

Study on Multi-Subject Coordination Mechanism of Industrial Integration between Urban and Rural Areas in Southwest Ethnic Counties

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Abstract: Through a comprehensive and systematic investigation into the multi-subject collaborative mechanism that drives urban-rural industrial integration development in ethnic minority counties of southwest China, this study thoroughly examines and elucidates the complex interactive relationships existing among various participating entities, including government agencies, enterprises, rural cooperatives, and local communities. The research further analyzes in detail how these dynamic interactions and coordinated efforts significantly contribute to and enhance the process of industrial integration between urban and rural areas. The findings of this paper not only offer substantial theoretical foundations but also provide valuable practical guidance for strategies aimed at promoting more balanced and coordinated regional economic development in ethnic regions of southwest China. Additionally, the study sheds light on potential pathways for optimizing the collaborative model to achieve sustainable development goals in these areas.

Keywords: Urban-Rural Industrial Integration; Rural Revitalization; Poverty Alleviation; Economic Development

1. Introduction

In China's socio-economic development landscape, the progress of southwestern ethnic counties has drawn significant attention. Influenced by natural, historical, and social factors [1], these regions exhibit vulnerabilities in economic stability, livelihood security, and ecological resilience. Economically, these counties face weak foundations, industrial challenges, small-scale enterprises, and limited market competitiveness, making it difficult to form cohesive industrial clusters. Regarding livelihoods, residents predominantly rely on

traditional agriculture with limited income sources, leaving them vulnerable to natural disasters and market fluctuations. Ecologically, the region's ecosystems are highly sensitive—once damaged, they face extreme restoration difficulties. Furthermore, irrational development practices in some areas have exacerbated ecological fragility.

This vulnerability makes southwestern ethnic counties prone to large-scale relapse into poverty, positioning them as key areas for China's anti-poverty efforts [2]. Such widespread relapse not only undermines residents' quality of life but also hinders the consolidation and expansion of poverty alleviation achievements nationwide, posing a serious challenge to rural revitalization [3] and common prosperity goals [4]. The Rural Revitalization Strategy aims to achieve thriving rural industries, livable ecosystems, civilized rural customs, effective governance, and prosperous livelihoods. As crucial components of rural development, the progress of these southwestern ethnic counties directly impacts the overall rural revitalization process.

In this context, exploring a multi-stakeholder collaborative mechanism for urban-rural industrial integration in southwestern ethnic counties holds significant practical importance. By promoting industrial convergence between urban and rural areas, we can fully leverage the unique strengths of both cities and countryside to achieve optimized resource allocation and coordinated industrial development. This collaborative framework integrates government, enterprises, farmers, and other stakeholders, creating a powerful synergy that drives economic growth in these regions while enhancing their capacity to resist poverty relapse.

This study aims to explore the multi-stakeholder collaborative mechanisms for urban-rural industrial integration in southwestern ethnic counties. By analyzing the role positioning,

interest relationships, and coordination methods of different stakeholders, we seek to identify suitable pathways for industrial development and measure support systems tailored to the region. The findings will provide theoretical foundations and practical guidance to accelerate urban-rural industrial integration, revitalize the economy of southwestern ethnic counties, and prevent large-scale relapse into poverty.

2. The Current Situation of Industrial Integration between Urban and Rural Areas in Southwest Ethnic Counties

2.1 Industrial Development of Counties in Southwest China

Southwest ethnic regions exhibit significant economic underdevelopment in their county-level industrial sectors, yet they possess abundant ethnic cultural resources. Economically, these areas face challenges including late-stage industrial development, lagging infrastructure construction, and predominantly small-scale enterprises. The absence of large leading enterprises further weakens industrial competitiveness. For instance, Xiaojin County and Aba County demonstrate low industrial added value as a percentage of regional GDP with slow growth rates, highlighting deficiencies in industrial development.

Southwest ethnic counties possess unique cultural resources that offer fresh opportunities for industrial development. In specialty agriculture, the region has cultivated distinctive farming industries like tea and medicinal herbs, thanks to its favorable climate and soil conditions. For instance, Nanjian County and Mengla County have seen their tea plantations expand annually, producing high-quality tea with growing market recognition. The ethnic cultural tourism sector is also thriving, as the area's rich heritage and natural landscapes attract numerous visitors. Yongshan County and Dechang County have developed folk culture experiences and eco-tourism projects leveraging their ethnic villages and scenic landscapes, resulting in steadily increasing tourism revenue [5].

While the industry currently maintains a relatively small scale, certain specialized sectors are demonstrating robust growth. The output value of specialty agriculture continues to grow annually, while the ethnic cultural tourism sector

has seen steady increases in both visitor numbers and tourism revenue, injecting fresh vitality into county-level economic development.

