

Research on the Challenges and Solutions for Multi-Gathering Cooperation in Revitalizing Underutilized Rural Housing in Guangxi's Ethnic Minority Areas

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Abstract: Revitalizing idle rural residential properties is crucial for advancing the "Three-Right Separation" reform of rural land use rights, revitalizing rural assets, and achieving common prosperity in ethnic minority regions. In the multi-ethnic karst regions of Guangxi, population outflow has led to a large number of idle rural housing units; however, under current revitalization models, the four key rural stakeholders—formal institutions agencies, enterprises, rural communities, and individual farmers—are constrained by both explicit institutional barriers and implicit cultural and clan-based obstacles, resulting in inefficient collaboration. Based on field research conducted in ethnic autonomous counties such as Dahua and Rongshui in Guangxi, this paper distinguishes between explicit collaborative conflicts and deep-seated implicit barriers, constructs a "Technology–Institution–Relationship" tripartite analytical framework, and proposes tailored countermeasures at the cultural, institutional, digital, and zonal levels, thereby providing a reference for revitalizing rural residential properties in the southwestern ethnic minority regions.

Keywords: Guangxi's Ethnic Minority Regions; Idle Rural Housing; Multiple Stakeholders; Rural Revitalization; Collaborative Cooperation

1. Introduction

The First Plenary Session of the 20th Central Committee of the Communist Gathering of China called for deepening the reform of the rural land system and safeguarding the property rights and interests of farmers. The 2026 Central Document No.1 elaborated on the detailed implementation rules for the "separation of three rights" mechanism for rural residential land, incorporating the revitalization of idle rural

houses as a key task in rural development. Guangxi has many different ethnic groups, and large parts of its territory belong to karst landform zones; for this reason, those unused houses built by ethnic groups carry three kinds of practical value, they can serve as family-owned property for local farming families, they can pass down local ethnic culture, and they can also provide places to develop rural industries. When local formal institutions and relevant parties carry out work to make good use of these idle houses, such work has close connections with raising local people's household income, keeping old ethnic buildings from disappearing, and pushing grassroots governance to achieve better modern development. Even so, Guangxi faces multiple restricting factors, including backward geographical conditions, fragile ecological environments, as well as complicated traditional customs formed under clan influences; local workers cannot directly copy a set of fixed housing revitalization plans that other areas have already put into practice; local stakeholders therefore need to work out sets of cooperative development paths, and these paths should fit the local population features and cultural backgrounds of Guangxi.

Large-scale labor migration keeps taking place in ethnic minority villages where Zhuang, Yao, Miao and Dong communities live; many local working-age people choose to leave their hometowns, so traditional stilt-style and elevated houses are left empty on a serious scale; people give very little care to these old wooden buildings over long periods, which makes their maintenance conditions get worse; local regions are now facing two tough problems at the same time, they suffer losses in natural resources, and local cultural treasures also keep fading away. At present, four main participants including formal institutions departments, village collective organizations, local farm families and private investment funds need to work together to reuse

these empty rural houses; this cooperation mode can in theory let different sides make full use of their respective resources to support one another. Still, plenty of practical projects run into difficult situations, participants spend much time on repeated talks, they hold different views on many practical matters, and the signed agreements may easily get broken during implementation. Local authorities have already given out related financial allowances and cut down complicated administrative steps, yet many farm households still do not want to join in these housing-reuse programs. Money shortages or difficult approval work are not the obvious main factors holding back project progress; hidden troubles come instead from different understandings toward local culture, the influences of clan relations, and the unfair allocation of available resources.

This paper selects several ethnic autonomous counties within Guangxi as research case objects; it sorts out cooperative conflicts that appear on the surface, as well as deep-seated difficult problems formed within local ethnic communities, it builds an analytical framework which can match these practical troubles with targeted countermeasures, it also adds the “relationship” dimension to improve the original collaborative governance analysis tool, and it puts forward varied solving strategies that take economic development, cultural protection and ethnic unity into consideration at the same time. Many previous research works have obvious shortcomings; they fail to carry out enough region-targeted analysis, and they do not dig deep into those hidden restricting factors, the thinking adopted in this paper can make up for such deficiencies; it can offer some theoretical references and practical operating suggestions for the joint reuse of unused rural houses in similar mountainous ethnic zones covering Guangxi, Yunnan, Guizhou and Hunan.

