previous pages of the article, the weight coefficients of indicators at all levels are obtained by using the hierarchical analysis method to determine the weight coefficient of tourism construction factors : $W_1 = [0.7235, 0.0833, 0.1932]$. Then the fuzzy evaluation value of tourism construction (B1) index factor is $C_1 = [0.1990, 0.5802, 0.1930, 0.0278, 0.0000]$, according to the maximum membership principle , the membership of the evaluation result belonging to " good " is the largest, and the development of Hadapu's red cultural tourism construction is judged to be good. By analogy , several other values are obtained and their memberships are judged in turn. Finally, the red tourism cultural space development performance value S of Hadapu Town is $S=C*V_T$, and its final value is 2.1667. According to the overall development performance evaluation table of tourist towns, the comprehensive level of the development performance of the red tourism cultural space in Hadapu Town can be divided into intervals. The final evaluation results show that the red tourism development performance evaluation of Hadapu is 2.1667 points.

Table 21

Comprehensive evaluation values	(4,5]	(3,4]	(2,3]	(1,2]	(0,1]
Level	Very good performance	Better performance	Average performance	Poor performance	Poor performance

4. Facilitation and discussion

The comprehensive rating of tourism development in Hadapu Town is "average", indicating that the regional competitiveness is weak and the driving force for sustainable development is insufficient, and it is urgent to make up for the shortcomings. Analysis at the criterion level: Resource development scored the highest, showing that it relies on resource advantages to drive the economy; comprehensive benefits and institutional management are second, reflecting the effectiveness of policy guidance and industrial integration; urban construction scored the lowest, reflecting that service facilities and levels need to be improved. Analysis at the indicator level: Cultural protection, community functions and planning management scored high (>2.5 points), highlighting

cultural heritage and residents' benefits; human settlement environment performance is low, the main reason weight is small and urban and rural development is uneven. This analysis clarifies the direction for subsequent improvements. The strategies are as follows:

The following is a detailed supplement to the optimization strategy for the red cultural tourism space in Hadapu Town, Gansu Province. Combined with the actual development needs and successful experiences of the local area, a specific implementation plan is proposed:

① **Space optimization: expand the Red Army Street Cultural and Creative Zone and add immersive experience projects**

Implementation path:

Site protection and scene restoration - Based on the renovation of the existing Red Army Street (443 households and 46,600 square meters have been renovated), the "Red Army Life Experience Area" will be expanded to restore the post office, pharmacy, cooperative and other scenes from the Long March period, and use AR technology to display historical events (such as the Red Army's rest and recuperation, the expansion of the Red Army and the establishment of the government) to enhance tourists' sense of involvement.

Immersive performance upgrade - relying on the successful experience of the existing live-action drama "Red Star Over Hadapu", a night light and shadow theater will be added, using 3D projection technology to present dynamic historical stories on the walls of the revolutionary ruins; a "role-playing" project will be developed, where tourists can change their clothes and participate in interactive tasks such as "raising food to support the front" and "military-civilian carnival" to deepen their experience.

Expansion of cultural and creative consumption space - setting up a "Red Cultural and Creative Workshop" to centrally display and sell special products such as Hadapu medicinal incense and Red Army snacks, and opening a DIY experience area (such as printing Red Army slogan cloth bags and making Chinese herbal medicine sachets) to extend tourists' stay.

Expected effect: Enhance the depth of tourists' immersive experience and drive secondary consumption; the average length of stay per visitor is expected to be extended by 1.5 hours, and the proportion of cultural and creative income will increase to 30% of total revenue.

② **Industrial linkage: Deepen the "red + green" model (the joint ticket system bundles the Guanegou Scenic Area)**

Implementation path:

Route design and joint ticket mechanism - launch the "red and green dual-core" joint ticket (Hadapu Memorial Hall + Guanegou Scenic Area), integrate the transportation connection services within 36 kilometers, and design a one-day tour route of "red education in the morning and ecological sightseeing in the afternoon". Cooperating travel agencies launch packages including transportation, explanations, and meals, with a 20%-30% discount.

