

# **Transformation and Path Optimization of Hangzhou's "Mountain-Urban Symbiosis" Development Paradigm from the Perspective of Humanistic Economics**

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## **Abstract**

Against the backdrop of China's urban development shifting from scale expansion to quality improvement, this paper explores the transformation logic and optimization paths of Hangzhou's "mountain-urban symbiosis" development paradigm from the perspective of humanistic economics. Based on the core connotations of humanistic economics-people-centered development, harmony between humans and nature, and integration of culture and economy-this study analyzes the evolutionary process of Hangzhou's urban-rural spatial pattern from the "West Lake Era" to the "Qiantang River Era". Using empirical data such as forest coverage rate, digital economy contribution rate, and urban-rural income gap, the paper identifies the practical dilemmas in the current development paradigm, including unbalanced resource allocation, insufficient cultural integration, and inadequate institutional guarantees. It further proposes optimized paths covering spatial planning, industrial innovation, cultural inheritance, and institutional construction. The research reveals that the transformation of Hangzhou's "mountain-urban symbiosis" paradigm is a systematic project that requires balancing efficiency and equity, tradition and modernity, and ecological protection and economic development. This study provides theoretical reference and practical enlightenment for megacities to realize connotative development and high-quality urban-rural integration.

## **Keywords**

Humanistic economics, mountain-urban symbiosis, development paradigm, path optimization, Hangzhou.

## **1. Introduction**

### **1.1. Research Background**

As China's urbanization enters a critical stage of connotative development, the 2025 Central Urban Work Conference clearly proposed shifting from scale expansion to quality improvement, emphasizing the importance of intensive development and harmonious coexistence between humans and nature<sup>[1]</sup>. Hangzhou, as a megacity with a GDP exceeding 2 trillion yuan and an urban population of over 10 million, has unique natural endowments of "three sides of mountains and one side of city" and a long-standing cultural heritage of integrating landscapes with urban life. For 18 consecutive years, it has retained the title of "China's Happiest City" and ranks 4th in China's high-quality development comprehensive performance evaluation, demonstrating remarkable achievements in balancing economic growth and quality of life<sup>[2]</sup>.

However, with the acceleration of urban expansion, Hangzhou is facing challenges such as the tension between mountain ecological protection and urban development needs, the imbalance of public service allocation between urban and mountainous areas, and the disconnection

between cultural inheritance and industrial development. The emerging paradigm of humanistic economics, which advocates "people-centered development" and "harmony between humans and nature", provides a new theoretical perspective for solving these contradictions. This paradigm emphasizes that economic development should be embedded in humanistic values, and the ultimate goal of urban construction is to realize the all-round development of people. Therefore, exploring the transformation path of Hangzhou's "mountain-urban symbiosis" under the framework of humanistic economics has important theoretical and practical significance<sup>[3]</sup>.

## **1.2. Literature Review**

Foreign research on urban-nature symbiosis mainly focuses on ecological urbanism and sustainable development theory<sup>[4]</sup>. For example, the "compact city" theory emphasizes optimizing spatial layout to reduce ecological pressure, while Amartya Sen's capability approach highlights the importance of human development in urban construction, laying a theoretical foundation for humanistic economics<sup>[5]</sup>. Domestic studies on Hangzhou's urban development mostly focus on digital economy, ecological protection, and cultural inheritance. For instance, some scholars have analyzed the path of Hangzhou's connotative development from the perspective of urban renewal, while others have explored the integration model of landscape and urban construction based on the theory of "mountain-water city". However, few studies have systematically combined humanistic economics with "mountain-urban symbiosis" to explore the transformation of Hangzhou's development paradigm, especially the lack of empirical analysis integrating quantitative data and practical cases<sup>[6]</sup>.

## **1.3. Research Methods and Structure**

This paper adopts a combination of literature review, empirical analysis, and case study methods. First, it sorts out the core connotations of humanistic economics and the theoretical framework of "mountain-urban symbiosis" through literature review. Second, it uses statistical data from Hangzhou Municipal Government and research reports to conduct empirical analysis on the current situation of mountain-urban symbiosis. Finally, it proposes optimization paths based on typical cases such as Hangzhou's urban-rural integration and ecological protection<sup>[7]</sup>. The structure of this paper is as follows: Part 1 is the introduction, which elaborates on the research background, literature review, and research methods. Part 2 defines the core concepts and theoretical basis. Part 3 analyzes the current situation and transformation logic of Hangzhou's "mountain-urban symbiosis" development. Part 4 identifies the existing problems. Part 5 puts forward optimized paths. Part 6 is the conclusion and prospect<sup>[8]</sup>.

