



# Study on the impact of tourism poverty alleviation effect perception on resident participation in old revolutionary areas

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**Abstract.** As a key task in the management and development of rural revitalization, tourism poverty alleviation requires scientific data analysis to promote the management and development of residents in poor areas. Taking Wangcang Red Army City as a case study, this paper constructs a research model from the relationship between the perception of tourism poverty alleviation effect, cultural identity and residents' willingness to participate, collects questionnaire data, uses AMOS structural equation model for path analysis, and uses SPSS software to test the mediating role of cultural identity. The results show that: (1) the perception of tourism poverty alleviation effect positively affects residents' willingness to participate and cultural identity; (2) cultural identity positively affects residents' willingness to participate; (3) cultural identity has a partial intermediary role. This study has certain significance for clarifying the influence relationship between the perception of the poverty alleviation effect of cultural tourism, cultural identity and willingness to participate among residents in the old revolutionary areas, and can also provide theoretical basis and reference for destination managers to formulate relevant management policies.

**Keywords:** Poverty alleviation effect; Structural equation model; data analysis; Tourism management

## 1 Introduction

The cultural tourism industry is an important resource and advantageous industry for the development of the old revolutionary areas, and in the poverty alleviation work in the era of rural revitalization, the value of the cultural tourism industry is brought into play, providing a sustained driving force and a new development model for the poverty alleviation work in the old revolutionary areas. Community residents can effectively solve the livelihood problem by participating in the development of cultural tourism, which is the premise and foundation for promoting the sustainable development of local tourism, and it is also the key to the "hematopoietic" endogenous development of the old revolutionary areas in the era of rural

revitalization, but at present, there is still insufficient participation of residents in many areas.

Looking at the research on tourism poverty alleviation and community residents in the old revolutionary areas, it is found that the research focus is mainly on tourism poverty alleviation performance and policy analysis, and the cultural identity of residents is relatively insufficient. Therefore, this paper proposes to select Wangcang Red Army City, the old revolutionary area of Sichuan and Shaanxi, as a research case to construct a research model from the relationship between the perception of the poverty alleviation effect of residents, cultural identity, and the willingness of residents to participate in tourism poverty alleviation, and through this study, we will try to further clarify the complex influence mechanism of residents' tourism poverty alleviation effect perception and cultural identity on residents' willingness to participate in the old revolutionary area under the situation of cultural tourism poverty alleviation, and also provide reference for the formulation of policies related to cultural tourism poverty reduction and rural revitalization in old revolutionary areas.

## **2 Research design**

### **2.1 Research hypothesis**

#### **2.1.1 Perception of poverty alleviation effect of tourism and residents' Participation.**

The perception of tourism poverty alleviation effect is a kind of social perception. It is a kind of tourism influencing factor and effect felt by residents in poverty alleviation areas (Wang, 2008). It generally includes three dimensions: economic effect, social and cultural effect and environmental effect (Wu, 2021). According to the exchange theory, the attitude and participation behavior of residents' tourism development are the result of individual weighing the pros and cons (Zhang, 2020). When the residents of tourist destination realize that their benefits from tourism activities outweigh their losses, they will have a positive evaluation of tourism activities and actively participate in tourism. Taking tourism in ethnic villages as a case, Wang Jinwei (2021) divided the poverty alleviation effect of tourism into positive and negative effects of economy, social culture and environment. The results show that residents' perception of positive effects is significantly higher than that of negative effects. In general, because tourism poverty reduction has played an important and positive role in China's poverty alleviation and development, residents' perception of the positive effect of tourism poverty alleviation is more obvious. Based on this, the following assumptions are put forward:

H1a: there is a significant positive correlation between the perception of economic effect of tourism poverty alleviation and residents' willingness to participate;

H1b: there is a significant positive correlation between the perception of social and cultural effects of tourism poverty alleviation and residents' willingness to participate;

H1c: there is a significant positive correlation between the perception of environmental effects of tourism poverty alleviation and the willingness of participating residents.

