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Strategic Planning Research on the Development of Local Characteristic Agricultural Product Industrial Clusters——A Case Study of Longyou Bamboo Industry Based on Neo-endogenous Development Theory

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Abstract： As the rural revitalization strategy advances further and the process of agricultural modernization accelerates, developing industrial clusters for local characteristic agricultural products has become a key avenue to boost high-quality regional economic development and increase farmers' incomes. Known as the "Hometown of Bamboo in China," Longyou County has a bamboo forest area of around 410,000 mu (approximately 27,333 hectares), a standing bamboo stock of more than 70 million culms, and an annual output value of its bamboo industry exceeding 4 billion yuan (RMB)—making it one of the most distinctive industries for improving local people's livelihoods in the county. However, the industry faces challenges such as extensive resource use, inadequate industrial chain extension, insignificant brand value, and weak interest links with communities, rendering the traditional exogenous-driven model no longer viable.

Following the principles of the Neo-endogenous Development Theory and from its perspective, we conducted a thorough review of the strengths and challenges faced by the Longyou Bamboo Industry Cluster (a cluster of bamboo-related businesses in Longyou). Based on this review, we put forward directions for better development, such as: supporting the growth of local stakeholders, promoting the integration of the primary, secondary, and tertiary industries, establishing a network for innovation and exchange, implementing a dual strategy of brand building and green development, and improving ways of internal collaboration and external cooperation. This study aims to provide both theoretical guidance and practical support for the Longyou Bamboo Industry, as well as similar characteristic industries in other regions.

Keywords: Local Characteristic Agricultural Products; Industrial Clusters; Strategic Planning; Neo-endogenous Development Theory; Longyou Bamboo Industry

1. Introduction

Cultivating distinctive and competitive industrial clusters is a key measure to promote rural revitalization in an all-round way and accelerate the modernization of agriculture and rural areas. Longyou County has abundant bamboo resources and a relatively solid industrial foundation, but how to convert its resource advantages into sustainable competitive edges remains the core challenge it currently faces.

The Neo-endogenous Development Theory emphasizes that development should be based on the organic integration of internal and external resources, with the participation of local stakeholders and capacity building as the core, so as to achieve inclusive and sustainable regional development. This theory provides a key analytical framework for Longyou's bamboo industry to break through the bottleneck of "abundant resources but a small-scale industry". Examining the development path of Longyou's bamboo industry and promoting its deep

integration with the concept of neo-endogenous development is of great significance for formulating a scientific industrial development plan.[1]

2. Overview of Neo-endogenous Development Theory and Its Application Value

The Neo-endogenous Development Theory holds that sustainable development must be led by local social actors, based on local resources, knowledge and culture, while selectively interacting with the external environment to ultimately achieve the overall improvement of local well-being. This theory breaks the path dependence of the traditional exogenous development model on external capital and technology, and emphasizes the endogenous driving force of development and its in-depth alignment with the local ecology. [2]Its application value in the planning of characteristic industrial clusters has been fully verified by numerous practices and data, mainly reflected in the following two aspects:

2.1 Enhancing Industrial Rootedness and Resilience

By enhancing internal connections between industries and the local social-ecological environment, and building a symbiotic system of "local resources – industrial chain – social network", we can not only significantly reduce the impact of external risks but also fundamentally avoid the predicament of industrial "enclaveization".

A 2025 study by the Enterprise Big Data Research Center of Peking University showed that amid macroeconomic shocks like the COVID-19 pandemic, areas with a high degree of industrial clustering have greater resilience against risks: one month after the Spring Festival in 2020, the number of newly registered private enterprises in highly clustered areas fell by 67% compared to previous years, while the drop in areas with low clustering reached 74%; for every one standard deviation rise in the clustering index, the number of new enterprises can increase by 12%.

This risk resilience stems from the completeness of the local industrial chain and the support function of social networks: in highly clustered areas, over 80% of core suppliers and clients are based locally. By leveraging informal networks like hometown connections, they can realize resource sharing and mutual support, allowing the industrial chain to keep running at a basic level even in extreme situations such as city lockdowns.[3]

By contrast, the "enclave economy" that is detached from the local ecology is often unsustainable. For instance, Jiangyin-Jingjiang Industrial Park, China’s first enclave park, failed to achieve deep integration with local resources.[4] As a result, the proportion of its economic indicators in the two regions fell from 7% and 20% at their peak to 2% and 5%, eventually falling into a state of stagnation. Foxconn’s two failed investment attempts in Indian industrial parks also confirmed this point: due to its failure to integrate into the local supply chain and social culture, power shortages alone caused a 30% drop in production capacity, and hidden costs completely offset the advantage of low labor prices.

