



# Research on Multiple Paths Among Influencing Factors of Country Tourism Economic Development

Ying Li<sup>1,a\*</sup>; Xianxian Duan<sup>2,b</sup>; Liru Zhang<sup>3,c</sup>

<sup>1</sup>School of Management, Guangdong University of Technology, Guangzhou 510000, China (Corresponding author),

<sup>2</sup>School of Management, Guangdong University of Technology, Guangzhou 510000, China,

<sup>3</sup>School of Economics and Trade, Guangdong University of Technology, Guangzhou 510000, China,

\* Corresponding author: [zhishiland\\_byd@163.com](mailto:zhishiland_byd@163.com)

<sup>b</sup>[zhishiland\\_byd@163.com](mailto:zhishiland_byd@163.com)

<sup>c</sup>[zhishiland\\_byd@163.com](mailto:zhishiland_byd@163.com)

## Abstract

This paper aims to explore the combined effects of factors affecting the development of the rural tourism economy, study the optimal combination of development paths for the development of rural revitalization, to further promote the construction of the modern agricultural economic system, and make contributions to the development of rural tourism. Using the crisp-set Qualitative Comparative Analysis (cs QCA) method, six related variables including the government policy, cultural substrate, tourist location, characteristic resources, regional economy, and network platform were selected to establish a theoretical model of influencing factors in the economic development of rural tourism characteristics, and 16 rural tourist locations with tourist development influence and tourist characteristics in three provinces of Anhui, Guangdong, and Hubei were selected as cases for analysis. The results show that in the development of rural tourism, government policy factors have a fundamental role in promoting rural tourism development, whereas single factors such as cultural substrate, tourist location, and other factors cannot constitute the necessary influences, and a multifactorial combination is necessary to promote the development of efficient rates of rural tourism and promote the development of the rural economy.

**Keywords:** rural tourism, qualitative comparative analysis, configuration pathway

## 1. INTRODUCTION

Country civilization is the vector of the history of Chinese national civilization, but also an important embodiment of the rejuvenation of the village. Rural tourism plays a crucial role in advancing the rejuvenation of villages, not only accelerating the integration of the rural industry, but also promoting the development of rural economy, rural culture, rural environment, and other aspects, providing local farmers with effective economic gains, helping to reduce the economic gap between urban and rural areas, and thus achieving rural rejuvenation (Hong Wang et al., 2022) [9].

Through searching relevant pieces of literature, it is found that there have been studies on the analysis of rural tourism mostly qualitative analysis and a few quantitative analyses, and few scholars use the method of qualitative comparative analysis to conduct detailed research on rural tourism. Many factors influence the

development of rural tourism sites, mostly in the form of combinations and not as single influencers. In this paper, using the clear set qualitative comparison method (csQCA), 16 related variables are selected to establish a theoretical model of the influencing factors on the economic development of rural tourism characteristics, and the data are analyzed and discussed.

## 2. LITERATURE REVIEW

The development of the country's tourism economy has been affected by several factors, and through the analysis of relevant literature, a summary of the development factors that affect country tourism is presented. Since 2011, the results of internationally integrating QCA with tourism management have started to emerge, and topics have dealt with strategies for tourism development in different rural villages (Youzhou Du et al., 2017) [29]: China's policy research points out that the macro institutional situation is the driving force

of policy change(Rupintris, 2020)<sup>[19]</sup>. Yajuan Li argues that weak infrastructure and small tourism location competitiveness are major factors influencing rural tourism development (Yajuan Li, 2012); Xiumei Chen<sup>[27]</sup> argues that the current policy orientation in our country has a very positive effect on rural tourism development. Moreover, the objective resource conditions of the tasks are also indispensable conditions to promote the development of rural tourism and have an important impact on its development (Yuanggang Zhang, 2020)<sup>[31]</sup>. Zhang Deping believes that the Internet can effectively promote the convergence and development of the tertiary industry in rural tourism destinations (Deping Zhang, 2022)<sup>[5]</sup>. Yu Runzhe holds that tourist attractions, tourist locations, regional economy, and network platforms are important factors affecting the development of rural tourism sites (Runzhu Yu et al., 2021).