### **2.1.2 Perception of poverty alleviation effect of tourism and cultural identity.**

From the perspective of their own culture, Zheng Xiaoyun (1992) and others believe that cultural identity is the recognition of the common culture by people within the group, which will produce a sense of belonging to the common culture. The impact of tourism activities can enhance community attachment (McCool SF, 1994) and enhance their cultural pride and cultural identity (Chai, 2019). Taking ethnic and village tourism as an example, Wu Qifu (2009) and Wang Chao (2017) proposed that the fundamental driving force of cultural identity is the pursuit of economic interests, and the perception of economic effects brought by tourism development will affect the cultural identity of local residents; Chen Xiuling (2018) mentioned that the change of social features and the exchange of foreign civilizations in tourism development will affect the host residents' sense of identity to the local culture, indicating that the perception of social and cultural effects will have an impact on the residents' cultural identity. Sun Jiuxia (2005) proposed that tourism development pays attention to the protection of local traditional cultural environment and cultural resources, which is conducive to strengthening residents' sense of identity. It can be seen that the impact of tourism on the local environment will affect residents' sense of identity. Based on this, the following assumptions are put forward:

H2a: there is a significant positive correlation between the perception of economic effect of tourism poverty alleviation and cultural identity;

H2b: there is a significant positive correlation between the perception of social and cultural effects of tourism poverty alleviation and cultural identity;

H2c: there is a significant positive correlation between tourism poverty alleviation environmental effect perception and cultural identity.

### **2.1.3 Cultural identity and residents' Participation.**

Tang Xiaoyun (2015) believes that cultural identity will strengthen residents' positive or negative attitude towards participating in tourism; Yang Liu (2013) believes that the combination of cultural identity and ecotourism can promote the local development of ecotourism community participation.;Li Guanghong (2019) mentioned that cultural identity can stimulate residents to participate in tourism activities and promote the development of tourism in ethnic villages. In short, affected by Chinese traditional culture, residents of old revolutionary base areas often have unique attachment to the local culture (Xu, 2016). Residents' identification with local culture and its surrounding environment will enhance their participation in tourism activities. Based on this, the following assumptions are put forward:

H3: there is a significant positive correlation between cultural identity and participation behavior.

### **2.1.4 Intermediary role of cultural identity.**

The theory of self regulating attitude is a continuous process of evaluation, emotional response and behavioral intention (bagozzi R P, 1992). As a kind of residents' emotional attachment to regional national culture (Cai, 2017), cultural identity will have an emotional response to the cognitive evaluation of the economic,

social, cultural and environmental effects produced by tourism poverty alleviation activities, and then have an impact on the resulting behavior of residents' willingness to participate. Affected by Chinese traditional culture and patriotism, residents of tourism destinations in old revolutionary base areas often have deep feelings for the red culture in their areas, This emotional factor may affect their perception and behavior of the effect of tourism poverty alleviation and development. Based on this, the following assumptions are put forward:

H4a: cultural identity plays an intermediary role between the perception of economic effects of tourism poverty alleviation and residents' willingness to participate;

H4b: cultural identity plays an intermediary role between the perception of social and cultural effects of tourism poverty alleviation and residents' willingness to participate;

H4c: cultural identity plays an intermediary role between the perception of environmental effects of tourism poverty alleviation and residents' participation.

## 2.2 Hypothetical model

According to the above research assumptions, the following hypothetical model diagram is constructed (Fig. 1).

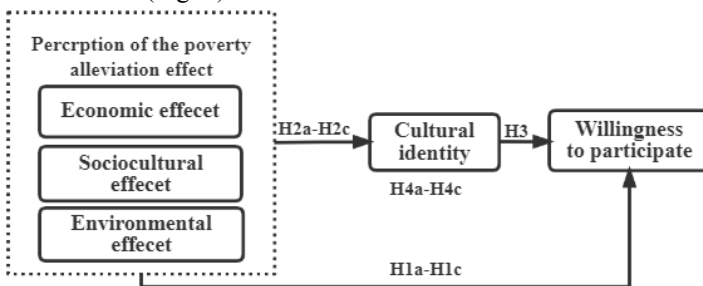


Fig. 1. hypothetical model

## 2.3 Research method

### 2.3.1 Overview of the case.

This paper mainly selects Wangcang Red Army City, Guangyuan City, the revolutionary base of Sichuan and Shaanxi, as the research site. Guangyuan is located in the junction of Sichuan, Shaanxi and Gansu provinces, with profound red cultural heritage. It is one of the areas with the most abundant red tourism resources in Sichuan. It created red tourism characteristic products in 2014, vigorously promoted red tourism, and selected provincial Red Tourism Characteristic Towns in 2017. However, due to its geographical location, After the founding of new China, compared with the old revolutionary base areas such as Yan'an, there is still an obvious lag in development.