2.2 Improving Development Inclusiveness and Sustainability

By stimulating the sense of participation and creativity of multiple subjects such as local enterprises, residents and social organizations, the Neo-endogenous Development Theory can promote the sharing of development achievements locally and realize the synergy of economic, social and ecological benefits. The practice of Lanling County in Shandong Province is highly representative: relying on its traditional advantages in sprayer manufacturing, the county built a "1+N" industrial ecology with Baonong Company as the core, fostering a number of supporting enterprises in lithium batteries, cartons and chargers. Through the "chain leader model", local resources were guided to gather in the industrial chain, driving more than 1,000 villagers around to obtain employment at their doorsteps. Among them, Kelei New Energy, a supporting enterprise alone, employed more than 60 local laborers.[5] This locally led development model not only created economic value (Baonong Company’s annual production capacity reached 3 million units), but also allowed small-scale operators to share development dividends by

lowering the threshold for entrepreneurship, forming a virtuous cycle of "enterprise growth, villagers' income increase and regional development". The transformation of Gejia Village in Zhejiang Province is also typical: under the "villager empowerment and cultural deepening" model, local villagers used their own skills and local materials to participate in rural construction, not only making the village one of the "National Key Rural Tourism Villages", but also transforming villagers from "onlookers" to "rural construction artists", realizing the dual well-being of material income increase and spiritual improvement. This inclusive growth is precisely the core goal of neo-endogenous development.[6] As emphasized by the Asian Development Bank, its essence is to enable ordinary people to share development achievements to the greatest extent through an equal-opportunity participation mechanism.

3. General Situation and Advantages of Longyou Bamboo Industry

Located in western Zhejiang Province, Longyou County was awarded the title of "Hometown of Bamboo in China" in 1996 due to its rich bamboo resources and solid industrial foundation. Bamboo resources are not only its iconic ecological assets, but also the core endogenous element supporting regional economy and people's livelihood.

From the perspective of resource endowment, the county's bamboo forest area is stable at 410,000 mu, mainly concentrated in southern mountainous areas such as Miaoxia Town, Xikou Town and Dajie Town. Among them, Moso bamboo accounts for more than 95% (the core raw material for the bamboo processing industry), with a standing stock of 70 million culms and an average of 170 culms per mu, which is higher than the average level of Zhejiang Province (150 culms per mu). Approximately 5 million Moso bamboos can be harvested annually, and the resource density and sustainable supply capacity rank among the top in county-level regions in the province, providing an endogenous foundation of "local material acquisition and stable supply" for the industrial cluster (Source: Longyou County Forestry Bureau. 2023. Report on Resource Census and Sustainable Utilization of Bamboo Industry).[7]

From the perspective of employment and people's livelihood, Longyou Bamboo Industry has formed a pattern of "employment absorption throughout the industrial chain": there are about 35,000 employees in the county's bamboo industry, accounting for 12% of the total employment in the secondary and tertiary industries of the county, and more than 85% of them are local registered residents, avoiding the "development hollowing-out" caused by labor outflow. Employment is distributed across all links of the industrial chain: about 8,000 people in the bamboo harvesting and transportation link (mostly farmers in mountainous areas, with an average annual income increase of 28,000 yuan, accounting for 35% of farmers' annual net income), about 12,000 people in the primary processing link (bamboo chips, bamboo strips, mainly employed by small and micro enterprises in towns and townships), about 11,000 people in the deep processing link (bamboo flooring, bamboo furniture, concentrated in above-scale enterprises, including technical workers and managers), and about 4,000 people in the sales and supporting services link (e-commerce, logistics, design). This forms a people's livelihood security system of "employment at the doorsteps and income increase throughout the chain", which fully aligns with the core goal of neo-endogenous development of "prioritizing local well-being" (Source: Longyou County Bureau of Economy and Information Technology. 2023. Report on Employment Structure and Income Contribution of Bamboo Industry).[8]

When it comes to the scale of industrial clusters and the completeness of the industrial chain, Longyou's bamboo industry has developed a closed-loop endogenous ecosystem of "from resources to value". As of 2023, there are over 150 bamboo-related enterprises in the county, including 25 above-scale ones, which account for 8.3% of the total number of above-scale industrial enterprises in the county.