Resource complementarity and brand linkage - add a Hadapu Red Culture Exhibition Corner in the Guanegou Scenic Area, and simultaneously broadcast a promotional video of the natural scenery of Guanegou on the Red Army Street; jointly organize theme activities (such as the "Retracing the Long March and Exploring Guanegou" hiking race) to share customer traffic.

Data sharing and precision marketing - establish a scenic spot passenger flow data intercommunication platform, analyze tourists' preferences and push customized itineraries (such as recommending the "Red Script Killing + Forest Study" combination to the study team).

Expected results:

The tourist mutual guidance rate will be increased by 40%, and the joint ticket coverage rate will exceed 60%; in 2023, the tourism revenue of Guanegou will reach 3.9 billion yuan, and after the linkage, the number of tourists in

Hadapu is expected to increase by 25% annually.

③ **Community empowerment: Promote the “cooperative + farmer” model (refer to the operation experience of the live-action drama in Shangjie Village)**

Implementation path:

Professional operation of cooperatives - copy the model of Shangjie Village Tourism Cooperative (which has attracted more than 50 villagers to participate in performances and increased annual income by 20,000 yuan per person), establish a town-level tourism cooperative alliance, and unify the management of the three major sectors of performances, homestays, and agricultural specialties. Set up a “Red Skills Training Fund” to regularly carry out tour guide, handicraft, and performance training.

Diversified business model shareholding and dividends - Encourage farmers to invest in cooperatives with idle houses and land:

The performing arts group recruits villagers to participate in live-action performances (e.g. the newly added “mass actor” position in “Go to Northern Shaanxi”) and distributes dividends according to the number of performances; For the homestay group, the cooperative uniformly renovated the residential houses on Hongjun Street and created the “Hongjun Inn” brand (currently there are more than 60 rooms). Farmers can get 60% of the profits by investing in the houses they own.

In the production and marketing group, the cooperative centrally purchases local specialties (Red Army jelly, Chinese medicinal materials), packages them into “Long March Grain Packages” gift boxes, and sells them online through live broadcasts (referring to Gaolan County’s “agricultural network terminal + e-commerce” model).

Governance coordination mechanism - promote the “Longnan Civil Direct Talk 1234 Working Method”, and the party branch of the cooperative will regularly hold villagers’ meetings to coordinate issues such as income distribution and service quality to ensure farmers’ voice.

Expected results:

It has mobilized more than 200 farmers to participate, with an average annual increase of 30,000 yuan per household; the village’s collective economic income has increased by 50%, forming a closed loop of the “performing arts - homestay - specialties” industrial chain.

Through the linkage of three major strategies, Hadapu can build a development model of “deepening of red scenes - integration of red and green resources - long-term community benefits”, promote the transformation and upgrading of red culture from “sightseeing and checking in” to “experience and get rich”, and provide a paradigm for the revitalization of the old revolutionary areas in Northwest China.

References

Rogerson C M, Rogerson J M. (2019) Tourism, local economic development and inclusion: evidence from Overstrand Local Municipality, South Africa[J]. *Geo Journal of Tourism and Geosites*, 25(2). pp. 293-308.

Mandelbaum, S. (1996) The talk of the community. In Mandelbaum, S., Mazza, L. and Burchell, R. (eds.) *Explorations in planning theory*. New Brunswick, NJ: Center for Urban Policy Research.

Mc Gehee N G, Andereck K L. (2004) Factors predicting rural residents’ support of tourism [J]. *Journal of Travel Research*, 43(2), pp.131-140.

Han S. (2023). Research on the Appropriate Development Mode and Planning Strategy of Small Tourism Towns in Nanniwan, Northern Shaanxi (Master degree). [Online] available at: <https://link.cnki.net/doi/10.27393/d.cnki.gxazu.2023.000248>.