

# Research on the Coupling Mechanism Framework of Poetry and Painting Countryside Construction: A Case Study of Tanzhesi Town, Mentougou District, Beijing

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**Abstract:** In the context of the comprehensive promotion of rural revitalization strategy, the existing research on “poetry and painting countryside” mostly stays in the summary of case experiences, and lacks a systematic analysis of its internal dynamic mechanism. In order to make up for this theoretical gap, this paper introduces the coupling theory, constructs a systematic coupling model of rural revitalization and the construction of “Poetry and Painting Countryside”, explains their intrinsic interaction from the three major subsystems, namely, ecology, culture, and industry, and proposes “multivariate collaborative governance” as the guarantee mechanism of the driving system. The study adopts the methods of literature review, theoretical modeling and case study analysis, and takes Tanzhesi Town in Mentougou District of Beijing as the empirical object to analyze its practical paths of ecological restoration, cultural revitalization, industrial upgrading and multivariate collaborative governance. The results show that Tanzhesi Town has realized the transformation of ecological value, revitalization of cultural resources and upgrading of industrial system through the three coupling mechanisms of ecology-industry, culture-industry, and ecology-culture and the collaborative governance, forming a replicable and extendable construction paradigm. This paper innovatively puts forward the coupling mechanism of poetic and pictorial countryside construction, enriches the theoretical system of rural revitalization, and provides systematic theoretical references and practical insights for the rural revitalization of ecological culvert areas and even the whole country.

**Keywords:** Poetry and Painting Countryside;

## Rural Revitalization; Coupling Theory

### 1. Research Background

China is currently at the historical juncture of achieving the “Two Centenary Goals” during which the principal social contradiction has gradually shifted toward rural areas. The countryside constitutes the main battlefield for building a moderately prosperous society in all respects and is central to realizing the modernization of the country. Addressing issues related to agriculture, rural areas, and farmers (commonly referred to as the “Three Rural Issues”) is therefore a critical priority. The important report clearly emphasized the need to continue to make solving the “three rural issues” a top priority, and thus put forward the strategy of rural revitalization. This strategy defines the modernization of agriculture and rural areas as its overarching goal, prioritizes rural development as a fundamental policy, and establishes the “thriving industries, livable ecology, civilized rural customs, effective governance, and prosperous living standards” as the general requirements. Furthermore, it aims to improve the institutional mechanisms and policy framework for integrated urban–rural development as systemic guarantees. By optimizing the allocation of various essential factors and addressing critical deficiencies in rural talent, land, capital, and public service facilities, the strategy seeks to accelerate the modernization of agriculture and rural areas while narrowing the urban–rural development gap<sup>[1]</sup>.

Beijing is at the forefront of the country's rural revitalization efforts following the full deployment of the Rural Strategy in 2018. Beijing has thoroughly studied and applied the experience of the “Thousand Villages Demonstration and Ten Thousand Villages Renovation Project” (commonly referred to as

the “Qianwan Project”) to create a high-quality model for rural revitalization in the capital. In October 2023, the municipality launched the “Hundred-Village Demonstration and Thousand-Village Revitalization Project” (commonly referred to as the “Baiqian Project”), aimed at creating model villages and clusters that embody capital-level standards and distinctive characteristics. This initiative seeks to further improve the rural environment, promote rural development at a higher level, continuously enhance the modernization of agriculture and rural areas, and forge a path of rural revitalization with capital-specific features<sup>[2]</sup>. To ensure effective implementation of the “Baiqian Project”, districts across Beijing have actively responded by exploring innovative rural revitalization pathways tailored to their local characteristics. Mentougou District, recognized as a vital ecological conservation area of the capital, leverages its abundant ecological resources and profound historical and cultural heritage. Through the unique lens of building “Poetry and Painting Countryside” (Shihua Xiangcun), Mentougou has been integrated into the broader momentum of the “Baiqian Project”. The construction of “Poetry and Painting Countryside” integrates ecological preservation with cultural heritage, and harmonizes rural nostalgia with pastoral lifestyles. It is driven by the cultural and tourism industry, underpinned by local traditions, and grounded in the philosophy that “lucid waters and lush mountains are invaluable assets”. By embedding indigenous culture throughout the entire process of rural revitalization, Mentougou has developed a distinctive model of “Poetry and Painting Countryside”. Tanzhesi Town, one of the key townships under Mentougou’s jurisdiction, has actively embraced this initiative, striving to build exemplary models of “Poetry and Painting Countryside”. Accordingly, this study selects Tanzhesi Town as its case area, systematically reviewing its specific practices and outcomes in advancing “Poetry and Painting Countryside” construction. The research aims to extract effective mechanisms and explore construction paradigms aligned with the requirements of rural revitalization in the new era, thereby providing both theoretical insights and practical references for comprehensively promoting rural revitalization.