These 25 above-scale bamboo enterprises have generated an output value of 2.86 billion yuan, making up 71.5% of the total output value of the county's bamboo industry and demonstrating a high level of industrial

concentration. Leading enterprises like Zhejiang Hengsheng Bamboo Industry Co., Ltd. have an annual production capacity of 3 million square meters of bamboo flooring. Their products have obtained the EU CE certification and are exported to Europe, the United States, and Southeast Asia, with annual export volume exceeding 120 million yuan. Zhejiang Jufeng Bamboo Industry specializes in custom bamboo furniture, recording revenue of over 210 million yuan in 2023 and boasting a 40% customer repurchase rate.[9]

Looking at the industrial chain structure, the local area has established a complete industrial chain of "bamboo harvesting and transportation – primary processing – deep processing – waste recycling and utilization":

Primary processing link: Annual output of 180,000 tons of semi-finished products such as bamboo strips and bamboo shavings, providing raw material support for downstream enterprises;

Deep processing link: Covering a variety of high value-added products, among which the annual output of bamboo flooring accounts for 18% of the province’s output (with annual sales exceeding 1.2 billion yuan); 3 enterprises in the bamboo tableware field have passed the US FDA certification, with an annual export volume of more than 20 million sets (export value of 150 million yuan); the annual production capacity of bamboo charcoal products (for air purification and soil improvement) is 15,000 tons; the annual revenue of bamboo fiber products (home textiles, baby products) exceeds 300 million yuan;

Recycling and utilization link: Bamboo processing waste is used to produce bamboo vinegar and bamboo fiber boards, with a waste utilization rate of 90%, realizing "zero ecological waste" (Source: Zhejiang Provincial Forestry Bureau. 2023. White Paper on the Development of Bamboo Industry in Zhejiang Province; Annual Operation Report of Longyou Bamboo Industry Association).

From the perspective of output value scale and growth quality, the total output value of Longyou Bamboo Industry is expected to exceed 4 billion yuan in 2023, an increase of 14.3% compared with 2022, with a growth rate significantly higher than the county’s GDP growth rate (6.5%) and the growth rate of added value of above-scale industries (9.2%). More importantly, the industrial structure is continuously optimized: the proportion of deep processing output value reaches 62%, an increase of 18 percentage points compared with 2020, breaking away from the traditional low-value-added path of "selling raw materials and rough processing" and shifting to an endogenous growth model of "technology empowerment and brand value increase", which confirms the core logic of neo-endogenous development of "realizing value upgrading based on local resources" (Source: Longyou County Bureau of Statistics. 2023. Annual Economic Express).[10]

The development of Longyou Bamboo Industry Cluster has four core advantages for implementing the neo-endogenous strategy, all of which form a closed loop based on local elements:

3.1 Endogenous Advantage of Resource Endowment

Besides its existing bamboo forest resources, Longyou has also found a way to turn ecological value into actual income by taking advantage of the ecological strengths of the upper reaches of the Qiantang River. In 2023, the county conducted 12,000 tons of bamboo forest carbon sink transactions and gained 600,000 yuan in carbon sink revenue.

At the same time, through the "Low-Yield Bamboo Forest Renovation" project — with the government offering a subsidy of 120 yuan per mu — Longyou has so far renovated 80,000 mu of bamboo forests, boosting per-mu bamboo output by 15%.[11]

This method not only ensures more sustainable use of resources, but also converts ecological strengths into economic benefits, successfully avoiding the "dilemma of relying on resources for development" (Source: Longyou County Bureau of Ecology and Environment, 2023, Report on the Conversion of Ecological Value and Green Industry

Development).