2. Current Status of Revitalizing Idle Rural Houses in Guangxi's Ethnic Minority Areas

2.1 Status of Idle Rural Houses in Ethnic Minority Areas of Guangxi

2.1.1 Geographical location and population outflow have contributed to large-scale housing vacancy rates

The ethnic villages of Guangxi are concentrated in the karst regions of northwestern and southwestern Guangxi; however, farmland is scattered and local employment opportunities are

scarce, leading to a high rate of young and middle-aged adults migrating for work elsewhere, resulting in a pronounced rural hollowing-out phenomenon. The region suffers from a high level of population aging, with the remaining residents primarily consisting of the elderly and children; a large number of young and middle-aged individuals capable of managing their properties have migrated away, leaving traditional dwellings—such as ganlan houses, stilted houses, and Dong ethnic wooden houses—largely idle. In terms of property rights, most of these historic homes are collectively owned by the clan, and the threshold for all property owners to reach a unified consensus on transferring ownership has been significantly raised, thereby increasing the cost of such transfers; meanwhile, ethnic groups such as the Zhuang and Yao adhere to the traditional belief that “ancestral homes should not be rented out or repurposed,” which means farmers' willingness to increase their income is often constrained by clan-based social norms, and their initiative to engage in cooperative arrangements is limited.

2.1.2 The cost of renovating traditional ethnic dwellings and increasing ecological constraints have exacerbated the problem of idle and underutilized properties

Local ethnic dwellings predominantly feature mortise-and-tenon wooden construction techniques; however, the architectural heritage conservation regulations permit only minor renovations and strictly prohibit large-scale demolition or new construction. There is a severe shortage of skilled woodwork restoration craftsmen, and the cost of renovating these dwellings is 50% [1] higher than that of conventional residential buildings; moreover, the substantial investment required for the foundation renovation of individual stilted houses is beyond the financial capacity of most rural households. Private investors usually prefer rental cooperation modes with low spending requirements and short contract cycles; they are unwilling to put their capital into long-term protection and repair work for these old buildings, and this situation brings about an investment stand-off between local farm households and business operators. Rocky desertification problems and ecological red-line controls over water source zones add extra difficulties for local development, so developing small-scale courtyard tourism becomes one of the few feasible choices for these areas; however, this business can only generate very limited earnings,

market participants hold an obvious wait-and-see mindset toward project investment, and such conditions make the idle status of rural residential buildings grow more serious over time.

2.1.3 The distribution of regional idle capacity exhibits significant gradient differences

Villages can be classified into three categories based on their location and cultural/tourism resources: villages situated near tourist attractions have an idle rate of 32.7%, and homestay cooperation initiatives have already been implemented; central agricultural villages lack a steady stream of visitors, with an idle rate of 41.2%; villages in remote mountainous areas suffer from poor transportation accessibility and a lack of local industries, resulting in a vacancy rate of nearly 48.3%. There is a significant gap between the current scale of underutilization and the potential for revitalization; therefore, a unified revitalization standard cannot be effectively adapted to the specific development conditions of each region.

2.2 Guangxi Ethnic Minority Regions' Idle Rural Housing Redevelopment Model

Guangxi's ethnic minority areas have formed four separate development routes to activate unused rural housing, and these routes can coordinate with one another while keeping their own features; every solution is adjusted according to local available resources and existing development conditions, and different participating subjects show obvious gaps when it comes to their assigned rights, obligations and the ways they run related projects. People can get a clear view about how these models are organized, what real results they bring in practice, and what shortcomings still exist within each of them.

2.2.1 The culture-tourism integrated model

Makes use of a joint working system that brings together township-level formal institutions departments, village collective bodies, private investment and local farm households; local formal institutions sides put money into supporting public facilities and hand out subsidy funds for homestay businesses, village collectives take unified charge of connected rural residential houses and give enterprises the right to run these properties, rural families offer their own houses as investment shares so they can get rental payments as well as yearly bonus earnings. Within Sanjiang Chengyang Bazhai, workers combined 42 traditional wooden houses built by the Dong people to set up a homestay gathering

zone, and this change raised local farmers' average yearly earnings by 4,800 RMB; even so, project gains are not distributed fairly among participants, village administrators and influential persons from local clans can get the better housing resources first, and common farming families only obtain a comparatively small portion of the extra profits created by this industry.