## 2. Analysis of the Intrinsic Coupling between

## Rural Revitalization and Poetry and Painting Countryside Construction

### 2.1 Coupling Theory

The term “coupling” originates from physics and is used to describe the phenomenon in which two or more systems interact and influence each other, thereby generating synergistic effects and forming an integrated whole. Building upon this concept, Coupling Theory has been developed, grounded in systems theory, synergetics, and system dynamics. It explores the mechanisms of interaction and coordinated development among systems and commonly employs measures such as the degree of coupling and coupling coordination degree to evaluate inter-system relationships. This theoretical framework has been widely applied across multiple research domains. Given that this study focuses on the interactive relationship between Poetry and Painting Countryside construction and Rural Revitalization, the application of Coupling Theory is particularly appropriate.

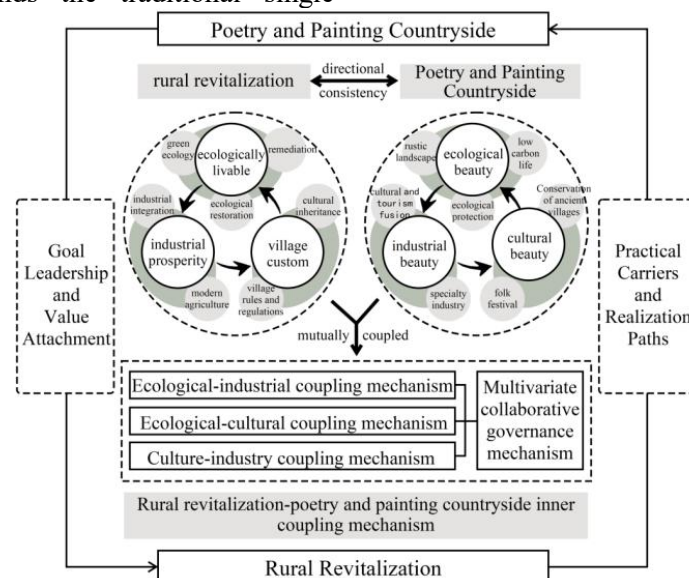
### 2.2 Analysis of Coupling

The strategy of rural revitalization provides a fundamental goal and value for the construction of the Poetry and Painting Countryside, while the construction of the Poetry and Painting Countryside constitutes an important practical carrier and specific implementation path for realizing the grand blueprint of rural revitalization. Generally speaking, the two are intrinsically coupled at the level of development goals and core elements (see Figure 1). Rural revitalization is committed to achieving the overall goal of “thriving industry, ecological livability, civilized rural customs, effective governance, and a rich life”; accordingly, the construction of Poetry and Painting Countryside pursues the pursuit of shaping a comprehensive rural form of “ecological beauty, beautiful life, industrial beauty, and cultural beauty”. The objectives of the two in the core dimensions of ecological protection, cultural prosperity and industrial revitalization are highly compatible, laying the foundation for deep coupling.