Throughout the literature, most studies remain open to discussion of the problems that exist with country tourism site development and then give solutions, with only a few scholars considering multiple factors collectively influencing the effect, and others limited to a certain area, making the findings locally restricted. This study applies a clear set qualitative comparative analysis method (csQCA,) to effectively avoid the deficiencies of single element qualitative and quantitative analysis, and synthesize the strengths of the two.( Ming Zhang et al., 2019)<sup>[14]</sup>.The csQCA method is different from the previous one-factor analysis, which is the perspective of copper drum configuration to analyze, the combinational path method with many factors to study the influencing factors of rural tourist development, using the row pipe theory to establish a truth table, and through specific analysis of multiple rural tourist locations to explain the causal relationship with the explained variables, it can provide a more real theoretical basis. Therefore, this paper applies the csQCA method to construct and analyze 16 factors influencing the economic development of rural tourism sites and applies empirical analysis to solve problems existing in rural tourism site development (E Skaaning S, 2011)<sup>[6]</sup>.

### 3. RESEARCH METHODS

Qualitative comparative analysis (QCA) was proposed by American sociologist Ragin in the 1980s as a case-oriented approach(Ragin C, 2014). The QCA method is different from the traditional statistical analysis and qualitative analysis methods, which can analytically handle limited complex cases through a "configuration "way (Jianqing Cheng et al., 2019)<sup>[10]</sup>. In the QCA method, the assumption that a single cause will

have an impact on the outcome is replaced by the assumption of "concurrent causality ", and at the same time, the symmetry of causality is broken (Zhanwen Mao, 2016)<sup>[32]</sup>. QCA has brought social science researchers far from being a technological means and a whole new logic of research(SCHNEIDER et al., 2006)<sup>[24]</sup>, and consistently, the problems studied in the management field are often characterized by causality complexity, and a QCA approach that fits many of the properties of management problem research will bring revolutionary contributions to solving complex causality and enhancing practical cutting questions, becoming a new path for management research(Nan Chao et al., 2019)<sup>[16]</sup>.

Qualitative comparative analysis (QCA) is a case study-oriented theoretical ensemble research method (Miller W, 1987)<sup>[13]</sup> to ask the cause mix path through Boolean logic. The QCA methods mainly include csQCA (clear set), mvQCA (multi-valued set) as well as fsQCA (fuzzy set) (Cong Cheng et al., 2016)<sup>[1]</sup>, and the clear set qualitative comparison analysis (csQCA) is characterized by the dichotomous value of 1 versus 0 for the conditional and outcome variables and conducts set relationship operations when the variables are assigned(Dun Wan et al., 2019).

### 4. INDEX SYSTEM

Concerning the research methods of other scholars, the medium sample of studies is in the range of 10-14, the number of explanatory variables of which is the best 4-7, and an indicator system is constructed based on the influencing factors of economic development of rural tourism places, and it is summarized that the influencing factors have government policy, cultural substrate, tourist location, population base, regional economy, new media promotion. With a preliminary analysis of the above 6 influencing factors, as far as a destination is concerned, the measure is whether the tourist destination has well-established infrastructure and emergency facilities and whether the region has relevant laws and regulations for rational planning management of the tourist destination. For the 16 cases selected in this paper, all of their destination management meet the criteria without much difference. In terms of government policy, all governments actively introduce relevant policies to promote the development of local tourism industries to enhance local economic development. Through the analysis, six influencing factors, such as government policy, cultural substrate, tourist location, population base, regional economy, and new media publicity, are finally included as conditional variables in the analysis, and the specific indicators are illustrated in Table 1 below.

