

Original Paper

A Study on Rural Spatial Governance in the Peripheral Areas of Major Cities against the Background of Urban-Rural Integration

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Abstract

Integrated urban-rural development is an intrinsic requirement for advancing Chinese-style modernization. As the areas where urban and rural elements converge most densely and interact most frequently, rural areas on the periphery of large cities serve a dual function: absorbing the spillover of urban functions and driving the transformation of rural development. The level of spatial governance in these areas directly influences the effectiveness of urban-rural integration strategies. Against the backdrop of current urban-rural integrated development, this paper examines the challenges facing spatial governance in rural areas on the periphery of major cities. It then analyses pathways for optimizing such governance, with the aim of providing theoretical support and practical guidance for promoting high-quality, sustainable development in these rural areas within the context of urban-rural integration.

Keywords

Urban-rural integration, Metropolitan fringe areas, Rural spatial governance, Rural revitalization

1. Introduction

Integrated urban-rural development is an inherent requirement of Chinese-style modernization the implementation of the Rural Revitalization Strategy constitutes a key component of the nation's modernization efforts. The Rural Revitalization Strategy was formally established as a major development strategy at the national level at the 19th National Congress of the Communist Party of China held in 2017. The central government issued supporting policy documents in 2018 marking the entry of urban-rural relations into a new phase of institutional restructuring. The implementation of this strategy emphasizes the two-way flow of urban and rural factors and functional complementarity providing a theoretical framework and practical guidelines for integrated urban-rural development in

the new era. This series of policy initiatives offers theoretical guidance for addressing the issue of urban-rural development imbalances. Essentially these policies aim to gradually narrow the urban-rural gap and improve the quality of life for the vast rural population by restructuring the urban-rural development landscape.

For a long time the existence of a dual urban-rural structure in China has resulted in a significant imbalance in urban and rural development (Zheng, Y. Y., 2025). In terms of urbanization the imbalance between urban and rural development in China is becoming increasingly severe in terms of the scale of economic development and the level of public services. As resources and factors concentrate in cities the urban-rural gap has widened amidst rapid urbanization urban functions continue to spill over and urban space is constantly expanding into peripheral areas. With regard to rural development the Rural Revitalization Strategy has charted a course for rural progress. As a key strategic initiative to address the issues of unbalanced and inadequate rural development this strategy bears the crucial responsibility of dismantling the urban-rural dichotomy and driving high-quality development. Constrained by practical factors rural areas face significant challenges in their development with issues such as population outflow and the hollowing-out of villages being particularly acute. Urban fringe areas refer to the zones where the urban core and suburban rural areas intermingle and permeate one another they serve as transitional regions between the city and the countryside typically characterized by mixed land use and transitional demographic and social features. China is currently at a historic stage of urban-rural integration and establishing a new pattern of urban-rural interaction and achieving the two-way flow of urban and rural factors has become a major strategic task. The “Comprehensive Rural Revitalization Plan (2024-2027)” issued by the Central Committee of the Communist Party of China and the State Council in January this year proposes optimizing the urban-rural development pattern and advancing comprehensive rural revitalization in a classified and orderly manner with a focus on promoting urban-rural integration in villages classified as “urban-rural integration” types.

Rural areas on the periphery of major cities are situated at the forefront of the most dynamic interaction between urban and rural elements bearing the dual mission of absorbing the spillover of urban functions and driving the transformation of rural development. Leveraging their locational advantage of proximity to central cities these areas possess significant development potential in terms of land resources labor supply and the extension of consumer markets providing an ideal testing ground for exploring new urban-rural relationships. From a spatial perspective the urban fringe as a unique geographical unit marking the transition between urban and rural areas faces dual constraints on land use the expansion of urban construction and the protection of agricultural production. It exhibits characteristics such as diverse land-use types ambiguous land-use classifications and a pronounced transitional nature. The land-use conflicts arising from this are particularly concentrated and acute making research into spatial governance in this region of significant practical importance. Due to their unique locational conditions rural areas on the periphery of major cities are influenced by urban

development whilst retaining the essence of traditional rural life. This dual nature makes them pioneering pilot zones for integrated urban-rural development. Research into the development pathways of these areas can provide valuable theoretical foundations for rural revitalization initiatives in other regions surrounding major cities offering valuable insights for promoting the development of rural areas on the periphery of major cities.

2. Challenges in the Spatial Governance of Rural Areas on the Periphery of Major Cities

As a unique transitional zone between urban and rural areas the periphery of major cities serves both as the frontline of urban expansion and as a focal point of contradictions in rural transformation and development. The multiple challenges facing spatial governance in this region are primarily manifested in three aspects disorder in land use imbalances in the flow of resources and disconnects within the planning system.