The fundamental reason why the construction of Poetry and Painting Countryside can comprehensively promote the revitalization of the countryside is that it promotes the effective integration and in-depth activation of the three major subsystems of ecology, culture and industry within the countryside through spatial

creation and industrial innovation, and promotes benign interactions and in-depth coupling among them. This coupling relationship is not a simple superposition of elements, but a process of mutual empowerment and synergistic evolution. In this regard, coupling theory provides a powerful theoretical support for the study and analysis of this complex systemic interaction. In-depth analysis of the interactions between the three subsystems can be extracted from the three core coupling mechanisms of “ecology-industry”, “ecology-culture” and “culture-industry”. However, it should be emphasized that the process of coupling evolution of these three systems is not spontaneous, and it relies on an efficient collaborative governance mechanism as a guide and guarantee. This governance mechanism transcends the traditional single

government-led or purely market-driven model, and innovatively builds a multi-subject co-governance network that integrates the government, market entities, village collectives, social organizations and villagers, the “Multivariate Collaborative Governance Mechanism”. As a key guarantee, this mechanism effectively drives and maintains the deep coupling and collaborative development of the three systems of ecology, culture and industry. Eventually, the above three major coupling mechanisms and the organizational collaborative governance mechanism together constitute a complete mechanism system for the intrinsic coupling of rural revitalization and the construction of the Poetry and Painting Countryside.



**Figure 1. Schematic Diagram of the Coupling Relationship Between Rural Revitalization and Poetic and Picturesque Villages (Drawn by the Author)**

### 3. Challenges of Poetry and Painting Countryside Construction

#### 3.1 Insufficient Research on the Theoretical Mechanism of Poetry and Painting Countryside

The established literature in the direction of Poetry and Painting Countryside mainly explores from the level of practice cases and planning and design. Among them, the case studies focus on regional construction practices, such as Zhejiang “Quzhou has manners” poetry and painting scenic Belt, Longyou County Xiaonanhai Area Poetry Road Cultural Belt, which emphasize ecological protection as a base, and regard the natural elements such as

mountains, water, forests, fields, and lakes as the background resources of the Poetry and Painting Countryside; emphasize on digging deep into the regional cultural kernel, integrating the Poetry Road culture, merchant culture and folk customs into the landscape creation, and endowing the Poetry and Picture Countryside with unique spiritual connotation by taking the culture as the soul. These practice cases not only verify the driving effect of poetic landscape on rural revitalization, but also highlight the core value of policy coordination, multiple governance and landscape reconstruction in construction. At the level of theoretical research, some scholars have tried to refine the aesthetic logic of poetic painting of the countryside, such as Li Yiran, who drew on techniques such as “scattered

perspective” and “corner composition” of landscape painting to guide the reconstruction of the landscape of Zhongcun Village in Guangdong, and put forward the design of “two-dimensional poetic painting to three-dimensional real scene”. The design thinking of “two-dimensional poems and paintings to three-dimensional real scenery” is proposed<sup>[3]</sup>. These studies have initially revealed the connection between poetic and pictorial imagery and the ecological, cultural and industrial elements of villages, and provided methodological support for practice.

However, there are significant limitations in the existing research. As a complex system, there is an urgent need for multi-dimensional mechanism analysis, but the existing results mostly focus on policy interpretation, practice summarization and construction of landscape creation methods, lacking a systematic deconstruction of the intrinsic motivation mechanism of the Poetry and Painting Countryside, not to mention the extraction of a universal mechanism that can be applied and relocated, which leads to a lack of theoretical explanation of the core proposition of “how to transform poetic and pictorial resources into the kinetic energy of revitalization?”

This study addresses the above gaps and proposes for the first time a “coupling mechanism for the construction of Poetry and Painting Countryside”: by analyzing the mutual coupling logic of ecological, cultural and industrial subsystems, it reveals the transformation path of “poetic and picturesque image - revitalization effectiveness” and introduces “multivariate collaborative governance” as the guarantee mechanism for the system coupling. This framework not only fills the theoretical gap of existing research on the construction of poetic and pictorial villages, but also provides a universal mechanism model for its paradigm promotion, which promotes the research on poetic and pictorial villages to leap from “experience summary” to “theoretical construction”, and then explores the new era of rural revitalization.