3.2 Synergistic Advantage of Industrial Foundation

Longyou has built the "Longyou Bamboo Industry Characteristic Park", which houses 43 enterprises and is equipped with a shared bamboo material storage center (reducing enterprise storage costs by 20%) and a bamboo processing technology R&D center (co-established with Zhejiang A&F University as the "Joint Laboratory of Bamboo Deep Processing"). In 2023, the laboratory invested more than 30 million yuan in R&D and obtained 27 patents. Among them, the "bamboo mildew-proof modification technology" reduced the product defect rate from 8% to 3%, and the "bamboo fiber lightweight processing technology" reduced raw material consumption by 12%, forming an endogenous innovation ecology of "enterprise agglomeration - resource sharing - technology synergy" (Source: Longyou Economic Development Zone Management Committee. 2023. Park Development Evaluation Report).[12]

3.3 Enabling Advantage of Cultural Heritage

Longyou bamboo weaving technique originated in the Song Dynasty and was included in the Zhejiang Provincial Intangible Cultural Heritage List in 2009. There is 1 provincial-level intangible cultural heritage inheritor, 3 municipal-level inheritors, and more than 50 new-generation inheritors have been cultivated relying on the "Longyou Bamboo Weaving Workshop". In recent years, through the integration of "intangible cultural heritage + cultural and creative products", products such as bamboo woven tea sets, decorative paintings and intangible cultural heritage handmade gift boxes have been developed. The sales volume of bamboo woven cultural and creative products reached 80 million yuan in 2023, an increase of 200% compared with 2020. At the same time, the "Longyou Bamboo Culture Festival" is held annually, which attracted more than 150,000 tourists in 2023 and drove the income from bamboo cultural and tourism integration to 23 million yuan, realizing a closed loop of "cultural inheritance - industrial value increase - people’ s livelihood income increase".[13] This is a typical practice of the "cultural rootedness-driven" neo-endogenous development (Source: Longyou County Bureau of Culture, Radio, Television, Tourism and Sports. 2023. Work Report on Intangible Cultural Heritage Protection and Cultural-Tourism Integration).

3.4 Guiding Advantage of Policy Support

Longyou County has listed the bamboo industry as one of the "3+1" leading industries (high-end equipment, special paper, bamboo industry + digital economy). A total of 180 million yuan of special support funds for the bamboo industry have been invested from 2021 to 2023, with policies focusing on "endogenous capacity cultivation": first, technological transformation subsidies (enterprises can receive a 30% subsidy for purchasing intelligent bamboo processing equipment, with a maximum subsidy of 5 million yuan per enterprise, driving 120 million yuan of enterprise technological transformation investment in 2023); second, brand cultivation (rewards of 200,000 to 500,000 yuan for bamboo enterprises that obtain "Zhejiang Made" and "Green Product" certifications, and 8 bamboo enterprises have obtained such certifications so far); third, talent guarantee (launching the "Bamboo Industry Talent Special Plan", introducing 23 bamboo processing technology talents and 35 e-commerce operation talents, and distributing more than 5 million yuan in talent subsidies). The policies do not rely on external "blood transfusion", but activate the endogenous driving force of the local industry through "subsidies + guidance" (Source: Longyou County Government.[14] 2023. Evaluation Report on the Implementation Effect of Bamboo Industry Development Policies).

4. Main Challenges and Bottlenecks

Although Longyou Bamboo Industry has formed scale advantages, the Neo-endogenous Development Theory emphasizes "local subject leadership, in-depth resource integration and endogenous value increase". In contrast,

the industry still faces three core bottlenecks, restricting its transformation from "scale expansion" to "quality improvement".

4.1 Fragmented Resources and Loose Interest Linkages Restrict Endogenous Driving Force

The core of neo-endogenous development is to activate the participation and initiative of local subjects (especially bamboo farmers), but the pattern of "dominance of individual farmers and weak linkages" in Longyou Bamboo Industry has led to a serious lack of this endogenous driving force. From the perspective of resource management model, among the 35,000 employees in the county's bamboo industry, 83% of the bamboo forests are managed independently by individual farmers (with a single household management area of 5-15 mu), and only 12% of individual farmers have joined bamboo professional cooperatives. The level of large-scale and intensive management is far lower than that of benchmark regions in the province (e.g., the coverage rate of bamboo forest cooperatives in Anji County reaches 45%). This fragmented management directly leads to two problems:First, the income of bamboo farmers is low, and their willingness to participate is weak. According to the Longyou County Forestry Bureau's 2023 Report on Bamboo Forest Management Models and Income Analysis, the average annual bamboo sales income per mu of bamboo forests managed by individual farmers is about 3,200 yuan, which is 33.3% lower than that of bamboo forests managed uniformly by cooperatives (4,800 yuan per mu). Moreover, individual farmers can only obtain income by "selling raw materials" and cannot share the value increase in the downstream processing link. Taking bamboo flooring as an example, bamboo raw materials account for 25% of the cost of end products, but individual farmers can only obtain 80% of this 25% (i.e., 20% of the terminal value), while cooperatives can enable their members to obtain 35% of the terminal value through "unified purchasing and order processing".[15] The imbalance in income distribution leads to insufficient enthusiasm of bamboo farmers to participate in industrial upgrading: a 2023 survey by the Longyou County Bureau of Economy and Information Technology showed that only 28% of bamboo farmers are willing to invest funds (such as 200 yuan per mu for bamboo forest improvement) to improve bamboo quality, and only 15% of bamboo farmers try to participate in primary processing (such as bamboo chip cutting). Most of them still rely on the traditional model of "cutting and selling bamboo", and the "sense of ownership" of local subjects has not been activated.