2.2.2 Intangible cultural heritage (ICH) empowerment model

ICH inheritors are engaged in co-founding folk craft workshops; the formal institutions allocates special ICH support funds; idle stilted houses are renovated into spaces for teaching and practicing Zhuang brocade and Yao embroidery skills; and farmers receive remuneration for their participation in handicraft production. The Yao village in Ancui Township, Rongshui County, has established a Yao embroidery workshop utilizing idle residential buildings and regularly hosts ICH exhibitions; however, frequent clashes in cultural values between the external operating team and the local inheritors have led to poor long-term operational stability of the project.

2.2.3 Digital property rights transfer model

By leveraging the district-level rural property rights online platform to establish a housing inventory database – enabling farmers to list properties independently and enterprises to place online bids – the implementation in Tiantong and Napo effectively breaks down barriers to accessing housing information, significantly reducing the costs associated with offline coordination[2]; however, due to the limited digital literacy among elderly members of ethnic minority communities, online registration and contract signing often require village officials to act as intermediaries, which can give rise to implicit communication-related conflicts.

2.2.4 The Courtyard micro-economy model

This model is tailored for scattered, idle rural dwellings in large mountainous areas; the formal institutions provides small-scale renovation subsidies, while the village collective offers technical support for farming, animal husbandry, and handicrafts; farmers utilize their side rooms to cultivate medicinal herbs or engage in sericulture processing. While this model features a low entry barrier and covers a large number of remote villages, its business activities are fragmented and the scale of the industry is small, leaving limited room for income growth and making it challenging to establish a stable, long-

term, and diversified cooperation framework.

3. The Challenges of Multi-Gathering Cooperation in Revitalizing Underutilized Rural Housing in Guangxi's Ethnic Minority Areas

3.1 Cooperation among Multiple Stakeholders in Revitalizing Idle Rural Housing in Ethnic Minority Areas of Guangxi

Work to make good use of idle rural housing covers three main stages, which are project planning, building renovation and daily business running; four important participants take part in this whole process, including formal institutions departments, village collective organizations, local farm households and private investment sides, and these groups hold quite different goals and work priorities. formal institutions departments aim to push forward rural development and keep good relations among local ethnic groups; village collectives need to seek collective earnings and at the same time maintain harmonious relations within local clans; rural households hope to get steady money income, and they also attach great importance to the cultural meaning carried by their old family houses; private capital pays most of its attention to gaining profits within a short time. The resources owned by these different groups can supplement one another in theory; yet participants hold totally different views toward value judgment and risk conditions, local ethnic customs and unwritten clan rules will also exert interfering effects, and all these factors will bring about conflicts during joint work. People can divide these conflicts into two major groups, which are obvious institutional-related troubles and hidden cooperation obstacles formed under local real-life backgrounds.

When local authorities carry out rural development work in ethnic minority zones, activating unused rural houses cannot be finished by only one participating group alone; multiple related subjects have to cooperate with each other to readjust how various resources are distributed. formal institutions departments offer institutional context directions, fund the building of public facilities, and carry out supervision work; these departments set up complete institutional rules by rolling out policies about rural housing right transfer, alongside supporting measures meant for the growth of local rural culture-tourism industries. The village collective acts as a

connecting body between formal institutions departments and local farm households; it needs to finish investigation work on rural housing resources, sort out conflicts happening inside the village, and strike a balance between collective public interests and the personal needs put forward by individual farm families. Rural households own the property rights of these residential buildings; they provide the core project resources, and they are also groups that receive direct influences from housing revitalization projects. Apart from expecting to gain economic returns from such projects, these families also place deep emotional feelings and cultural meanings on their ancestral houses. Social capital, by providing funding, renovation expertise, and market-oriented operational experience, plays a vital role in facilitating the industrial implementation of these revitalization projects.

3.2 Challenges in Multi-Gathering Cooperation for Revitalizing Idle Rural Housing Units

3.2.1 Institutional level: Inadequate rule adaptation and a lack of a stable contractual foundation for coordination

The shared ownership disposal mechanism still requires further optimization[3]; a large number of rural housing units in Guangxi are held in clan-owned form, yet the current transfer system lacks standardized regulations for cross-regional rights confirmation and entrusted authorization; the contracts do not incorporate customary provisions such as landscape conservation or clan-based decision-making processes; as a result, property rights disputes often lead to project delays of more than six months; incentive and support mechanisms are unevenly distributed—subsidies and tax benefits predominantly favor large cultural and tourism enterprises, while there are no dedicated subsidies available for farmers' minor renovation projects or village-level clan coordination efforts; there is no specialized performance evaluation system for grassroots-level revitalization initiatives, leaving officials with insufficient motivation to proactively engage in coordination; interdepartmental collaboration is fragmented—the responsibilities and authorities pertaining to agriculture, ethnic and religious affairs, natural resources, and cultural and tourism sectors are poorly aligned; policies and standards governing construction regulation conflict with those

guiding business model development; the multi-tiered approval process prolongs implementation timelines and significantly increases project communication costs.

