

## Exploring the Growth Path under Coupling Relationship between Space and Economy of Mountain Village and Townlets: Case Study of Southwest China

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**Abstract :** China is a mountainous country, with two-thirds of its territory covered by plateaus, hills, and mountains, and nearly half of the cities and towns are distributed in mountainous areas. Compared with the environmental constraints in the development path of cities and towns in the plains, there are heterogeneities in aspects such as spatial characteristics, growth mode, and ecological protection and so on for mountain village and townlets, and the development path of mountain village and townlets has a bidirectional relationship between mountain space and economic growth. Based on classical growth theory, this article explores the two-dimensional coupling relation between space and economy in mountain village and townlets under background of rural rejuvenation. GIS technology is adopted in the study to analyze spatial trends and patterns, economical spatial differentiation characteristics of village and townlets. This powerful tool can also help differentiate and analyze limiting factors and assessment systems in the economic growth of village and townlets under spatial dimension of mountainous space. To make the research more specific, this article selects mountain village and townlets in Southwest China as the object of study; this provides good cases for analyzing parallel coupling mechanism of the duality structure system between economic growth and spatial expansion and discussing the path selection of spatial economic growth of mountain village and towns with multiple constraints. The research results can provide quantitative references for the spatial and economic development paths of mountain villages and towns, which is helpful in realizing efficient and high-quality development mode with equal emphasis on spatial and economic benefits for these type of towns.

**Keywords :** coupling mechanism, geographic information technology, mountainous town, synergetic development, spatial economy

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