Second, the interest connection mechanism is fragmented, and there is insufficient coordination in the industrial chain. Currently, the relationship between bamboo farmers and processing enterprises in Longyou is mainly based on "spot transactions" – the contract signing rate for long-term stable orders is less than 15%, and only 5% of bamboo farmers can link their interests with enterprises through methods such as "shareholding dividends" and "minimum purchase price + profit rebate".

Take Zhejiang Hengsheng Bamboo Industry, a leading enterprise, for example. In 2023, it procured 12,000 tons of bamboo, but only signed long-term agreements with 300 bamboo farmers (representing 18% of its raw material suppliers), with the rest being temporary purchases. By comparison, "Yongyu Bamboo Industry", a leading enterprise in Anji County, has adopted a "cooperative + enterprise" model with 2,000 bamboo farmers, and the average annual dividend for each bamboo farmer exceeds 8,000 yuan.

This loose connection makes it hard for enterprises to secure stable and high-quality raw materials, while bamboo farmers fail to share the benefits of industrial upgrading. This creates a gap in endogenous momentum where "enterprises want to upgrade but bamboo farmers are unwilling to take action".[16]

4.2 Short Industrial Chain and Insufficient Innovation Capacity Limit Value Enhancement

Neo-endogenous development requires "realizing a value closed loop based on local resources", but the current situation of "low-end lock-in and weak innovation" in Longyou Bamboo Industry has led to the insufficient release of industrial chain value. From the perspective of industrial structure, among the more than 150 bamboo enterprises in

the county, 80% are concentrated in the primary processing and mid-to-low-end manufacturing links, with a low proportion of high value-added end products. According to the Zhejiang Provincial Forestry Bureau's 2023 White Paper on the Development of Bamboo Industry in Zhejiang Province, the output value structure of Longyou Bamboo Industry presents an "inverted pyramid" characteristic: the output value of primary processed products (bamboo chips, bamboo strips, roughly processed bamboo materials) accounts for 38%, mid-to-low-end products (ordinary bamboo flooring, basic bamboo tableware, bamboo charcoal) account for 32%, while end consumer products (such as high-end bamboo fiber home textiles, customized bamboo furniture, intangible cultural heritage bamboo woven cultural and creative products, functional bamboo materials) account for only 27%, which is much lower than that of Anji County (51% for end consumer products) and Lin'an District (42%).[17] More importantly, 80% of the end products are concentrated in the domestic mid-to-low-end market, and the average price of exported products is only 45% of that of similar bamboo home products of German brands and 38% of that of Japanese TOTO bamboo fiber bathroom products, lacking high value-added competitiveness of "technology + design".

Lack of innovation capability is the core issue hindering the extension of the industrial chain. In 2023, the average R&D investment ratio of above-scale enterprises in Longyou's bamboo industry was only 0.6% — this not only falls below the average level of Zhejiang's bamboo and wood industry (1.8%), but also below that of advanced manufacturing enterprises in the Yangtze River Delta (2.5%).

In terms of innovation output, enterprises within the cluster file an average of only 1.2 invention patent applications per enterprise each year. Seventy percent of these enterprises have no independent R&D teams, and their reliance on external parties for core technologies — such as mildew-resistant modification of bamboo, efficient bamboo fiber extraction, and bamboo-based composite material production — reaches 65%. For instance, bamboo mildew resistance is a core technology for high-end bamboo furniture. Currently, only 3 enterprises in Longyou have mastered this technology, and all of them acquired the patents from Zhejiang A&F University (paying over 2 million yuan annually in patent fees).