**Table 1.** Description of variables and indicators

	Variant names	Description of indicators
Conditional variables	government policy	The introduction of government tourism policy provided a good outside environment

		for the development of country tourism and played a guiding role in the development of the country as a whole.
	Culture substrate	China's countryside is a place with a deep historical-cultural substrate, and in terms of the cultural substrate cloud, there are mainly three forms of Rural Tourism: the camera type, the red cultural type, and the Zika type of the cultural village of the civil host.
	Tourist location	Locational element is one of the central issues in a tourist location, and it is the external constraint on the location units to make spatial configuration, which in turn determines the constraints on spatial location and combinatorial relationships underlying the tourist phenomenon.
	population base	The development of rural tourism is inseparable from the population, and since the development of the tourism industry has developed in coordination with both supply and demand parties, among them, people are one of the important elements to drive the development of the economy.
	Location economy	The development of a locational economy has a major impact on local transportation, infrastructure construction, catering culture, and consequently local tourism development.
	media campaigns	media transmission modes with information networks and mobile terminals as vehicles have brought new development potential to the rural tourism industry.
Outcome variables	Country economic development	The number of country tourist visits increased, the country's construction was gradually improved, and the local people's living standard was improved.

## 5. CASE ANALYSIS

### 5.1. description of data

To make the findings more extensive and persuasive, 12 rural tourist attractions representative of three provinces in Guangdong, Anhui, and Hunan are selected as cases in this paper, and 12 rural tourist attractions in three provinces of Guangdong Province - South Kunshan, shetian principals, Baishan, Tuxiang island in the nepheline area, Shaoguan Danxia Mountain and Luo floating mountain, respectively, are selected for analysis; Anhui Province - tiancolumnan, Huangshan, Xijie, Hongcun, Longchuan; Hunan Province - Changde Tao Hua source, jinmetho yuan, Yueyang Tower, phoenix ancient city, Tianmen Shan, Hengshan, China. By comparatively analyzing the development of 16 village tourism spots in three provinces, we explore relatively efficient measures for rural tourism development to provide theoretical references for some government parts.

### 5.2. variant assignment

After a variable has been identified, the QCA method requires variable assignment following dichotomous imputation (Table 2). The principle of dichotomous assignment is based on binary variables(Rihoux B et al., 2017), denotes "present ", [0] denotes "absent " (Table 2), and the combination of conditions is further simplified using Boolean algebraic computation principles. Referring to the research of other scholars and combined with the actual situation of this paper, the specific assignment rules are as follows: according to the government policy research, the documents that governments have issued to guide the development of local tourism are assigned a value of 1, and 0 vice versa; Cultural background is a main natural condition for local development of tourism(Xiaoqin Lai et al., 2022)<sup>[30]</sup>.In this case, the local tourism modes belonging to traditional ancient villages, red cultures, or residential cultural villages are assigned a value of 1, while those not given above are assigned a value of 0. Tourist locations refer mainly to local traffic conditions. In this case, the

travel distance from a tourist destination to an urban area is assigned a value of 1 for less than one hour and 0 for more than one hour. The population base is one of the main factors driving the development of tourism. It is determined that the population base is 600,000 people as a watershed to distinguish the population of case areas, with a value of 1 for more than 600,000 people and 0 for less than 600,000 people. Location economy is mainly reflected in the local infrastructure construction and the

quality of life of residents. This paper assigns the per capita GDP of the municipality to which the case belongs a higher value than the national average per capita GDP of 1, otherwise assigns a value of 0. Cases that are advertised mainly through Internet platforms are assigned a value of 1, whereas those that are advertised through Internet platforms are assigned a value of 0. The specific assignment is shown in table 2.