## **2. Core Concepts and Theoretical Basis**

### **2.1. Connotation of Humanistic Economics**

Humanistic economics, as a new development paradigm, adheres to the people-centered development thought, takes realizing people's yearning for a better life as the starting point, and regards the harmony between humans and nature as an important support. It emphasizes the mutual integration and promotion of culture and economy, holds that cultural prosperity is the deep foundation of economic development, and economic growth provides material support for cultural inheritance<sup>[9]</sup>. Compared with traditional economics that focuses on material growth, humanistic economics pays more attention to the realization of human values, the improvement of quality of life, and the fairness of development results, which is highly consistent with the core requirements of "mountain-urban symbiosis" for ecological protection, cultural inheritance, and common prosperity<sup>[10]</sup>.

## **2.2. Theoretical Framework of "Mountain-Urban Symbiosis"**

"Mountain-urban symbiosis" refers to the formation of a mutually beneficial and sustainable development relationship between urban and mountainous areas through rational allocation of resources<sup>[11]</sup>, complementary industrial development, and integrated ecological protection. Its core elements include four aspects: spatial integration, industrial coordination, cultural inheritance, and ecological co-protection. Spatial integration emphasizes breaking administrative barriers to realize the optimal allocation of urban and mountainous space resources; industrial coordination requires building a complementary industrial chain based on the comparative advantages of urban and mountainous areas; cultural inheritance focuses on excavating mountainous cultural resources and integrating them into urban cultural construction; ecological co-protection advocates taking ecological protection as the premise to realize the sustainable use of mountainous and urban ecological resources.

## **2.3. Logical Connection between Humanistic Economics and "Mountain-Urban Symbiosis"**

Humanistic economics provides a theoretical basis for "mountain-urban symbiosis" in three aspects: First, the people-centered concept requires that the development of "mountain-urban symbiosis" should take improving the well-being of urban and rural residents as the core, narrowing the urban-rural development gap, and realizing common prosperity. Second, the idea of harmony between humans and nature emphasizes that urban development should respect the laws of nature, protect mountain ecological environments, and avoid excessive development and destruction. Third, the concept of cultural-economy integration provides a path for "mountain-urban symbiosis" to realize industrial upgrading and cultural inheritance, and promotes the transformation of mountainous ecological and cultural resources into development advantages.

## **3. Current Situation and Transformation Logic of Hangzhou's "Mountain-Urban Symbiosis" Development**

### **3.1. Evolution of Spatial Pattern**

Hangzhou's "mountain-urban symbiosis" spatial pattern has experienced three stages of evolution: The first stage is the "West Lake Era", with the West Lake as the core, and the urban area is concentrated around the lake, showing a spatial pattern of "city surrounding the lake". The second stage is the transition period to the "Qiantang River Era", with the adjustment of administrative divisions (such as Fuyang and Lin'an being merged into the main urban area), the urban space has expanded westward and southward, and the connection between the main urban area and mountainous areas has been strengthened. The third stage is the mature period of the "Qiantang River Era", forming a "multi-center, networked" spatial structure with the Qiantang River as the axis, connecting the main urban area with mountainous counties such as Lin'an and Tonglu through transportation networks such as subway and expressways. By 2025, Hangzhou's built-up area has expanded to 801 square kilometers, with a highway network of 879 kilometers and a subway network of 516 kilometers, laying a solid foundation for spatial integration between urban and mountainous areas.

### **3.2. Achievements in Ecological Co-protection**

Hangzhou has always adhered to the concept of "lucid waters and lush mountains are invaluable assets", and has made remarkable achievements in mountain-urban ecological co-protection. Data show that Hangzhou's forest coverage rate ranks first among sub-provincial cities, with the proportion of Class III and above water quality in municipal-controlled sections remaining 100% for five consecutive years, and the PM2.5 concentration has reached the

national secondary standard for six consecutive years. It has taken the lead in realizing zero landfill of raw domestic waste and was selected as the first batch of national carbon peak pilot cities. Notably, Chun'an County has achieved a forest coverage rate of 94.3% and successfully passed the national forest carbon sink certification, with a verified carbon sink capacity of 61,000 tons from 28,900 hectares of forest land, becoming a national model for ecological value conversion . These achievements not only ensure the ecological security of the urban area but also provide a good ecological foundation for the development of mountainous areas, forming a mutually beneficial pattern of "urban protection of mountains and mountains nourishing cities".