### 3.2 Difficulties in Economy and Industrial Structure

Poetry and Painting Countryside is easy to paint, but difficult to assign, the root of which lies in the weak foundation of sustainable economy. The lack of strong endogenous development

power and reasonable industrial structure is the first and the most central dilemma facing the construction of Poetry and Painting Countryside. The industrial structure of most rural areas shows obvious singularity, mainly relying on the production of primary agricultural products or sightseeing tours, with great risks in market operation<sup>[4]</sup>. Even in some model villages, the degree of industrial integration is far from adequate. This “one-legged walk” model has led to an extremely weak ability of the rural economy to cope with external market fluctuations, and once the dominant industry is impacted, the entire rural economy will come to a standstill.

### 3.3 Cultural and Ecological Difficulties

The soul of Poetry and Painting Countryside lies in its unique cultural style and harmonious ecological environment. However, in the process of construction, there are often deep internal contradictions and conflicts between the protection of cultural authenticity and the restoration and exploitation of the ecological environment. The creation of a “painting” atmosphere is often accompanied by large-scale development and construction activities. Excessive development of rural tourism may lead to the degradation of the ecological environment and the loss of traditional cultural heritage<sup>[5]</sup>. There is a natural tension between the introduction of modern facilities and the preservation of traditional village features, and it is extremely difficult to find a balance between preserving traditional customs and adapting to modern life, promoting professional management and maintaining traditional norms, and conducting commercial development and protecting traditional practices. The extent to which external morphological changes are allowed in order to continue the original function of human-land relations has become the core contradiction in the concept of conservation<sup>[6]</sup>.

### 3.4 The Difficulty of Governance Mechanism

The construction of Poetry and Painting Countryside is a complex social system project involving multiple subjects such as the government, enterprises, villagers and social organizations. A clear, efficient and synergistic governance mechanism is the institutional guarantee for its success. However, the current rural governance is generally characterized by

the dilemma of unclear powers and responsibilities and poor synergy. In rural grassroots governance, the problems of “confusing powers and responsibilities” and “unclear responsibilities” are very prominent, which can easily lead to the situation of “exclusive power” or mutual shirking of responsibilities, affecting the efficiency of governance<sup>[7]</sup>. The problem of “multiple participation and collaborative governance” has not yet been established; under the influence of the traditional system, China's rural governance is mostly dependent on the township government and village committees. Villagers have a weak sense of participation, and there is a lack of democratic concepts and awareness, such as “waiting, relying and demanding” and “the government does the work, the villagers look on”. Moreover, villagers' self-governance is still promoted by the government alone, and the implementation of self-governance laws and regulations is ineffective; there is a lack of education and training and multiple channels for participation, which leads to an inadequate mechanism for communication, expression, and supervision, and the villagers' meetings in some areas are only a formality<sup>[8]</sup>.

#### **4. Empirical Research and the Use of Coupling Mechanism**

##### **4.1 Empirical Study**

Tanzhesi Town is located in the southeast of Mentougou District in Beijing, adjacent to Fengtai District and Fangshan District, with a total area of 81km<sup>2</sup>, 34 km from the city center, and an important node connecting the central city with the ecological culvert belt of Xishan Mountain. The town is located in the shallow mountainous area of the ecological conservation function zone, and assumes the dual functions of ecological barrier and cultural tourism gateway in the western part of Beijing. Based on this location, Tanzhesi Town is planned as an “ecological, cultural, tourism and financial town”, which relies on ecological conservation and the development of eco-industries to take a sustainable path to prosperity, and realizes the coordination between the city and the mountainous areas through green development. Thanks to its unique geographic location and functional position, Tanzhesi Town occupies an important position in the green development pattern of western Beijing.

In terms of development concepts and practical paths, Tanzhesi Town is highly compatible with the construction of the “Poetry and Painting Countryside”. In recent years, under the guidance of Beijing's strategy of “establishing ecological areas and developing cultural areas”, Tanzhesi Town has completed the transformation from a resource-dependent economy to a green service economy. Through mountain management, water system restoration and ecological corridor construction, the regional ecological environment has been significantly improved; culture and tourism, recreation and health, green finance and other green industries have gradually replaced traditional resource development, realizing the effective transformation of ecological value into industrial value. Relying on the cultural heritage of Tanzhe Temple, a thousand-year-old temple, as well as folklore resources such as flower shows, the town actively develops diversified industries such as cultural studies, non-heritage experiences and folk festivals, and builds a composite industrial system of “ecology + culture + tourism”. At the same time, with the help of government-enterprise cooperation, “one village, one enterprise” mechanism, and through the slow flash parks, cycling paths, Tan Valley business circle and other innovative initiatives, Tanzhesi Town has continued to promote the organic fusion of natural resources, historical and cultural lineage, and modern green industry, and gradually explored a new path of rural revitalization that is in line with the characteristics of ecological culvert areas.