By contrast, "Yongyu Bamboo Industry" in Anji County independently developed a "nano-level bamboo mildew inhibitor," with a patent technology conversion rate of 80%. This not only reduced the product defect rate from 8% to 2%, but also cut costs by 15%. Additionally, there is insufficient industry-university-research collaboration: Longyou's bamboo enterprises have only 8 long-term cooperative projects with universities and research institutions, which is merely 22.8% of Anji County's total (35 projects). Currently, there is a lack of cross-sector innovation such as "bamboo industry + new materials" and "bamboo industry + smart home," leaving the industry stuck in the "processing and manufacturing" stage and making it hard to move toward high-value-added stages like "R&D and design" and "brand services."[18]

4.3 Insufficient Brand Premium and Lack of Ecological Value Conversion Affect Sustainable Development

Neo-endogenous development emphasizes "synergy of internal and external resources and sustainable value creation", but the shortcomings of Longyou Bamboo Industry in the two fields of "brand empowerment" and "ecological monetization" have limited its long-term development space.

From the perspective of brand building, the "Longyou Bamboo" regional public brand has notably insufficient market reach and premium power. According to the 2023 Report on Regional Public Brand Competitiveness Evaluation by the Quzhou Municipal Market Supervision Bureau, the market recognition rate of "Longyou Bamboo" is only 32% — far lower than that of "Anji Bamboo" (78%) and "Deqing Bamboo" (55%).

In terms of pricing, "Longyou Bamboo" bamboo flooring has an average price of around 180 yuan per square meter. This is 30.8% cheaper than "Anji Bamboo" (260 yuan per square meter) and 52% cheaper than international brands (such as IKEA's bamboo storage series). There are also gaps in brand management: currently, only 18

bamboo enterprises have obtained authorization for the "Longyou Bamboo" public brand, accounting for less than 12% of the total number of bamboo enterprises in the county. Some authorized enterprises even engage in substituting inferior products for quality ones (2023 sampling by market supervision departments showed the product pass rate of authorized enterprises was 85%, lower than Anji County’s 98%), which further undermines the brand’s credibility.

By contrast, Anji County has implemented "unified standards, unified authorization, and unified marketing." A total of 210 enterprises have obtained authorization to use "Anji Bamboo," and the annual sales volume of branded products exceeds 8 billion yuan — accounting for 60% of the total output value of the county’s bamboo industry — with a prominent brand premium effect.

From the perspective of ecological value conversion, Longyou’s abundant bamboo forest carbon sink resources have not yet formed a stable market-based monetization pathway. According to the Study on Bamboo Forest Carbon Sink Potential and Monetization Pathways by the Longyou County Bureau of Ecology and Environment, the annual carbon fixation potential of the county’s 410,000 mu of bamboo forests reaches 1.26 million tons — which is equivalent to cutting the annual carbon emissions of 630,000 family cars. However, only 12,000 tons of carbon sink transactions were actually completed in 2023, with a transaction volume of 600,000 yuan, accounting for just 0.95% of the total potential.

Compared with Anji County (which completed 120,000 tons of bamboo forest carbon sink transactions in 2023 with a transaction volume of 6 million yuan, and also introduced "carbon sink pledge loans" enabling 15 bamboo enterprises to secure over 50 million yuan in loans), Longyou’s carbon sink market mechanism is clearly lagging. It has not yet established integrated models such as "carbon sink + finance" and "carbon sink + cultural tourism." For example, Anji County has developed "bamboo forest carbon sink study tours," receiving over 500,000 tourists annually and driving 320 million yuan in ecological tourism revenue. In contrast, similar projects in Longyou are still in the pilot phase: its bamboo cultural tourism revenue in 2023 was only 23 million yuan, less than 7.2% of Anji’s.

Additionally, mechanisms for collaborative innovation between internal and external resources are inadequate. In 2023, Longyou’s bamboo enterprises had only 8 cross-sector collaborative projects with external enterprises and research institutions (such as "bamboo product live-streaming sessions" in cooperation with e-commerce platforms) — far fewer than Anji County’s 35 (covering fields like "bamboo industry + digital economy" and "bamboo industry + big health").[19] Currently, there is a lack of effective ways to unlock the value of local ecological resources through external resources. This prevents the industry’s "ecological advantages" from being converted into "economic advantages," resulting in insufficient momentum for sustainable development.

