

# An Investigation of Rural Areas of the Dadu River Basin in China

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## Abstract

**Dadu River, located in the central western part of Sichuan Province, People's Republic of China, has historically been regarded as the largest tributary of the Minjiang River, a tributary of the Yangtze River in China. The watershed covers an area of 77700 square kilometers, and the unique terrain and landforms make it rich in tourism resources such as snow capped mountains, Haizi, canyons, and lakes. However, due to the underdeveloped economy of the region, the natural resources in the watershed have not been reasonably developed and utilized. Since China proposed the national policy of rural revitalization, how to make the tourism resources in this region fully and reasonably utilized has profound significance in helping people overcome poverty. This article constructs a key factor model that affects the diffusion of ecological and economic innovation in the Dadu River Basin from the perspectives of natural resource characteristics and government capabilities. Empirical analysis was conducted on the main influencing factors of ecological economic innovation diffusion. The results indicate that natural resources, cultural characteristics, policy orientation, and government capital are key factors influencing ecological and economic decision-making.**

## Keywords

**Innovation Diffusion; Ecological; Government Resources.**

## 1. Introduction

In September 2018, Ganzi autonomous prefecture launched the Rural Revitalization demonstration area in Dadu River Basin. Focusing on the theme of "Chengdu back garden, health care, and leisure," Kangding made every effort to promote the construction of "one core and seven parks" demonstration area in Dadu River Basin by relying on the resource advantages of Dadu River Basin.

Kangding is located in the upper reaches of the Yangtze River, with fragile ecology and significant responsibility for environmental protection. Giving priority to tourism development with little impact on the ecological environment has become our strategic choice. " Yang Guoyong, director of agriculture, animal husbandry, and rural science and technology of Kangding City, said that in promoting the process of rural revitalization, Kangding attaches great importance to the protection of ecology and makes green water and green mountains dress up as a beautiful mountain town.

By March 2021, the three demonstration sites had received 1.469 million tourists, realizing a total tourism revenue of 1.61 billion yuan. To explore a new path of a trinity of life, production, and ecology and integrated development of culture, industry, and tourism, and form a "Kangding model" for Rural Revitalization in Dadu River Basin.

It can be seen from the data that the construction and development of an ecological economy is the premise for the success of the "Kangding model." How to vigorously promote the "Kangding model" so that the Dadu River Basin of Ganzi Prefecture can enjoy the dividend of the ecological economy? From the perspective of innovation diffusion, this paper studies the factors affecting the innovation diffusion of the environmental economy in Dadu River Basin, that is, the factors

affecting the decision-making of the environmental demonstration area. It aims further to improve the ecological-economic construction of Dadu River Basin and promote the further development of the ecological-economic industry.

## 2. Literature Review

Ecological innovation refers to taking ecology as the essential variable, core resource, and comparative advantage in regional competition and cooperation, attracting industries, science and technology, and talents, driving the integration and evolution of urban and rural space, public services and lifestyle, and systematically opening up green water and green mountains is the value transformation path of value, to promote regional division of labor and cooperation with ecology on a larger scale Creative practice of urban energy level promotion.

Schumpeter [1] put forward the innovation theory. He divided technological change into three stages: invention, innovation, and diffusion.

Scholars represented by Lindsey and others believe that the driving force of technological innovation comes from the learning process between individuals and organizations in the organization[2]. The use of production and technology is individual behavior and exists in the cooperation between organizations and groups, organizations and industries [3].

Hall [4] believes that innovation diffusion factors are the benefits of new technology, the cost of accepting technology, industry, social environment, information, and uncertainty [5].

## 3. Hypothesis and Model Construction

### 3.1. Research Hypothesis

- Ganzi Prefecture has unique natural landscape resources such as mountain landscape, lake landscape, glacier landscape, grassland landscape, forest landscape, and climate landscape. Ganzi Prefecture is located in the core area of China's Shangri La ecotourism area. There are incredibly high mountains closest to the metropolis in the world, Daocheng Aden, known as "the last pure land on the blue planet," low-altitude Hailuoguo Glacier symbiotic with hot springs and forests, and Danba, the most beautiful village in China with the charm of "ancient blockhouse, Tibetan village, and beauty Valley." There is "The world's highest-altitude city" Litang and other natural tourism resources[6].

H1:The natural landscape characteristics of Ganzi Prefecture are positively related to the development of the ecological economy.

- Ganzi Prefecture is the main body of the Kangba Tibetan area and the birthplace of rich Kangba culture. The unique nomadic culture, folk song culture, and Tibetan Buddhism are important religions in Ganzi Prefecture[7]. There are more than 470 temples in the prefecture, with unique temple culture[8].

H2:The cultural industry in Ganzi Prefecture is positively related to the development of the ecological economy.