2.2 Industrial Integration between Urban and Rural Areas in Southwest Ethnic Counties

The integration of urban and rural industries in southwestern China's ethnic regions has made significant progress in both factor mobility and industrial synergy. Regarding capital flow, resources such as funds, technology, and talent are increasingly flowing into rural areas. Urban enterprises and investors are channeling investments into rural specialty industries, bringing advanced technologies and management expertise. Simultaneously, rural labor is migrating to cities, which not only increases income but also introduces new perspectives and skills. In terms of industrial synergy, the connections between agriculture, industry, and services have grown increasingly close. Agricultural products are being transformed into industrial goods through processing enterprises, significantly enhancing their value-added potential. The integration of agriculture with tourism has fostered rural tourism development, promoting coordinated industrial growth.

Typical integration models include agricultural-tourism fusion and industry-city integration. Taking Yongshan County as an example, the local government has developed tourism projects such as pastoral sightseeing and agricultural experience through its specialty farming, attracting a large number of visitors. This not only boosted agricultural product sales but also spurred the growth of service industries like catering and accommodation. Industry-city integration involves establishing industrial parks around county towns to attract businesses, promoting industrial clustering and population concentration, thereby driving coordinated development between urban areas and industries. The integration of urban and rural industries varies significantly across different counties. Some areas have achieved remarkable progress with strong resource advantages and robust measure support, while others face slower development due to underdeveloped infrastructure and outdated development concepts. Table 1 shows a comparison of some typical cases and their integration effectiveness.

2.3 Participating Entities

1) County and Town Entities: This framework encompasses township enterprises and government bodies. County and town governments are tasked with driving local economic growth and improving public services, while promoting industrial integration to revitalize regional economies and ensure social stability. Governments at all levels play a guiding, coordinating, and safeguarding role in urban-rural industrial integration. Through measure formulation and financial support, they create favorable market conditions for industrial development, achieving dual objectives of poverty prevention and rural revitalization.

2) Rural Entities: Primarily comprising farmers and village collectives. Farmers, as direct producers in rural industries, seek to enhance their livelihoods by participating in industrial

integration, thereby gaining more employment opportunities and income sources. Village collectives, possessing resources such as land, aim to strengthen collective economies through rational resource development and utilization, while providing villagers with improved public services.

3) Market entities: Composed of upstream, midstream, and downstream enterprises, which can be further categorized into suppliers, manufacturers, and distributors. As key players in the market economy, these enterprises possess advantages such as capital, technology, and market channels. They aim to achieve business expansion and profit growth through participation in urban-rural industrial integration.

Table 1. Urban–Rural Industrial Integration in Typical Counties

County name	Integration model	Integration effectiveness
YuanYang County, Yunnan Province	Agriculture-tourism integration	Relying on the farming culture and ethnic customs of Hani terraces to develop agriculture and tourism, the annual number of tourists increased by 50%, the sales of agricultural products such as terraced red rice increased by 30%, and the per capita income of farmers increased by 20%
Beichuan County, Sichuan	Industry-city integration	Relying on the Qiang ethnic culture to build a characteristic industrial park, introduce cultural tourism and creative enterprises, and special agricultural processing enterprises. The number of enterprises in the industrial park increased by 20, the number of employed people increased by 40%, and the built-up area of the county (Yongchang Town, etc.) expanded by 10%, driving the coordinated development of urban and industrial areas
Leishan County, Guizhou	Agriculture-tourism integration	With the help of tourism resources such as Miao villages and Xijiang Qianhu Miao Village, the tourism income increased by 40% through the linkage with surrounding agriculture, and 30 farmhouse restaurants were driven to develop in surrounding villages. Agricultural products and handicrafts such as glutinous rice wine and silver ornaments were sold locally

The interest relationship between the participants in the integrated development of urban and rural industries in southwest ethnic counties.

2.4 Analysis of Interest Relations between Subjects

From Table 2 we can see, although the interests of various subjects are different, they can

complement each other through resource sharing and measure support, forming a joint force to promote the integrated development of urban and rural industries in ethnic counties in southwest China.

Table 2. Stakeholder Interest Relationships

Type of subject	Core interests claims	Compensation for interest
County town authorities	Pursue industrial value-added, improve industrial competitiveness by integrating resources and expanding the market, realize the expansion of enterprise scale and profit growth [6], and promote the development of county economy and increase fiscal revenue.	Share resources with rural subjects, use the special agricultural products and ethnic culture resources of rural areas for deep processing and development, and realize industrial extension; with the measure support of market subjects, obtain tax incentives, land supply and other

		convenient conditions to reduce the cost of development.
Rural	They are eager to increase their income by participating in industrial integration, so as to obtain stable jobs and higher income, and improve their quality of life. At the same time, they hope that the village collective can expand the collective economy through industrial development and provide better public services for villagers.	Provide characteristic resources and labor force for county towns to meet their production and development needs; under the measure guidance of market entities [7], they can obtain technical training, financial support and other support to enhance their own development ability.
Main market players	Dedicated to preventing the return to poverty and rural revitalization, it promotes the integration of urban and rural industries, enhances the economic strength and anti-risk ability of ethnic counties in southwest China, prevents the occurrence of large-scale return to poverty, and realizes the sustainable development of rural economy, society and ecology.	Coordinate the interest relationship between county and town entities and rural entities, promote the rational allocation of resources and coordinated development of industries; provide measure guarantee and public services for county and town entities and rural entities, and create a good development market.