### 2.3.2 Questionnaire and data.

The measurement of the perception dimension of the economic effect of tourism poverty alleviation draws on the research of John AP (AP John, 1998); The perception of social and cultural effects and environmental effects of tourism poverty alleviation draw lessons from Chen Wei (Chen, 2020), etc; Cultural identity refers to Xie Mingyu (Xie, 2018), etc; Residents' willingness to participate refers to the research of Liu Weihua (Liu, 2000), which has 21 items. In January 2022, the investigators conducted a questionnaire survey in Wangcang Red Army city by means of random stop visit and household survey. 340 questionnaires were distributed in the whole process, 312 were recovered and 305 were effective, with an effective rate of 89.7%. The sample data are shown in the table below. In terms of gender, the proportion of men and women is basically the same, 53.4% and 46.6% respectively; The age is mainly 18-50 years old, accounting for 76.7%; The proportion of junior high school and below is the largest, accounting for 43.9%, followed by senior high school; The monthly income of 2001-5000 yuan accounts for the largest proportion, accounting for 43.6%; The time of living in the local area for more than 35 years is the most, accounting for 50.8%; In terms of occupation, migrant workers accounted for the largest proportion, accounting for 19.3%, followed by farming, accounting for 19.3%; Most of the people without tourism experience accounted for 52.5%.

## 3 Empirical analysis

### 3.1 Exploratory factor analysis

Using SPSS 26.0, this paper makes an exploratory factor analysis (EFA) on the perception of tourism poverty alleviation effect, cultural identity and residents' willingness to participate. According to the EFA analysis results, the KMO value of the scale data is 0.933, Bartlett's spherical test approximates chi-square 3264.771 and the P value is less than 0.001, indicating that the questionnaire is suitable for factor analysis. Using principal component analysis, taking the criteria of factor load lower than 0.4, cross load greater than 0.4 and the number of items corresponding to factors less than 2 as the basis for item deletion, the variance maximization orthogonal rotation method is selected to extract the common factor. Five common factors were extracted, and the total explanatory variance ratio of the five common factors was 67.647%, and the Cronbach's of the five common factors  $\alpha$  The coefficients are greater than 0.8, indicating that the internal consistency of each factor is strong (Table 1). According to the factor load matrix, the five common factors are named as F1 (economic effect perception), F2 (social and cultural effect perception), F3 (environmental effect perception), F4 (Cultural Identity) and F5 (residents' willingness to participate).

**Table 1.** Exploratory factor analysis

Variable	Factor/item	Factor loading	Mean	Eigen-value	Variance explained	Cronbach's $\alpha$
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Perception of tourism-led poverty alleviation	F1: Economic effect	3.67	1.04	12.26	0.81
	F2: Sociocultural effect	3.49	1.43	13.22	0.84
Cultural identity	F3: Environmental effect	3.57	1.18	12.99	0.83
	F4: Cultural identity	3.70	1.78	14.11	0.85
Residents' willingness	F5: Willingness to participate	3.62	8.78	15.08	0.88

### 3.2 Correlation analysis

Pearson correlation coefficient was used for correlation analysis. The correlation results between independent variables and dependent variables involved in this study are as follows: there is a significant positive correlation between economic effect ( $r = 0.443$ ,  $P < 0.01$ ), socio-cultural effect ( $r = 0.389$ ,  $P < 0.01$ ), environmental effect ( $r = 0.419$ ,  $P < 0.01$ ) and cultural identity; There was a significant positive correlation between economic effect ( $r = 0.625$ ,  $P < 0.01$ ), social and cultural effect ( $r = 0.567$ ,  $P < 0.01$ ), environmental effect ( $r = 0.633$ ,  $P < 0.01$ ) and willingness to participate; There was a significant positive correlation between cultural identity ( $r = 0.542$ ,  $P < 0.01$ ) and willingness to participate.