### 3.3. Progress in Industrial Coordination

Hangzhou has built a complementary industrial system between urban and mountainous areas based on its industrial advantages. The main urban area focuses on developing digital economy, high-end manufacturing, and modern service industries, with the added value of the core digital economy industry accounting for 28.8% of GDP in 2024, leading the country. Mountainous areas such as Lin'an and Tonglu focus on ecological agriculture, cultural tourism, and green manufacturing, forming characteristic industries such as bamboo products processing and ecological tourism. Table 1 shows the key economic indicators of representative mountainous counties in Hangzhou in 2025:

**Table 1.** Key economic indicators of representative mountainous counties in Hangzhou, 2025

Mountainous County	Core Industry	Key Economic Indicator	Data
Lin'an	Bamboo Industry	Annual Output Value	Over 30 billion yuan
Tonglu	Digital Economy	Core Industry Growth Rate	15.9% (ranking 1st in Hangzhou)
Chun'an	Ecological Agriculture & Tourism	GDP	300 billion yuan (year-on-year growth 5.7%)
Fuyang	Cultural Tourism	Tourist Reception (after free tickets)	2.6397 million person-times (3x increase)
Yuhang (Jingshan)	Tea Industry	Annual Output Value	Over 100 million yuan

As shown in Table 1, Lin'an's bamboo industry has an annual output value exceeding 30 billion yuan, and Tonglu's digital economy core industry has achieved a growth rate of 15.9%, ranking first in Hangzhou . Fuyang's implementation of free tickets for Longmen Ancient Town and Huang Gongwang's Retreat has led to a threefold increase in tourist numbers, with non-ticket income growing by 80% . This industrial division of labor not only gives play to the comparative advantages of urban and mountainous areas but also promotes the flow of factors such as capital, technology, and talent between urban and rural areas, laying a foundation for common prosperity.

### 3.4. Transformation Logic of Development Paradigm

Driven by humanistic economics, Hangzhou's "mountain-urban symbiosis" development paradigm is undergoing a profound transformation: First, the development goal has shifted from "scale expansion" to "quality improvement", and the focus has changed from pursuing economic growth and spatial expansion to improving people's quality of life and ecological environment quality. Second, the development driving force has transformed from "factor-driven" to "innovation-driven", relying on technological innovation and cultural innovation to promote the upgrading of the mountain-urban industrial chain. Third, the development model has shifted from "urban leading" to "integrated development", breaking the urban-rural binary

structure and realizing the equalization of public services and the integration of ecological protection. Evidence of this transformation is reflected in the continuous narrowing of the urban-rural income gap: in 2025, Hangzhou's urban-rural income ratio was reduced to 1.62, with the per capita disposable income of urban residents reaching 86,640 yuan and that of rural residents reaching 53,565 yuan .

#### 4. Existing Problems in Hangzhou's "Mountain-Urban Symbiosis" Development

##### 4.1. Unbalanced Allocation of Resources

Although Hangzhou has made progress in urban-rural integration, there is still an imbalance in resource allocation between urban and mountainous areas. Table 2 compares the resource allocation between Hangzhou's main urban area and mountainous counties:

**Table 2.** Comparison of Resource Allocation Between Hangzhou's Main Urban Area and Mountainous Counties

Resource Type	Main Urban Area	Mountainous Counties (e.g., Lin'an, Chun'an)	Gap Ratio
Per Capita Public Cultural Facilities Area	1.5 sqm	0.9 sqm	60%
High-skilled Talent Proportion	15%	1.8%	12%
Tertiary Hospitals per 100,000 People	3.2	0.8	25%
Rural Road Density	1.2 km/km <sup>2</sup>	0.65 km/km <sup>2</sup>	54%

As shown in Table 2, the per capita public cultural facilities area in mountainous counties is only 60% of that in the main urban area, and the proportion of high-skilled talents is only 12% of that in the main urban area . In terms of medical resources, the number of tertiary hospitals per 100,000 people in mountainous areas is only 25% of that in the main urban area. In terms of infrastructure, although the subway and expressway networks have covered most mountainous areas, the density of rural roads is still insufficient, affecting the flow efficiency of factors between urban and mountainous areas.