- Ganzi Prefecture has always insisted that the creation of ecological civilization should "beautify the ecology" and "revitalize the industry," and finally "benefit the people,"

to ensure that the advantages of environmental and environmental protection are transformed into poverty alleviation achievements, inject vitality into consolidating poverty alleviation and promoting rural revitalization, and constantly enhance the people's sense of gain and happiness.

H3:The policy orientation of Ganzi Prefecture is positively related to the development of the ecological economy.

- A total of 267 million yuan of central and provincial special funds for ecological and environmental protection were arranged in Ganzi Prefecture, including 157 million yuan of

major rural environmental comprehensive improvement fund, 21 million yuan of local air quality incentive fund, 19 million yuan of local water quality incentive fund and 12.5 million yuan of Provincial Natural Ecological Protection Fund (mainly used for the standardized construction of mother duo Mountain Provincial Nature Reserve in Danba County, Ganzi Prefecture), Other environmental protection funds: 57.5 million yuan.

H4:Government capital investment in Ganzi Prefecture is positively correlated with the development of an ecological economy.

### 3.2. Concept Model

According to the above assumptions and analysis. The model is specially constructed, as shown in Figure 1:

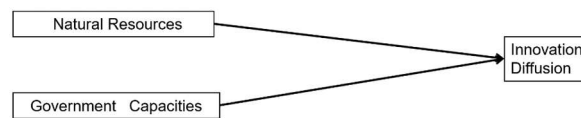


Figure 1. Concept model

After coding the questionnaire, 20 invalid questionnaires were eliminated, and finally, 362 valid samples were left. The model has four latent variables, including 16 question measurement items. The specific question item design is shown in Table 3.

### 3.3. Cronbach's Method

Spss22.0 software is used to test the reliability with 0.7 as the critical value. Suppose the analysis results show that this study has acceptable internal consistency (generally 0.70), good introverted validity, and discriminant validity. In that case, it can be said that the measurement model has successfully passed the test. The next step is to test the theoretical assumptions proposed in this study.

Table 1. Reliability Statistics

Variables	Reliability Statistics	
	Cronbach's Alpha	N of Items
V1-V3	.931	3
V4-V8	.903	5
V9-V12	.901	4
V12-V16	.859	4

### 3.4. Validity Test

Results the approximate chi-square distribution of Bartlett spherical test was 4028, the degree of freedom was 105, and the significance probability = 0.000 < 0.000, which reached the significant level, indicating that the data were correlated and suitable for factor analysis.

Table 2. Validity test

KMO & Bartlett		
KMO		.869
Bartlett	Chi-square	4028
	df	105
	Sig.	.000

## 4. Empirical Analysis

### 4.1. Survey Design

### 4.2. Factor Load Analysis

Based on the random survey of Ganzi Prefecture, 435 questionnaires were distributed, and 382 were recovered. The results in the above table show that Bartlett's test of the questionnaire is acceptable. Over ( $P < 0.0001$ ), KMO value is above 0.7, indicating that it is suitable to enter factor analysis was performed see Table 3.

### 4.3. Pearson Correlation Analysis

Based on the above factor correlation table, among the influencing factors of consumers' online shopping decisions, the influencing factors from high to low are NL(0.434), CC (0.559), PO(0.633), GC(0.204). The results of testing hypotheses by Pearson correlation check of SPSS software are shown in Table 4.

**Table 3.** Factor Load Analysis

Dimension	NO.	CITC	Cronbach's $\alpha$
Natural Landscape	V1	0.807	0.890
	V2	0.882	
	V3	0.835	
Cultural Characteristics	V4	0.799	0.801
	V5	0.711	
	V6	0.882	
	V7	0.878	
	V8	0.710	
Policy Orientation	V9	0.905	0.858
	V10	0.874	
	V11	0.869	
	V12	0.816	
Government Capital	V13	0.874	0.847
	V14	0.869	
	V15	0.816	
	V16	0.850	

**Table 4.** Pearson test

		NL	CC	PO	GC	ID
NL	Pearson Correlation	1				
CC	Pearson Correlation	.459**	1			
PO	Pearson Correlation	.297**	.421**	1		
GC	Pearson Correlation	.589**	.482**	0.055	1	
ID	Pearson Correlation	.434**	.559**	.633**	.204**	1

## 5. Conclusion

The modernization we want to build is the modernization of harmonious coexistence between man and nature. We should not only create more material and spiritual wealth to meet the people's growing needs for a better life, but also provide more high-quality ecological products to meet the people's growing needs for a beautiful ecological environment, which fully affirms

the prominent position of people's material and spiritual needs and environmental needs in the national strategy.

In the research, we should pay attention to the ecological economy. We should contact the local region's specific things and be good at excavating the culture and tradition with regional characteristics. Pay attention to the resources and capacity of the government, earnestly implement the party's ecological civilization construction, and always combine the environmental structure and economic development to promote the innovative achievements of ecology to a broader range.

## Acknowledgments

This work is supported by Sichuan Minzu Collage: XYZB2115SB.

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