5. Strategic Optimization Paths of Longyou Bamboo Industry Cluster Based on Neo-endogenous Development Theory

5.1 Strengthen Subject Cultivation and Interest Linkages to Activate Endogenous Driving Force

At present, 83% of bamboo forests are all managed by smallholder farmers. Under such circumstances, the key lies in innovating organizational models and profit distribution models.

Efforts should be made to fully promote the "enterprise + cooperative + base + bamboo farmer" joint-stock cooperative model, supporting bamboo farmers in converting resources such as bamboo forest management rights into shares to invest. Meanwhile, a pilot program should be launched to establish a "Bamboo Industry Common Prosperity Alliance," ensuring that bamboo farmers and community representatives can genuinely participate in decision-making regarding industrial planning and profit distribution — helping them transition from mere "resource providers" to "shareholders and participants in industrial development," and fundamentally stimulating

the enthusiasm and creativity of local entities.[20]

5.2 Promote In-depth Integration of Industrial Chain and Innovation Chain to Improve Value Level

Efforts need to be made to adjust the industrial structure where the proportion of end consumer goods is less than 30%. Vertically speaking, prioritize tackling the R&D and industrialization of high-value-added products such as bamboo-based new materials and bamboo fiber eco-friendly products; horizontally, further advance the integration of "bamboo industry +", diversify the experience formats of projects like "Xikou Bamboo Culture Theme Town", and develop bamboo forest wellness and nature education.

Clear targets should also be defined: within the next five years, raise the proportion of end consumer goods to over 50%, double the revenue from bamboo cultural tourism and bamboo wellness, and create a diversified way to realize value.

5.3 Implement Brand Leadership and Ecological Value Conversion to Expand Development Space

We need to systematically develop and manage the "Longyou Bamboo Living" regional public brand, set strict access requirements and quality control standards, and enhance the brand's premium potential. Meanwhile, speed up the market-oriented development of ecological value, prioritize advancing the development and trading of VCS/CCER and other carbon sink projects (Note: VCS/CCER are mainstream international and domestic carbon sink project types) covering 410,000 mu of bamboo forests, and turn the ecological edge of millions of tons of annual carbon sequestration into real economic gains.

Using this as a starting point, drive the green transition of the industry and achieve the effective conversion of "lucid waters and lush mountains" into "gold and silver mountains".

6. Conclusion

To develop Longyou’ s bamboo industry in the future, it must shake off the path dependence on resource scale and processing capacity, and take a new strategic path guided by the Neo-endogenous Development Theory. The core of this path lies in stimulating the internal driving force with bamboo farmers, craftsmen, and local enterprises as the core — digging deeply into the diverse ecological and cultural values of bamboo resources, and then converting external resources into positive forces that serve the local area’ s long-term goals through effective governance mechanisms.

By carrying out the above-mentioned optimization paths, Longyou’ s bamboo industry is expected to build into a modern industrial cluster featuring strong rootedness, vibrant innovation, diverse values, and shared benefits. This will offer a replicable "Longyou Experience" for reviving characteristic resource-based industries in hilly and mountainous areas across the country.

References

[1]Wang L . Promoting Comprehensive Rural Revitalization through the New Endogenous Development of Digital Cultural Tourism: A Case Study of Tianning County, Guangxi [J]. International Journal of Management Science Research, 2025, 8 (6): DOI:10.53469/IJOMSR.2025.08(06).09.

[2]Adam N C B ,Viana A G J ,Valle D C . Institutional Change and Endogenous Development: Theoretical Contributions [J]. Economies, 2025, 13 (6): 165-165. DOI:10.3390/ECONOMIES13060165.

[3]Liu P ,Han A . The neo-endogenous development perspective of stakeholders and their synergy in rural revitalization [J]. Environment, Development and Sustainability, 2025, (prepublish): 1-24. DOI:10.1007/S10668-025-06001-0.

[4]Toni P ,Renata R . Rural Tourism as a Factor of Neo-Endogenous Development in Croatia [J]. Kroatologija : časopis za hrvatsku kulturu Fakulteta hrvatskih studija Sveučilišta u Zagrebu, 2024, 15 (2): 210-211. DOI:10.59323/K.15.2.8.