##### 4.2. Insufficient Integration of Culture and Economy

Hangzhou's mountainous areas are rich in cultural resources, such as traditional villages, folk customs, and intangible cultural heritage, but the integration of these resources with the economy is not sufficient. Table 3 shows the cultural-economy integration efficiency of mountainous areas:

**Table 3.** Cultural-Economy Integration Efficiency in Mountainous Areas

Region	Cultural Resources	Cultural and Creative Product Output Value Ratio	Tourist Stay Time
Tonglu	Traditional Crafts	% of total tourism income	Fuyang
Yuhang (Jingshan)	Zen Tea Culture	25% of total tourism income	>1 day
National Advanced Level	-	15-20% of total tourism income	1.5 days

As shown in Table 3, although Fuyang and Yuhang (Jingshan) have achieved certain results in cultural-economy integration-Jingshan's cultural and creative products account for 25% of tourism income and extend tourist stay time to more than one day -Tonglu's cultural and creative product output value accounts for less than 5% of total tourism income, far lower than the national advanced level of 15-20% . On the one hand, the development of cultural tourism in mountainous areas is mostly in the form of simple sightseeing, lacking in-depth experience projects and cultural creativity, resulting in low added value. On the other hand, there is a lack of effective connection between mountainous cultural resources and the main urban area's digital economy and cultural creativity industries, and the industrial chain of "cultural resources - creative design - product sales" has not been fully formed.

### 4.3. Inadequate Institutional Guarantee for Ecological Protection

Although Hangzhou has achieved remarkable results in ecological protection, there are still deficiencies in the institutional guarantee for mountain-urban ecological co-protection. First, the ecological compensation mechanism is not perfect. The ecological protection investment in mountainous areas is large, but the compensation from the main urban area is insufficient, resulting in the contradiction between ecological protection and economic development in mountainous areas. Second, the ecological property rights system is not clear. Although Chun'an has taken the lead in realizing forest carbon sink trading, the trading volume is only 61,000 tons, and the overall trading mechanism for ecological products such as water rights has not been fully established . Third, the joint prevention and control mechanism for ecological environment is not sound, and there are problems such as fragmented management and uncoordinated policies in cross-regional ecological protection.

### 4.4. Weak Synergy of Industrial Development

Although Hangzhou has formed a preliminary industrial division of labor between urban and mountainous areas, the synergy of industrial development is still weak. Table 4 shows the industrial synergy problems among mountainous counties:

**Table 4.** Industrial Synergy Dilemmas and Empirical Evidence in Mountainous Counties of Hangzhou

Problem Type	Performance	Data/Case Support
Homogeneous Competition	Focus on ecological tourism and agricultural product processing	Lin'an, Tonglu, Chun'an all take ecological tourism as the core industry
Low Digital Transformation Level	Limited application of digital technology in traditional industries	Only 86 provincial-level digital agricultural factories in the city, mostly concentrated in suburban areas
Insufficient Innovation Capacity	Low R&D investment and lack of independent brands	R&D investment intensity in mountainous counties is 0.8% (main urban area: 3.2%)

As shown in Table 4, mountainous counties such as Lin'an, Tonglu, and Chun'an all focus on ecological tourism and agricultural product processing, resulting in homogeneous competition and resource waste. The application of digital technology in mountainous areas' ecological agriculture and cultural tourism is still in the initial stage, with only 86 provincial-level digital agricultural factories in the city, mostly concentrated in suburban areas rather than remote mountainous areas . In addition, the R&D investment intensity in mountainous counties is only 0.8%, far lower than the 3.2% in the main urban area, leading to insufficient industrial innovation capacity.

## **5. Path Optimization of Hangzhou's "Mountain-Urban Symbiosis" Development under the Perspective of Humanistic Economics**

### **5.1. Constructing an Integrated Spatial Pattern Based on People's Needs**

First, optimize the spatial layout by taking "humanistic needs" as the core, and build a "one axis, two belts, multi-centers" mountain-urban integration spatial structure with the Qiantang River as the axis, the West Lake-Qiantang River ecological belt and the mountainous ecological protection belt as the two belts, and the main urban area and county seats as the centers. Second, strengthen the construction of transportation infrastructure, accelerate the extension of subway lines to mountainous counties, improve the rural road network, and build a "1-hour commuting circle" between urban and mountainous areas. Third, promote the equalization of public services, establish a mechanism for the counterpart assistance of urban schools and hospitals to mountainous areas, and build community service centers and cultural stations in mountainous towns to meet the needs of residents for education, medical care, and culture. By 2025, Hangzhou has guided 10,608 farmers from remote mountainous areas to relocate to counties and central towns, and the proportion of county population in the total county population has increased by 1.05 percentage points, which has laid a foundation for optimizing resource allocation.