3. The Dilemma of Multi-Subject Coordination in Industrial Integration between Urban and Rural Areas in Southwest Ethnic Counties

3.1 Obstacles in Connecting Supply and Demand of Resources

In the process of urban-rural industrial integration within southwestern China's county-level regions, there exists a mismatch between rural resources and the needs of county towns. Regarding labor resources, most rural workers remain engaged in traditional agricultural production, lacking the specialized skills and knowledge required by modern industries. Survey data reveals that over 60% of rural laborers possess only basic agricultural production capabilities, failing to meet the technical worker demands of county enterprises. Meanwhile, these enterprises require professionals with advanced technical expertise and management experience. This gap results in ineffective alignment between rural labor resources and the employment needs of county enterprises.

In terms of ecological resources, rural areas possess abundant natural assets and eco-market potential, yet lack the technological expertise and capital to convert these resources into economic value. Rural ecological agricultural products and ethnic cultural resources struggle to achieve added value due to insufficient deep-processing technologies and market promotion capabilities. While county-level

enterprises possess technical expertise and capital, their limited utilization of rural ecological resources results in resource idleness and waste.

Information asymmetry remains a key factor hindering resource coordination between supply and demand. Rural entities often lack awareness of county-town enterprises' needs, making timely adjustments to production strategies difficult. Meanwhile, county-town businesses have limited understanding of rural resources, struggling to identify suitable partners or projects. This disconnect results in underutilized resources and creates supply gaps that hinder development.

3.2 Conflict of Roles and Responsibilities

County-level entities, as key drivers of industrial integration, leverage their financial, technological, and market advantages to steer the development direction and models of industries. They tend to introduce large-scale, standardized industrial projects to achieve value-added growth and economic expansion. In contrast, rural stakeholders act as catalysts for industrial integration, prioritizing employment creation and income growth through small-scale, diversified industries tailored to local characteristics. This fundamental divergence creates inherent tensions in industrial leadership between the two groups.

In some projects, county-level enterprises may prioritize economic gains over the interests and needs of rural communities, resulting in low farmer participation and even social conflicts.

For instance, when developing rural tourism projects, a county enterprise failed to adequately consider local farmers' employment needs. Instead, it extensively hired migrant workers from other regions, sparking widespread discontent among local residents.

As key enablers of industrial integration, market entities have implemented multiple policies to support urban-rural industrial synergy. However, measure implementation often faces delays, with challenges such as insufficient funding allocation and cumbersome approval procedures significantly undermining their effectiveness. This results in rural stakeholders and enterprises failing to benefit from measure incentives promptly, thereby slowing the progress of industrial integration.

3.3 Difficulty of Goal Coordination

Businesses primarily aim for profitability, prioritizing cost reduction and profit maximization. In the integration of urban-rural industries within southwestern ethnic counties, companies often prioritize short-term economic gains over protecting rural ecological markets and safeguarding farmers' long-term interests. For instance, some enterprises may adopt high-pollution, energy-intensive production methods to cut costs, thereby damaging local ecological ecosystems.

Farmers seek stable income growth and improved livelihoods through industrial integration. They prioritize the stability and sustainability of industrial development, aiming for long-term benefits. The conflict between short-term profit goals and long-term income growth objectives often leads to disagreements between enterprises and farmers during collaboration.

Preventing poverty relapse remains a long-term objective for industrial integration between urban and rural areas in southwestern ethnic counties, yet this goal faces coordination challenges with short-term interests of certain stakeholders. Some enterprises may cut investments in anti-poverty programs or lower implementation standards to chase quick profits. Meanwhile, farmers often prioritize immediate income gains, lacking sufficient awareness of the enduring objectives behind these measures.

4. Building a Multi-Subject Coordination Mechanism for Industrial Integration between Urban and Rural Areas in Counties

of Southwest China

4.1 Supply-Demand Coordination Mechanism

To address resource supply-demand coordination challenges in southwestern ethnic counties' urban-rural industrial integration, establishing a resource supply-demand information platform is essential. This platform integrates rural resource inventories with county-town demand lists to achieve precise matching between resources and needs. On one hand, it systematically catalogs rural resources including labor, land, ecology, and ethnic culture to create a comprehensive resource inventory. Through field research and questionnaire surveys, the platform accurately monitors the quantity, quality, and distribution of these resources. On the other hand, it collects technical, financial, and market demand information from county-town enterprises to establish a demand list. By leveraging big data and internet technologies, the platform categorizes, organizes, and analyzes resource-demand information, providing tailored matching services for both supply and demand sides.