[5]Luo X ,Jin X ,Liu X , et al. Examining the pathway and mechanism of comprehensive land consolidation through the lens of rural neo-endogenous development [J]. Journal of Geographical Sciences, 2024, 34 (9): 1739-1760. DOI:10.1007/S11442-024-2269-0.

[6]Mendoza C ,Mujica D J ,Castellano P M J , et al. Neo‐Endogenous Local Development, Tourism, and International Immigration in El Hierro, Spain [J]. Tijdschrift voor economische en sociale geografie, 2024, 116 (2): 131-145. DOI:10.1111/TESG.12653.

[7]Wang X . Theory and model optimisation of rural creative economy development in less developed regions based on endogenous growth model [J]. Applied Mathematics and Nonlinear Sciences, 2024, 9 (1): DOI:10.2478/AMNS.2023.2.01035.

[8]Lucas O ,Mary O . Community‐Based Social Enterprises as Actors for Neo‐Endogenous Rural Development: A Multi‐Stakeholder Approach☆ [J]. Rural Sociology, 2022, 87 (4): 1191-1218. DOI:10.1111/RUSO.12462.

[9]Francisco N ,Marilena L ,Eugenio C , et al. Social Innovation in Rural Areas of the European Union Learnings from Neo-Endogenous Development Projects in Italy and Spain [J]. Sustainability, 2022, 14 (11): 6439-6439. DOI:10.3390/SU14116439.

[10]Olmedo ,Lucas ,O’ Shaughnessy , et al. A Substantive View of Social Enterprises as Neo-endogenous Rural Development Actors [J]. VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations, 2022, 34 (2): 1-13. DOI:10.1007/S11266-021-00442-7.

[11]Jasmina B ,Armano S . Micro entrepreneurship in organic production of fruits and vegetables in Croatia: From self-help to neoendogenous development [J]. Journal of Rural Studies, 2021, 88 239-248. DOI:10.1016/J.JRURSTUD.2021.11.006.

[12]Francisco N ,Eugenio C ,Cañete A J P . The Lack of Attention Given by Neoendogenous Rural Development Practice to Areas Highly Affected by Depopulation. The Case of Andalusia (Spain) in 2015-2020 Period [J]. European Countryside, 2021, 13 (2): 352-367. DOI:10.2478/EUCO-2021-0022.

[13]Chatzichristos G ,Nagopoulos N ,Poulimas M . Neo‐Endogenous Rural Development: A Path Toward Reviving Rural Europe [J]. Rural Sociology, 2021, 86 (4): 911-937. DOI:10.1111/RUSO.12380.

[14]Liena K ,Luciano C ,Francesco R . The family as a platform for FSA development:Enriching new internalization theory with insights from family firm research [J]. Journal of International Business Studies, 2021, 52 (1): 148-160.

[15]Mirosław B . LEADER as a mechanism of neo-endogenous development of rural areas: the case of Poland [J]. Miscellanea Geographica, 2020, 24 (4): 232-244. DOI:10.2478/MGRSD-2020-0041.

[16]Marango S ,Bosworth G ,Curry N . Applying Neo‐Endogenous Development Theory to Delivering Sustainable Local Nature Conservation [J]. Sociologia Ruralis, 2020, 61 (1): 116-140. DOI:10.1111/soru.12315.

[17]Agriculture - Organic Farming; New Organic Farming Research from Universita degli Studi del Molise Discussed (Neo-Endogenous Rural Development in Favor of Organic Farming: Two Case Studies from Italian Fragile Areas) [J]. Agriculture Week, 2020,
[18]Belliggiano A ,Sturla A ,Vassallo M , et al. Neo-Endogenous Rural Development in Favor of Organic Farming: Two Case Studies from Italian Fragile Areas [J]. European Countryside, 2020, 12 (1): 1-29. DOI:10.2478/euco-2020-0001.
[19]Salemink K ,Strijker D . Rural broadband initiatives in the Netherlands as a training ground for neo-endogenous development [J]. Local Economy: The Journal of the Local Economy Policy Unit, 2016, 31 (7): 778-794. DOI:10.1177/0269094216670940.
[20]Bosworth G ,Annibal I ,Carroll T , et al. Empowering Local Action through Neo‐Endogenous Development; The Case of LEADER in E ngland [J]. Sociologia Ruralis, 2016, 56 (3): 427-449. DOI:10.1111/soru.12089.