3.2.2 Economic aspect: Uneven distribution of benefits

Resource allocation is marred by elite capture; enterprises control revenue accounting; large scale stakeholders are given priority in shareholding; the proportion of value-added income for ordinary farmers is less than 25% [4]; and dividend distribution among farmers lacks transparency; cost risk sharing is imbalanced—wooden structure maintenance costs are high, yet enterprises have reduced their investment in historic buildings, leaving farmers unable to share the renovation costs, and there is no off-season loss compensation fund; supporting resources are scarce—village logistics and promotion efforts are inadequate, specialized credit facilities are lacking, and financing barriers are high, all of which constrain the scale of cooperation and profitability levels.

3.2.3 Cultural cooperation challenges: Cultural heterogeneity gives rise to fragmented value systems

The cognitive perception of ancestral dwellings creates psychological barriers; for ethnic groups such as the Zhuang, Yao, and Dong, rural homes are regarded as carriers of clan spirit [5]. Over 60% of elderly farmers oppose long-term shareholding arrangements; purely economic incentives are insufficient to alleviate their concerns regarding the preservation of their ancestral dwellings. There is a lack of cross-cultural communication mechanisms, as policies and cooperation documentation are rarely available in bilingual versions for ethnic minority communities, and the operators are unfamiliar with local customs. Each Gathering focuses on either economic benefits or cultural heritage preservation, and these divergent values can easily escalate conflicts within the partnership. Furthermore, the distribution of cultural value benefits is uneven: while cultural and tourism projects generate revenue from ethnic architecture and intangible cultural heritage, they rarely contribute back to the restoration of historic buildings or the preservation of folk traditions; as a result, the cultural efforts made by the local community fail to yield corresponding economic returns, which continuously undermines mutual trust and commitment to the partnership.

3.3.4 Social-level cooperation dilemma: Informal

clan-based intervention fragments collaborative networks

The village elders and clan leaders wield informal local authority; however, some clans are concerned that external capital could disrupt the local order, and they leverage public opinion and collective protests as a means of resistance. Even when farmers are willing to cooperate, they are often constrained by group-based pressure; the foundation of mutual trust is weak—past incidents in which enterprises damaged residential properties have made farmers wary of capital; lagging institutional context outreach and lack of transparency further erode trust and increase the costs of communication and transaction; moreover, the supply of rural intermediaries is insufficient—there is a scarcity of buffer actors such as bilingual coordinators or new local elites, and the absence of a regularized negotiation and mediation platform makes it difficult to resolve disputes in a timely manner, which can easily lead to the termination of cooperation.

4. Pathways to Address the Cooperation Challenges among Multiple Stakeholders in Revitalizing Idle Rural Housing in Guangxi's Ethnic Minority Areas

This research follows a fixed research thinking, that is to find corresponding solving approaches for each specific practical difficulty; on the basis of the “Technology-Institution-Relationship” three-Gathering coordination theory, this paper builds a full set of institutional context frameworks to deal with different kinds of cooperation obstacles from four main angles, these angles include perfecting relevant systems, readjusting economic benefit patterns, building mutual trust among different cultural sides, and improving local connection networks. Besides that, this research puts forward two kinds of guarantee measures, which are graded digital support and locally adapted execution plans; these measures can help solve visible institutional troubles brought by property-right rules and capital shortages, and also handle deep-lying hidden coordination obstacles produced by ethnic culture and clan connections.

4.1 Refine the Institutional Framework Tailored to Diverse Cultural Contexts to Address Institutional-Level Cooperation Challenges at the Regulatory Level