### 3.3 Structural equation model analysis

#### 3.3.1 Goodness of fit test.

The maximum likelihood method is used to estimate the parameters of the structural relationship model of "influencing factors of residents' willingness to participate in tourism poverty alleviation" and test the overall goodness of fit of the model. The analysis results are shown in Table 2. The fitting indexes of the model are  $Cmin/df = 1.158$ ,  $GFI = 0.940$ ,  $AGFI = 0.923$ ,  $NFI = 0.938$ ,  $TLI = 0.989$ ,  $CFI = 0.991$  and  $RMSEA = 0.023$ . The results show that the fitting indexes of the structural equation basically reach the ideal value and the model fits well.

**Table 2.** Structural equation model fitting index

	$X^2$	df	$X^2/df$	GFI	AGFI	NFI	IFI	TLI	CFI	RMSEA
Standard value			1-3	> 0.9	> 0.9	> 0.9	> 0.9	> 0.9	> 0.9	< 0.08
structural equation	207.247	179	1.158	0.94	0.923	0.938	0.991	0.989	0.991	0.023

#### 3.3.2 Path analysis.

It can be seen from table 3 that all paths of the model are significant at the level of 0.05, indicating that all research hypotheses have passed the significance test and the hypothesis is tenable. The results show that: economic effect ( $\beta = 0.27$ ,  $P < 0.001$ ) had a significant positive impact on Residents' willingness to participate; Social and cul-

tural effects ( $\beta= 0.209, P < 0.001$ ) had a significant positive impact on Residents' willingness to participate; Environmental effects ( $\beta= 0.316, P < 0.001$ ) had a significant positive impact on Residents' willingness to participate; Economic effect ( $\beta= 0.272, P < 0.01$ ) had a significant positive impact on cultural identity; Social and cultural effects ( $\beta= 0.177, P < 0.05$ ) had a significant positive impact on cultural identity; Environmental effects ( $\beta= 0.212, P < 0.05$ ) had a significant positive impact on cultural identity; Cultural identity ( $\beta= 0.223, P < 0.001$ ) had a significant positive impact on Residents' willingness to participate. The hypothesis h1a-h3 is verified.

**Table 3.** Structural equation model path test results

			Estimate	S.E.	C.R.	path analy-	P	hypothesis
F4	<---	F1	0.337	0.121	2.773	0.272	0.006**	establish
F4	<---	F2	0.187	0.088	2.124	0.177	0.034*	establish
F4	<---	F3	0.238	0.109	2.18	0.212	0.029*	establish
F5	<---	F1	0.343	0.095	3.605	0.277	***	establish
F5	<---	F2	0.221	0.067	3.302	0.209	***	establish
F5	<---	F3	0.356	0.085	4.173	0.316	***	establish
F5	<---	F4	0.223	0.057	3.907	0.223	***	establish

Note: \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

### 3.4 Test of the mediating role of cultural identity

Using model 4 in SPSS macro compiled by Hayes (2012), under the control of gender and age, the mediating effects of cultural identity in the relationship between economic effect and residents' willingness to participate, socio-cultural effect and residents' willingness to participate, and environmental effect and residents' willingness to participate should be tested respectively. The results show that (Table 4) the upper and lower limits of the bootstrap 95% confidence interval of the direct effect of economic effect on participation intention and the intermediary effect of cultural identity do not contain 0, indicating that economic effect can not only directly predict participation intention, but also predict participation behavior through some intermediary effects of cultural identity. The direct effect (0.540) and intermediate effect (0.172) accounted for 75.86% and 24.14% of the total effect (0.712), respectively, which verified the hypothesis H4a; Similarly, cultural identity has a partial mediating effect between social and cultural effects and willingness to participate. The direct effect (0.419) and mediating effect (0.155) account for 73.03% and 26.99% of the total effect (0.573), respectively, which verifies hypothesis H4b; Cultural identity plays a partial mediating role between environmental effects and willingness to participate. The direct effect (0.514) and mediating effect (0.154) account for 76.92% and 23.10% of the total effect (0.669) respectively, which verifies the hypothesis H4c.