Based on the above characteristics, Tanzhesi Town not only has the dual advantages of ecological barrier and cultural and tourism hub in terms of location, but also highly suits the connotation of the construction of “Poetry and Painting Countryside” in terms of development concept and practice path. It has accumulated rich experience in ecological protection, cultural inheritance, industrial upgrading and multi-dimensional collaborative governance, providing a replicable and promotable demonstration path for rural revitalization in ecological conservation areas in Beijing and even the whole country. Therefore, it is of significant theoretical value and practical significance to take Tanzhesi Town as a case study of “Poetry and Painting Countryside”.

##### **4.2 Example Analysis of the Coupling**

## Mechanism of Poetry and Painting Countryside

### 4.2.1 Ecology-industry coupling: the value transformation mechanism from “green mountains” to “silver mountains”

The ecosystem is the basic resource and core competitiveness of industrial development, while the economic benefits generated by industrial development provide material guarantee and sustainable power for ecological protection. The ecological-industrial coupling mechanism of Tanzhesi Town began with the implementation of the concept of “Green mountains and clear waters are as good as mountains of gold and silver”.

Mentougou District was once the second largest mining area in Beijing, and the three major industries of coal, lime and gravel have long supported the regional economy. Tanzhesi Town is located in the southeast of Mentougou District, surrounded by mountains, rich in mineral resources, was due to large-scale mountain farmers to take stones, indiscriminate mining and digging, resulting in serious degradation of the ecological environment, resource depletion, economic development is in a predicament. Faced with this situation, the town decisively closed down 43 resource-based enterprises, which accounted for 95% of the town, and made ecological restoration a top priority. In order to ensure the scientific and systematic nature of the restoration project, the town has repeatedly organized expert demonstration meetings, set up an ecological restoration project headquarters, and joined hands with the Chinese Academy of Sciences and other scientific research institutes to form a research group to comprehensively analyze the damaged area's topography, vegetation, soil, and climatic conditions. On this basis, an overall plan covering measures such as mountain leveling, earth filling, slope protection and weir, greening and restoration was formulated, and advanced technologies such as ecological gabion slope protection, slope hanging net spraying, stone wall spraying and mixing planting were adopted in key areas such as abandoned quarries, and suitable re-greening plant varieties were selected scientifically to achieve synergistic advancement of mine management and ecological restoration<sup>[9]</sup>. After years of governance, the once gray and yellow exposed rocky mountains are gradually covered in green, and the abandoned mines, old ash kilns and quarries have been transformed into green

spaces integrating leisure, recreation and eco-tourism, which not only repairs the ecological environment, but also lays a good ecological foundation for the subsequent development of cultural and recreational tourism and recreation industries. Today, local farmers have realized the transformation from “digging stones” to “ecological conservation”, avoiding the secondary damage caused by the lack of alternative industries, but also through tourism, recreation and other emerging industries to achieve economic income, forming a “ecological restoration - green industry - feeding protection” virtuous cycle, showing a typical ecological - industrial coupling mechanism.

The Tan Valley Business Circle, developed on the basis of Tanzhesi Town's excellent ecological landscape resource conditions, breaks the construction logic of traditional commercial complexes, and skillfully integrates parks, shopping streets, exhibition halls, theaters, and other diversified modes of business into the ecological landscape of the shallow mountains. 2024 From January to September, the cumulative passenger flow of the Tan Valley Business Circle amounted to more than 1.4 million, and through the implementation of the Shanlihong Bazaar, the FIRST Surprise Movie Exhibition, “Echo - Valley Music Week” and other multi-industry integration activities, driving a 20% increase in passenger flow and a 30% increase in sales. This model verifies the feasibility of developing eco-tourism and high value-added cultural and tourism industries on the basis of high-quality ecological environment, and also confirms the strong attraction of high-quality ecological environment to people with high consumption power.