**Table 2.** Assignment and criteria of variants

Variant names	Assignment Criteria	assignment
government policy	The government issues documents to guide the development of rural tourism.	1
	The government has not issued documents to guide the development of rural tourism.	0
Culture substrate	One of the three forms of rural tourism: traditional ancient village type, red culture type, and residential culture village type.	1
	It is not one of the three types of rural tourism: traditional ancient village type, red culture type, and residential culture village type.	0
Tourist location	Less than an hour's drive from downtown	1
	Drive more than an hour from downtown	0
population base	Over 600,000 people	1
	Less than 600,000 people	0
Location economy	Regional municipalities' per capita GDP exceeds the national average per capita GDP	1
	The per capita GDP of the prefecture-level cities in the region is lower than the national average per capita GDP	0
media campaigns	Universal Internet Platform for Promotion	1
	Use offline publicity	0

### 5.3. Building Truth Table

The truth table is the correspondence between the sample data and the possible configuration and is a comprehensive display based on all the configurations for a given dataset (Charles C, 2019), and constructing

the truth table gives the distribution of the cases on the possible configuration. Based on the assignment of the variables in Table 2, the original data of each index of 16 rural tourism destinations are input into the csQCA software, and the true value table is constructed by operation (as shown in Table 3).

**Table 3.** Table of clear set truth values for conditional variables and outcome variables

Serial number	government policy	Culture substrate	Tourist location	population base	Location economy	media campaigns	Country economic development
1	1	0	1	1	1	1	1
2	1	1	0	0	0	1	1
3	1	0	1	1	1	1	1
4	1	1	0	0	0	0	0

5	1	1	1	0	0	1	1
6	1	0	0	0	0	0	0
7	1	1	0	0	0	0	0
8	1	0	1	1	1	1	1
9	1	1	0	0	0	1	0
10	1	0	0	0	0	1	0
11	1	0	1	0	1	1	1
12	1	1	1	0	1	1	1
13	1	1	1	1	1	1	1
14	1	1	1	1	1	1	1
15	1	1	1	0	1	1	1
16	1	1	1	0	0	0	1

**5.4.data analysis**

The clear set qualitative analysis and comparative analysis method are adopted, and the csqca software is used to conduct univariate necessity analysis and multi-factor necessity analysis on the data respectively.

**5.4.1. univariate necessity analysis**

In the QCA method, we can first judge whether a single conditional variable is a sufficient or necessary condition for the development of the rural tourism economy in China by analyzing a single conditional variable. The emergence of sufficient explanation conditions will inevitably lead to the emergence of outcome variables, which is reflected in the emergence of municipal policies in this study. From the analysis results, the seven explanatory variables are not sufficient conditions to constitute the outcome variables. For necessity, univariate necessity is judged by the consistency index(Rihoux B and Charles C, 2017)<sup>[2]</sup>, and the formula is:

$$consistency(Y_i \leq X_i) = \sum [\min (X_i \leq Y_i) / \sum (Y_i)]$$

In the formula: Xi refers to the membership score in the combination of conditions; Yi refers to the affiliation score in the results. Generally, only if the consistency is greater than 0.9 can it be considered a necessary condition for the results (Guoxian Bao et al., 2018)<sup>[7]</sup>. Further, the strength of interpretation of condition x for y

can be judged by coverage metrics (Dun Wan et al., 2019)<sup>[4]</sup>. The analysis of the univariate necessity results by csQCA is presented in Table 4. It can be seen that for a single factor necessity, only 'government policy' constitutes a necessary condition for rural tourism economic development.

**Table 4.** Univariate necessity analysis

Conditional variables	Consistency	Coverage
policy	1.000000	0.750000
culture	0.666667	0.727273
location	0.833333	1.000000
population	0.416667	0.833333
economy	0.500000	0.666667
media	0.750000	0.750000

**5.4.2. multifactorial necessity analysis**

Multifactorial necessity analysis is conducted by using the coverage indicator (coverage) to judge the explanatory power of the conditional variable on the outcome variable(Runzhu Yu et al., 2021)<sup>[22]</sup>, and the coverage in this paper represents the explanatory power of the conditional variable on the causal pathway by the influencing factors of rural tourism development, that is, the higher the numerical value of its coverage, the better its explanatory power for the causal pathway(Rihoux B et al., 2017), and the coverage expression formula is shown below (table 5).