**Table 4.** Breakdown of indirect effect, direct effect and total effect

Variables	Effect	BootSE	BootLLCI	BootULCI	Proportion of effects	
F1→F4→F5	IE	0.172	0.033	0.114	0.242	24.14%
	DE	0.540	0.055	0.429	0.650	75.86%
	TE	0.712	0.049	0.613	0.811	
F2→F4→F5	IE	0.155	0.030	0.099	0.217	26.99%
	DE	0.419	0.049	0.321	0.515	73.03%
	TE	0.573	0.044	0.489	0.662	
F3→F4→F5	IE	0.154	0.029	0.102	0.214	23.10%
	DE	0.514	0.057	0.403	0.624	76.92%
	TE	0.669	0.051	0.565	0.768	

## 4 Conclusion and discussion

### 4.1 Research conclusion

(1) The perception of tourism poverty alleviation effect is composed of three dimensions: economic effect, social and cultural effect and environmental effect. The perception of tourism poverty alleviation effect has a positive impact on Residents' willingness to participate in tourism poverty alleviation, which is similar to the research conclusion of Xu Zhongwei (Xu, 2019). Positive perception of tourism development effect will have a significant impact on Residents' attitude and willingness to participate in tourism. Among them, residents have the most obvious perception of economic effects, with an average of 3.67, followed by environmental effects, with an average of 3.57, and residents have the weakest perception of social and cultural effects, with an average of 3.49, indicating the need to strengthen social and cultural assistance.

(2) The three dimensions of tourism poverty alleviation effect perception have a positive impact on cultural identity. This conclusion confirms the views of chaiyan (chai, 2019). The multiple impacts brought by tourism activities can affect residents' cultural identity; Cultural identity positively affects residents' willingness to participate, which is consistent with the research conclusion of Tang Xiaoyun (Tang Xiaoyun, 2015). Tourism and culture complement each other. The various benefits brought by the implementation of cultural tourism poverty alleviation enable the residents of the old revolutionary base areas to truly feel the role and strength of taking red culture as the tourism consumption point, which can deepen the residents' understanding and recognition of the local red culture. At the same time, the contemporary connotation of red culture will also further affect the residents of the old revolutionary base areas and stimulate the residents to spontaneously participate in tourism poverty alleviation.

(3) Cultural identity plays a partial intermediary role in the dimensions of tourism poverty alleviation effect perception and residents' willingness to participate. This conclusion shows that to a certain extent, the perception of tourism poverty alleviation effect affects residents' willingness to participate by strengthening cultural identity, and red cultural tourism effectively drives the development of old revolutionary base



areas. In the tourism world, residents, as a unique "role identity", participate in the development of cultural tourism, effectively feel the new economic and social psychological benefits brought by the development of cultural tourism, significantly enhance their sense of identity with the local red culture, and their willingness to participate in the development of red cultural tourism will also be significantly enhanced.

## **4.2 Marginal contribution**

Firstly, in terms of research content, cultural identity is embedded in the influence chain of "perception of tourism poverty alleviation effect – willingness to participate", and the influence relationship between the three is demonstrated, which helps to clarify the complex influence mechanism of community participation willingness in the context of cultural tourism poverty alleviation, and can provide direction guidance and theoretical enlightenment for subsequent relevant research to a certain extent; Secondly, in terms of practical value, this study focuses on the poverty alleviation effect of cultural tourism and cultural identity, which can provide reference for destination managers to formulate relevant development policies from the perspective of developing red culture, and then promote the realization of the dual goals of improving the quality of life of residents in old revolutionary base areas and carrying forward excellent culture.

## **4.3 Research prospects and deficiencies**

There are still some deficiencies in the article, which need to be further discussed in the follow-up. First, the article adopts the cross-sectional data collection method, which lacks the continuous follow-up of the research object. With the continuous improvement of tourism development level and quality in the old revolutionary base areas, residents' effect perception and cultural identity will show the characteristics of dynamic changes. The article is only a microcosm of the development of tourism and cultural poverty alleviation in the whole country. Based on the above limitations, it is necessary to adopt diachronic research methods in the future, further enrich the research objects and broaden the research perspective, so as to pay continuous attention to and conduct in-depth research on the development of cultural tourism in relevant regions.

## **Founding**

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