To address three major systemic shortcomings—

lack of a well-defined shared ownership process, imbalanced support policies, and fragmented departmental authorities and responsibilities comprehensive, localized regulatory frameworks have been established. The Autonomous Region has issued special implementation rules for the transfer of shared ownership rights pertaining to clan-owned properties, introducing simplified procedures for online authorization and video-based rights confirmation for non-local property holders[6], and has uniformly introduced standardized transfer contracts incorporating specific clauses regarding clan-based deliberations, protection of ethnic cultural heritage, and annual dividend disclosures; at the county level, the agricultural and rural affairs departments, in conjunction with the natural resources departments, have established a one-stop service window for shared ownership transactions, integrating the entire process—including rights confirmation, transfer, and filing—to significantly shorten project approval timelines. Fiscal subsidy resources are prioritized for small-scale rural renovation projects; a 30% renovation subsidy is provided for intangible cultural heritage workshops and courtyard-based economic initiatives; meanwhile, the institutional context entry thresholds for local cooperatives and small-to-medium-sized cultural and tourism enterprises have been lowered; the revitalization of idle rural housing and the effectiveness of traditional residential heritage conservation have been incorporated into the annual performance evaluations for townships; and diversified stakeholders, including rural revitalization demonstration award recipients and village elders, have been recognized and incentivized. At the county level, a monthly joint meeting mechanism for rural housing revitalization has been established to coordinate unified management and control standards across the agricultural and rural affairs, ethnic and religious affairs, cultural and tourism, and natural resources sectors; at the village level, comprehensive service windows have been set up to integrate property rights and subsidy application services, while simultaneously establishing dynamic institutional context feedback channels to optimize local implementation rules on a quarterly basis in response to public feedback.

4.2 Restructure Mechanisms for Equitable Benefit Distribution and Risk Sharing to

Overcome Bottlenecks in Economic Cooperation

A long-term balancing mechanism has been established to address three types of economic contradictions: imbalanced income distribution, unreasonable allocation of cost risks, and insufficient supporting industrial resources. Across the entire region, a unified distribution model—comprising "basic minimum rental income + 15% village-level ethnic cultural fund + farmer equity dividends"—has been implemented. Revenue is calculated based on a dual criterion: the area of housing contributed as equity and the duration of employment within the village. Participating cooperatives are required to submit an annual third-Gathering financial audit report, which is publicly displayed in bilingual format on the village affairs board, thereby addressing the issue of elite capture at the institutional level. Differential cost-sharing schemes have been designed according to various asset revitalization models: for large-scale cultural and tourism projects, renovation costs are shared by the formal institutions, the enterprise, and the village collective in a ratio of 4:4:2; for small-scale rural courtyard projects, the formal institutions covers the entire cost of basic renovation; at the county level, the formal institutions and the enterprise contribute to the establishment of a revitalization risk compensation fund in a ratio of 6:4, while a special low-interest credit program for ethnic residential properties has been launched to lower the financing barriers for local residents[7]. The county-level authorities have coordinated public service resources—including logistics, online operations, and cultural and tourism planning—where the formal institutions provides free promotional services to project operators; universities have been engaged to share lightweight renovation blueprints for traditional dwellings; and village-level e-commerce teams have been cultivated to facilitate the marketing and distribution of ethnic handicrafts and specialty agricultural products, thereby effectively enhancing the profitability of these projects.

4.3 Establish a Comprehensive Cultural Integration and Communication System to Dismantle the Implicit Collaborative Barriers Arising from Cultural Heterogeneity

Establish anormalization cultural integration support mechanism centered on bridging value

divergences among diverse stakeholders. Each ethnic administrative village shall be assigned one or two bilingual cultural coordinators—typically appointed from among village elders or intangible cultural heritage inheritors. All institutional context dissemination materials and renovation planning documents shall be simultaneously produced in the minority language versions; prior to project implementation, coordinators shall conduct door-to-door surveys to gather local folk demand and reserve appropriate venues for sacrificial rites and festive activities within the project plans [8]. All rural housing equity participation and long-term rental projects must undergo dual review by both the villagers' assembly and the clan representative council; intangible cultural heritage-based business activities—such as bronze drum performances and Yao embroidery—shall be integrated into cultural and tourism operations, gradually shifting farmers' entrenched perception that "renovating ancestral homes means disrupting family heritage transmission." The institutional context mandates that a fixed portion of the revenue generated by cultural and tourism projects be allocated to the restoration of ancient buildings and the subsidization of intangible cultural heritage inheritors; simultaneously, the formal institutions, enterprises, and villagers shall be regularly invited to participate in joint ethnic festival-building activities, thereby continuously narrowing the cultural perception gaps among all parties.