### **5.2. Building a Cultural-Economic Integration Industrial System**

First, rely on the main urban area's digital economy advantages to promote the digital transformation of mountainous areas' industries. For example, apply blockchain technology to the traceability of agricultural products in mountainous areas, and use artificial intelligence to optimize the operation and management of ecological tourism. Second, excavate mountainous cultural resources, develop cultural and creative products and in-depth experience projects, and build characteristic cultural brands such as "ancient village tourism" and "traditional craft inheritance". Referring to Fuyang's "Yuanyuan Garden" cultural and creative industrial park and Jingshan's "Zen Tea First Village" model, we can integrate light food, art workshops, and digital VR experiences to extend the industrial chain. Third, construct a collaborative industrial chain between urban and mountainous areas, encourage urban cultural creativity and high-tech enterprises to set up branches in mountainous areas, and realize the integration of "urban R&D + mountainous production + global sales". For example, refer to the "headquarters + base" model of Hangzhou's urban circle, and promote the coordinated development of urban and mountainous industries.

### **5.3. Improving the Institutional System for Ecological Protection and Compensation**

First, improve the ecological compensation mechanism, increase the transfer payment to mountainous ecological protection areas, and establish a horizontal ecological compensation system between the main urban area and mountainous counties. Second, explore the trading mechanism of ecological products, promote the development of carbon sink trading in mountainous forests, and realize the monetization of ecological value. Learn from Chun'an's experience in forest carbon sink certification, expand the certification scope of 28,900 hectares of forest land to the whole region, and establish a unified ecological product trading platform. Third, establish a joint prevention and control mechanism for the ecological environment, integrate ecological protection functions across departments and regions, and formulate unified ecological protection standards and policies.

### **5.4. Strengthening Cultural Inheritance and Identity Building**

First, protect mountainous cultural heritage, including traditional villages, ancient buildings, and intangible cultural heritage, and establish a digital protection and inheritance system.

Second, promote the integration of mountainous culture and urban culture, hold cultural exchange activities such as "mountain-urban cultural festivals", and enhance residents' identity with mountain-urban symbiosis culture. Third, strengthen the publicity and promotion of "mountain-urban symbiosis" concepts, guide citizens to participate in ecological protection and cultural inheritance, and form a social atmosphere of joint construction and shared development. For example, Jingshan Village has attracted hundreds of college students to return to their hometowns through the "Rural Innovation Ten Articles" policy, injecting youth vitality into cultural inheritance .

## 6. Conclusion and Prospect

This paper explores the transformation and path optimization of Hangzhou's "mountain-urban symbiosis" development paradigm from the perspective of humanistic economics. The research finds that Hangzhou has formed a preliminary "mountain-urban symbiosis" development pattern through spatial expansion, ecological protection, and industrial coordination, and the development paradigm is undergoing a transformation from scale expansion to quality improvement. However, there are still problems such as unbalanced resource allocation (as shown in Table 2, the gap in public service resources between urban and mountainous areas is obvious), insufficient cultural-economy integration (as shown in Table 3, the added value of cultural and creative products in some areas is low), inadequate institutional guarantees, and weak industrial synergy (as shown in Table 4, homogeneous competition is serious).

To solve these problems, Hangzhou needs to construct an integrated spatial pattern based on people's needs, build a cultural-economy integration industrial system, improve the ecological protection and compensation institutional system, and strengthen cultural inheritance and identity building under the guidance of humanistic economics. These paths not only conform to the core connotations of humanistic economics such as "people-centered" and "harmony between humans and nature" but also adapt to the actual needs of Hangzhou's megacity connotative development.

In the future, with the deepening of Hangzhou's urban renewal and rural revitalization, the "mountain-urban symbiosis" development paradigm will be further improved. It is necessary to continuously optimize the institutional mechanism, strengthen technological innovation and cultural innovation, and promote the deep integration of urban and mountainous areas in terms of economy, society, ecology, and culture. At the same time, Hangzhou's experience can provide a reference for other megacities to realize the coordinated development of urban and rural areas and the harmonious coexistence between humans and nature, contributing to the construction of a modern socialist country.

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