In contrast, the Tam Wang Road Cycling Corridor is a lighter and more permeable model of ecological industry integration. The project takes the mountain landscape along the route as its core tourism product, and through the construction of cycling-friendly facilities such as supply stations and parking areas, it has driven the clustering of diverse industries such as cycling sports, outdoor equipment leasing, and leisure and catering. The number of cycling enthusiasts exceeded 2,000 in a single day, which not only brought direct consumption revenue, but also shaped the regional brand image of Tanzhe Temple as a “sporty and healthy” town. The brand itself has become an important intangible asset for promoting

subsequent eco-tourism, recreational vacation and green business development.

#### 4.2.2 Culture-industry coupling: the activation and value-added mechanism from “cultural resources” to “cultural capital”

Vernacular culture is the soul of culture and tourism industry and the key to differentiated competition, while the development and operation of the industry provides a living inheritance scene and a platform for realizing economic value for the static cultural resources. The culture-industry coupling mechanism of Tanzhesi Town is precisely based on the protection and revitalization of traditional cultural resources, and promotes economic development through cultural experientialization and industrial operation, and in turn provides material support and innovation power for cultural inheritance.

The core cultural resource of Tanzhe Temple is undoubtedly the Tanzhe Temple itself, which has a thousand-year history. As one of the oldest Buddhist temples in Beijing, Tanzhe Temple has the reputation of “Tanzhe Temple first, then Beijing City”, and is an important remnant of Chinese meditation culture and royal temple architecture<sup>[10]</sup>. In recent years, Tanzhesi Town has focused on this core cultural resource, organically combining static historical buildings with dynamic cultural activities through systematic protection, functional optimization and integrated development of culture and tourism. On the one hand, the authenticity and integrity of the cultural resources are maintained through the restoration and protection of the ancient architectural complexes and the standardized inheritance of Buddhist rituals; on the other hand, diversified products such as meditation experiences, Buddhist cultural lectures, and immersive drama performances have been developed in conjunction with the modern tourism demand, attracting a large number of tourists to participate in the immersive cultural experience. This industrialized operation of cultural resources not only enhances the tourism attractiveness of Tanzhe Temple, but also extends Buddhist culture and folklore activities from a single religious place to a wider cultural consumer market. Folk activities such as flower fairs and temple fairs have been reactivated and incorporated into the tourism festival system, giving new life to traditional folklore; at the same time, supporting businesses such as local

farmhouse, cultural and creative commodities, and cultural research and study have been developed, which not only realizes the economic transformation of the cultural value, but also promotes the upgrading of the tourism industry of the neighboring villages and the employment of villagers for increasing their income, thus forming the virtuous circle of cultural inheritance and rural revitalization.

The Ziyang Villa B&B Cluster is an example of how culture and industry can be deeply intertwined: in 2012, the Ziyang Villa project was located in the abandoned village of Yangpo Yuan, which is situated on a gently sloping mid-mountain slope, with a difference in elevation of nearly 100 meters, and had been left unused for a long time due to out-migration. The project plan aims to build a “high-quality mid-mountain ancient village B&B cluster resort” in the western part of Beijing, realizing the functional regeneration and economic revitalization of the old village through the revitalization of idle resources and the introduction of modern leisure and vacation businesses<sup>[11]</sup>. The project fully respects the local culture in the design, and realizes the reproduction of the traditional style through the “cultural translation” of the architectural form. The B&B cluster is modeled on the ancient building forms of western Beijing, with the Tianxian Palace hall restored, and elements such as pebble walls, gray tile roofs, and preserved ancient trees used to naturally integrate the buildings with the mountain landscape, recreating the historical atmosphere of the old village. This is not only a physical transformation of the old village, but also the protection and inheritance of the local historical lineage, which fits the planning concept of preserving regional cultural characteristics and traditional features in the transformation of old villages. In terms of operation, Ziyang Villa not only provides accommodation, but also enhances the value of the experience through “cultural implantation of lifestyle”. The project introduces cultural experiences such as meditation, tea ceremony and art crafts, upgrading the traditional lodging into a high-end tourist destination that combines cultural experiences with leisure and vacation. Mature business model and differentiated product positioning, so that it has achieved “annual reception of more than 20,000 tourists” performance, the annual collective income for the village and provide no