4.4 Optimize the Collaborative Network within Rural Communities to Overcome Social Dilemmas such as Clan-Based Interference and Lack of Trust

Streamline the collaborative relationship among the clan, capital, and rural households, and restore the trust-based partnerships among these stakeholders. Incorporate village elders and clan leaders into the fixed village-level dual-review deliberation team and grant them voting rights on development proposals [9]; clearly define the boundaries for clan-led public opinion intervention; and transform traditional clan influence into a role as project coordination intermediaries. Utilize village public notice boards and WeChat groups to publicly disclose all information regarding housing resources, project revenues and expenditures, and subsidy distributions in both local and foreign languages; conduct quarterly multi-stakeholder symposiums

for on-site Q&A sessions; simultaneously, the formal institutions shall establish a "black and white list" for business entities 'creditworthiness to rebuild rural households' fundamental trust in market capital. Establish a special subsidy program for local elites returning to their hometowns to revitalize local economies; support local cooperatives and intangible cultural heritage practitioners in building cooperative bridges; and set up bilingual mediation workstations at both the county and township levels to intervene proactively in resolving disputes among stakeholders, thereby preventing conflicts from escalating into breakdowns in cooperation.

4.5 Digital Tiered Empowerment Combined with Targeted, Zoned Institutional Context Interventions – Strengthening the Foundation for Diversified, Sustainable Cooperation

Researchers put digital tools into use at different levels according to the resource conditions of three different village groups, and these tools match the varied development focuses for each village type [10]. For well-developed villages close to scenic spots, workers set up a complete digital coordination platform; this platform covers online resource matching for housing assets, electronic filing work, and automatic profit settlement functions; for central villages mainly relying on farming, local authorities place bilingual public service equipment in these places, and they also run free training courses to teach elderly residents basic digital operating skills; for out-of-the-way mountain villages with steep terrain, mobile digital service vehicles are arranged to supply on-site offline help, and research teams make use of big-data analysis to track how well housing revitalization projects work, as well as settle disagreements coming from cooperative work. When putting these plans into practice, workers take different measures for each kind of village; for key villages focused on culture and tourism industries, they give priority to strategies guided by local interpersonal connections, and they mainly improve bilingual communication work together with the dual-review consultation rules; for central agricultural villages, workers push forward system optimization and digital support at the same time, and they make great efforts to expand small courtyard-style economic projects; for vast mountain villages which stress ecological protection, institutional guarantee measures become the main work content, including raising

financial input for building repair subsidies and risk reserve funds, putting tight restrictions on large-scale development carried out by outside capital, and making all project arrangements fit local ecological limits.

5. Conclusion

This paper selects Dahua, Rongshui and Sanjiang, several ethnic autonomous counties of Guangxi, as its research scope; it looks into the features of unused rural houses, as well as four different sets of housing revitalization modes. This research picks out conflicts appearing in cooperative work from four perspectives, namely system rules, economic conditions, local culture and social relations; it also draws a line between obvious blocking factors such as capital shortages and property-right troubles, and those deeper hidden hindrances including cultural gaps and interventions from local clan groups. The results gained from this study show that the poor operating effect of local housing reuse projects comes from the joint impact of many factors covering system setup, benefit allocation, cultural background and social environment; among all these influencing elements, those hidden barriers generated by clan culture form the most critical restricting condition. The old two-part analytical framework which only contains "technology-institution" cannot handle these deep-seated practical problems well; for this reason, researchers need to add the dimension of interpersonal relations, so as to build up a three-angle collaborative analysis framework.

This paper puts forward four main solving routes to cope with these four kinds of cooperation difficulties; these routes involve adjusting property-right systems to fit local cultural backgrounds, rebuilding benefit allocation rules that follow fairness requirements, setting up mutual cultural trust among different participating groups, and forming stable local cooperative connection networks; digital-based supporting work and location-specific execution plans are also added to back up these routes. This paper refers to several practical operational methods such as shared-ownership contracts, two-step discussion procedures, graded bonus allocation, and proper guidance toward local clan forces; it tries to strike a balanced institutional setting among the growth of industrial income, the protection of ethnic cultural resources, and the maintenance of karst ecological surroundings, so that participants can remove various obstacles

standing in the way of four-Gathering joint work. This study has certain limitations: the survey sample covers only county-level areas in Guangxi, and no cross-regional comparative analysis was conducted; future research could expand to include surveys in the ethnic mountainous regions of Yunnan and Guizhou provinces to quantitatively examine the actual role of the three-factor driving mechanism. At the practical level, this research approach aligns with the distinctive multi-ethnic regional characteristics of Guangxi's karst landscapes and eschews a uniform, template-based implementation model. It can serve as a practical reference for the coordinated revitalization of idle rural residential properties in the region, as well as provide a replicable paradigm for revitalizing dormant homestead assets and supporting the achievement of common prosperity in western China's ethnic minority areas.

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