**Table 5.** Combination results of multiple factors

Sequ ence	combination	raw coverage	consisten cy
1	~media*~economy*~population*~culture*policy	0.166667	1
2	media*~economy*~population*culture*policy	0.25	1
3	media*economy*population*location*policy	0.416667	1
4	~media*~economy*~population*location*policy	0.166667	1
5	~economy*~population*location*culture*policy	0.25	1
6	media*~population*location*culture*policy	0.25	1
7	media*economy*location*culture*policy	0.333333	1
solution coverage:		1	
solution consistency:		1	

According to the study logic, a total of 64 condition combinations existed for the 6 influencing factors. The composite outcome yields a total of seven adequately conditioned mix pathways affecting the development of the country's tourism economy with an overall coverage of 1; The overall concordance is 1, with high strength of interpretation. Specifically, seven combined factors that affect rural tourism economic development are: First, government policy. This effect is also confirmed by the adequacy conditional test, which can explain 16% of the cases with a native coverage of 16%. Interpretation path two is the promotion of media \* cultural \* policy and can explain 25% of cases. It can be seen that it is more conducive to the development of a tourism economy after villages have fully used their cultural resources in conjunction with media campaigns. The three paths to explain are: media \* economy \* population \* location \* policy, which explains 41% of cases, can be seen the better the integration of conditions conducive to the development of a tourism economy, the better the economic development. The explanatory path four is the economy \* location \* policy where the original coverage under the path is 16%, which shows that 16% of cases can be explained. Raw coverage of pathway combinations V and VI was 25%, i.e., indicating that 25% of cases could be explained by pathways V and VI. The raw coverage of pathway seven was 33%, illustrating that 33% of cases can be explained by this pathway.

## 6. CONCLUSIONS

### 6.1. results

In the above model, the most frequent occurrence of the core variable is government policy, which has involvement in all seven pathway combinations and is the most direct and powerful driver of rural tourism economic development (Hongmei Liu and Chenwei Ji, 2018)<sup>[8]</sup>. For the five influencing factors, such as cultural substrate, tourist location, characteristic resources, regional economy, and network platform, through univariate necessity analysis, although all showed high consistency, none of the factors that were rigid for the economic development of rural tourism in 16 countries could constitute a sufficient requirement for influencing factors for the economic development of rural tourism.

Secondly, the effect size exerted by a single conditional variable is limited (Shaonan Shan and Duan Xia, 2022)<sup>[25]</sup>, and a combination of factors is required to exert their effect to jointly promote the development of a rural tourism economy, to better achieve tourism to bring the economy to fruition, and then rejuvenate the country. First, to fully exert the government's guiding role, the support of policies that contribute to the active formation of good motivation for rural development, combined with the adequate advocacy role of new media platforms, effective integration of pre-existing resources in

destinations, and location advantages, will facilitate rapid rural tourism economic development.

Finally, in multifactorial analysis, among the various paths that affect the economic development of rural tourism, the raw coverage ratio difference among the paths is large, so it can be concluded that what influences the economic development of rural tourism is very complex, and comprehensive analysis needs to be performed in the research, using configuration analysis method to conduct a comprehensive analysis, and then to find the optimal path to promote the development of rural tourism economy.

### 6.2. discussion

The findings suggest that the development of country tourism by a multifactorial combination pathway is a major driving force to promote the booming development of country tourism and that multiple influencing factors should be taken into account in combination when planning country tourism development. In addition, the introduction of new development elements is full of opportunities and challenges for rural tourism development, and different research methods should be used comprehensively to solve the difficulties in the process of rural tourism development and make contributions to rural tourism development.

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