less than 50 jobs, while driving the transformation and upgrading of the surrounding farmhouse, to promote the revitalization of the village economy and the upgrading of the regional industry, forming a “cultural preservation - industrial innovation”. The innovative transformation path of “cultural protection-industrial innovation-village revitalization” is formed.

4.2.3 Ecological-cultural coupling: a modern reconstruction mechanism of the traditional wisdom of “the unity of heaven and mankind”

The ecological-cultural coupling mechanism seeks to integrate the beauty of natural ecology with the charm of humanism to create a living environment with deep cultural connotations and poetic living experience, which is the soul of the “Poetry and Picture Village”.

Relying on the development pattern of Mentougou Poetry and Painting Countryside, Tanzhesi Town divides the 15 formed villages and communities in the whole area into 4 types according to local conditions, including area-driven, urban-rural integration, planning and brand-led, and extends the main function of the “six business cards” to create the spatial integration of scenery and villages of “one village, one product, and a different landscape in each step”. “This means that different villages will be adapted to local conditions, relying on their unique natural endowments and cultural heritage to form differentiated features: Plain Village is close to the thousand-year-old temple Tanzhe Temple, with the help of deep Buddhist cultural heritage and the natural landscape of the mountain foliage, the development of the temple supporting services and foliage ornamental tourism, to achieve the interpenetration of culture and ecology; Sangyu Village relies on Dingdu Peak natural scenic spot, restores Guanghui Temple, and creates a holy place for landscape viewing in western Beijing, combining mountain ecological resources with meditation culture to create a characteristic mountain ecological style; Zhaojiatai Village plans to excavate the old site of Daily Newspaper and ancient tunnels and other red heritage to develop red education and cultural study tourism, so that historical memories will be reproduced in the ecological environment.

4.2.4 Multivariate collaborative governance: the key guarantee mechanism driving the coupling of the three systems

The effective coupling of the three major

mechanisms of ecology-industry, culture-industry, and ecology-culture cannot be separated from an efficient and synergistic governance system as a driver and guarantee. The vivid practice of Tanzhesi Town shows that the shared governance and cooperation of multiple subjects in rural revitalization can effectively coordinate the potential conflicts between ecological protection, cultural heritage and industrial development, thus promoting the deep coupling of the three systems.

First of all, the government-enterprise cooperation model provides institutional guarantee for industrial upgrading and sustainable development. The government attracts high-quality enterprises and brands by simplifying administrative approvals, building development platforms and optimizing the business environment, and promotes the landing of high-end commercial, cultural and tourism projects. Especially in the development of the “first store economy” in Tanzhesi Town, the government has transformed itself from a single resource controller to a service-oriented governor, realizing a governance shift from ‘control’ to “empowerment”. This has created favorable conditions for the development of innovative and dynamic business clusters. Secondly, the development of tourism and leisure industries has formed the development pattern of “one village, one enterprise, one characteristic”, revitalized rural resources and established a long-term benefit linkage mechanism. Through the village collectives to land, houses and other resources into shares, enterprises are responsible for investment and development and market-oriented operation, while villagers share the industrial dividends through employment opportunities, profit-sharing, shareholding income and other multiple ways. This not only solves the problem of waste of resources such as idle land and inefficient assets in rural areas, but also promotes the active participation of villagers in ecological protection and cultural inheritance, and realizes the economic enrichment and environmental governance within the community. Once again, the four-party linkage governance mechanism of the Tan Valley business circle reflects the refinement and modernization of social governance. The Co-Governance Committee, which consists of the government, the builder, the property company and the commercial tenants, realizes



rapid response and closed-loop governance in the daily management through the operation process of “Walk Inspection - Issue Dispatch - Closed Loop Handling”. This mechanism not only maintains the high-quality operating environment of the commercial space, but also ensures the orderly use of the ecological environment and public space, providing an operational guarantee for the coordinated development of ecology, industry and culture.