Meanwhile, establishing well-designed profit-sharing mechanisms is crucial. Dividends should be distributed according to each function's contribution in industrial integration, ensuring all stakeholders' interests are protected. For rural entities, allocations should be based on resource inputs like land and labor; county and town entities receive corresponding shares according to their contributions in capital and technology. A fair evaluation system must be established to regularly assess and adjust contributions, maintaining the scientific validity and rationality of distribution rules. Additionally, a risk-sharing mechanism should be implemented where all parties collectively bear losses at predetermined ratios when industry development encounters risks, thereby strengthening cooperative confidence and accountability among participants.

4.2 Complementary Roles Mechanism

1) County and Town Entities: Leveraging Core Technology Transfer Capabilities. Capitalizing on their strengths in technological R&D and management expertise, these entities provide rural communities with advanced agricultural cultivation techniques, food processing technologies, and modern enterprise

management models. This initiative enhances technological sophistication and operational efficiency in local industries, driving industrial upgrading. For example, county and town enterprises can establish technology demonstration bases in rural areas to conduct technical training programs, thereby improving farmers' production skills.

2) Rural Entities: Focusing on Resource Provision. By fully utilizing rural resources such as land, labor, and ecological assets, they provide foundational support for industrial integration. They supply high-quality agricultural products, ethnic cultural resources, and eco-tourism offerings to meet the needs of county and township entities. Simultaneously, they actively participate in industrial development to enhance their income levels and employment capabilities.

3) Market Entities: Strengthen measure safeguards. Develop and refine supportive policies to ensure seamless integration of urban and rural industries. Boost funding for industrial convergence, upgrade infrastructure, and optimize business ecosystems. Enhance regulatory oversight and guidance to ensure all industrial developments meet environmental protection standards and safety requirements.

4.3 Goal Fusion Mechanism

Establish a multi-objective evaluation system for "Poverty Prevention, Industrial Value Enhancement, and Farmer Income Growth", with anti-poverty measures, industrial value creation, and income growth serving as key performance indicators. Tailored assessment criteria will be developed for county/town entities, rural communities, and market players, with regular evaluations conducted to drive participation in industrial integration. This mechanism aims to motivate all stakeholders to actively engage in economic collaboration, collectively advancing the development of southwestern ethnic counties.

measure incentives should be leveraged to align the objectives of stakeholders. Enterprises actively participating in industrial integration that contribute to poverty prevention and farmers' income growth will receive tax breaks to reduce operational costs. Qualified projects will be granted fiscal subsidies to support production expansion and technological upgrades. Additionally, outstanding rural entities and individuals demonstrating exceptional

performance in industrial integration will receive commendations and rewards to boost their initiative and creativity. Through these measure incentives, the goals of all parties will become more aligned, creating a powerful synergy to drive the integrated development of urban-rural industries across ethnic minority counties in Southwest China.

5. Conclusion

Multi-stakeholder collaboration plays a pivotal role in advancing industrial integration between urban and rural areas within southwestern ethnic counties. Through coordinated efforts by county-town authorities, rural communities, and market entities, this approach achieves optimized resource allocation, synergistic industrial development, and equitable benefit distribution. Such collaborative mechanisms help dismantle the urban-rural dual structure, facilitate factor mobility and industrial synergy, strengthen the risk resilience of local economies, and provide robust safeguards against large-scale relapse into poverty.

In terms of institutional mechanisms, the supply-demand coordination mechanism has resolved resource allocation barriers, enabling effective integration and utilization of resources. The complementary role mechanism clarifies the division of responsibilities among stakeholders, reducing role conflicts and enhancing collaborative efficiency. The goal convergence mechanism aligns objectives across entities, creating a powerful synergy to drive industrial integration. These mechanisms have achieved remarkable results: industrial scales in some counties continue to expand, farmers' incomes have significantly increased, and ecological markets are effectively protected.

However, the integrated urban-rural industrial development in southwestern ethnic counties still faces numerous challenges, and the multi-stakeholder coordination mechanisms require continuous refinement. Future research could conduct long-term tracking of typical cases to gain deeper insights into dynamic operational changes and long-term impacts, summarizing lessons learned to provide a foundation for ongoing improvements. Cross-regional comparative studies could also be conducted to draw on successful experiences from other regions while adapting them to the actual conditions of southwestern ethnic counties. This approach would help explore

more suitable development models and collaborative mechanisms, further advancing the integration of urban-rural industries in these areas to achieve rural revitalization and common prosperity goals.

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