## 5. Concluding Remarks

### 5.1 Research Conclusions

This study takes Tanzhesi Town, Mentougou District, Beijing Municipality as the empirical object, and analyzes the intrinsic correlation between the construction of Poetry and Painting Countryside and rural revitalization through the introduction of the coupling theory, and comes up with the following main findings: first, there is a deep coupling between the construction of Poetry and Painting Countryside and rural revitalization in the core dimensions of ecological protection, cultural prosperity, and industrial revitalization, which is realized through the three major mechanisms of “ecology-industry”, “culture-industry” and “ecology-culture”. In terms of ecological-industrial coupling, Tanzhesi Town has transformed the abandoned site into a green space by closing down resource-based enterprises and adopting ecological restoration technology to manage mines, and used this as a base to develop the Tan Valley business circle, the Tanwang Road cycling corridor and other industries, forming the cycle of “ecological restoration-green industry-feeding protection”. In terms of cultural-industrial coupling, the company relies on the Millennium Tanzhe Temple to develop meditation experiences and immersive cultural activities, and activate traditional folklore; and the Ziyang Villa B&B cluster, by restoring the style of ancient villages and implanting cultural experience projects, has built a “cultural protection-industrial innovation” model. The “cultural protection-industrial innovation-village revitalization” path is constructed to promote the transformation of cultural resources into sustainable industrial competitiveness; in terms of ecological-cultural coupling, the town's established villages are categorized and planned, and the plains villages are integrated with Buddhist culture and natural landscape. In terms

of ecological-cultural coupling, the town's established villages are classified and planned, with Plain Village integrating Buddhist culture and natural landscape, Sangyu Village combining mountain ecology and meditation culture, and Zhaojiatai Village tapping into the red heritage and ecological resources, forming a landscape-village fusion pattern of “one village, one product”, and realizing the symbiosis of natural landscape and humanistic connotations. Secondly, multivariate collaborative governance is the key guarantee for the operation of the three coupling mechanisms. Tanzhesi Town optimizes the business environment through government-enterprise cooperation, establishes “one village, one enterprise” as a linkage of interests, and realizes closed-loop governance through the four-way linkage of the Tan Valley Business Circle, which coordinates the rights and responsibilities of multiple subjects, and provides institutional support for the systematic coupling.

The value of the research is reflected in the first construction of the coupling mechanism framework for the construction of the Poetry and Painting Countryside, to make up for the theoretical gaps in the analysis of the internal power mechanism of the existing research, the Poetry and Painting Countryside research from the “summary of experience” to the “theoretical construction”; at the same time, the paradigm of “three coupling mechanisms + collaborative governance” refined by the sample of ecological culverts provides a replicable and systematic theoretical reference for the synergistic development of ecology, culture and industry in the national rural revitalization.

### 5.2 Shortcomings and Prospects

The study still has certain limitations, the current empirical analysis only focuses on Tanzhesi Town, whose attributes as an ecological culvert area of the capital and a cultural and tourism characteristic town may lead to the practice of the coupling mechanism with particularity, which restricts the universality of the conclusions, and fails to cover the types of villages with different stages of development or resource endowment; the study is dominated by the qualitative analysis, and the lack of the quantitative assessment of the degree of coupling of the three major subsystems, which makes it difficult to accurately characterize the operational efficiency of the mechanism. Based

on this, future research can expand the sample scope, select villages in different regions and with different development bases for comparison, and explore the geographical suitability of the coupling mechanism; strengthen the quantitative analysis, build an evaluation system including indicators of ecological restoration efficiency and cultural revitalization, and quantify the evolutionary trajectory of the coupling coordination by combining with the long-term data; deepen the research on the details of the mechanism, and explore the optimization paths of the digital technology, in order to provide a more operative solution for the practice.

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