2.1 Mixed Land Use and Spatial Disorder in the Peripheral Zones of Major Cities

The spatial form of the peripheral zones of major cities exhibits distinct transitional characteristics with various land uses intermingling and overlapping. This dilemma is primarily manifested in the high degree of land-use heterogeneity. Owing to the unique geographical location of rural areas in these peripheral zones, industrial, agricultural, residential and idle land coexist within the same spatial unit, creating a spatially heterogeneous landscape. From the perspective of land development rights, this state of heterogeneity is the result of the interplay between multiple stakeholders within the urban-rural dual system. The lack of a sound mechanism for distributing land appreciation gains during rapid development has exacerbated the chaos in land use.

The inefficient and extensive use of construction land is another prominent manifestation of spatial disorder. The outskirts of major cities often harbor a large number of small-scale, scattered township enterprises and unauthorized structures. Although these plots occupy prime locations, they struggle to generate commensurate economic returns. In some villages, residential plots are large but underutilized, and traditional, dispersed settlement patterns fail to meet the demands of modern living. More challenging still is the fact that, due to historical circumstances, rectifying these inefficient land uses entails high costs, leaving them generally trapped in a dilemma where rectification is difficult and development even more so.

The continuous encroachment upon ecological spaces has further exacerbated spatial disorder with urban boundaries expanding steadily and ecological spaces as well as prime farmland being eroded consistently which results in severe ecological fragmentation. External factors including the influx of urban capital the increase in non-agricultural employment opportunities and the worsening of environmental pollution intertwine with internal factors such as the spontaneous transfer of land by villagers and the backwardness of industrial development to jointly influence the spatial evolution of peripheral zones. This spatial fragmentation affects the quality of the ecological environment and

undermines the functional value of rural areas as ecological buffers for cities.

2.2 Structural Imbalances in the Flow of Factors in the Peripheral Zones of Major Cities

The flow of factors in the peripheral zones of major cities exhibits characteristics of structural imbalance primarily manifested in the unidirectional flow of labor. Areas within a certain radius of major cities experience significant population outflow due to the strong pull effect of central cities this is particularly pronounced in regions dominated by agricultural industries where labor outflow is even more evident (Ji, Y. C., & Yu, G. S., 2025, pp. 30-38). Following the migration of young labor to cities the remaining population faces prominent issues of ageing and depopulation weakening the human capital foundation for rural development.

The allocation of land resources is confronted with structural imbalances as urban construction land quotas remain tight and there exists a pronounced mismatch between supply and demand while large amounts of rural collective construction land stay idle with low utilization efficiency. Some regions have realized the reallocation of land resources through the revitalization of idle residential land which is used to develop rural tourism. This phenomenon indicates that imbalances in factor flows are not irreversible as the key rests on the establishment of an effective market-based allocation mechanism.

Imbalances in the flow of capital present a more complex situation as major cities relying on their agglomeration effects and economies of scale keep drawing in various forms of capital while rural areas around them are trapped in the dual predicament of insufficient capital investment and distorted capital allocation. Some investors move to these peripheral areas to engage in speculative property purchases with the aim of gaining profits through short-term market speculation. This capital has not become a driving force for the real economy but has instead increased housing vacancy rates and intensified market volatility. These distortions in capital allocation have further worsened the problem of uneven flows of factor resources.

It is worth noting that structural imbalances show distinct phased characteristics as regional development advances to higher stages, the spillover effects of central cities gradually become more intense and surrounding areas are expected to absorb more development resources. This observation indicates that imbalances in factor flows are not static; the key is to identify the core contradictions present at different stages of development and adopt targeted governance measures to promote the two-way flow and rational allocation of factors.

2.3 Imbalances in Rural Planning in the Peripheral Areas of Major Cities

Imbalances within the planning system serve as the fundamental cause of governance challenges in the peripheral areas of major cities and these imbalances are primarily reflected in the fragmentation of urban and rural planning systems (Han, W., & Zhao, Y. F., 2023, pp. 1340-1349). Urban master plans often only provide broad coverage for peripheral areas without detailed consideration of this transitional zone while village planning lacks forward-looking assessments of future development trends which makes it difficult to address the uncertainties brought about by urban expansion. In

cross-administrative boundary zones the division of administrative districts further exacerbates the difficulty of planning coordination and differences in tax and industrial policies create institutional barriers to cross-regional industrial collaboration.

Planning implementation delays have further intensified existing governance difficulties. The peripheral regions of large cities maintain rapid development with strong uncertainty while statutory planning features long cycles and complicated adjustment mechanisms that often cause planning content to fall behind real development progress. Planning implementation processes lack sufficient flexibility to respond to complex and changing actual development needs. Many villages with important historical and cultural resources still suffer from outdated infrastructure and poor rural environmental conditions because of inadequate planning guidance and delayed capital investment. Such practical situations fully indicate that unique resource endowments cannot naturally convert into real development advantages without effective and forward-looking planning support.

The failure of living amenities to meet developmental needs places further constraints on the development of rural fringe areas as in the development of new districts the commitments made regarding certain public service facilities often do not materialize and the construction of basic infrastructure including healthcare education and commercial facilities lags far behind. This lag in infrastructure construction leads to insufficient convenience for residents and hinders the formation of a stable residential environment as the disconnect between planning and implementation undermines the development of rural areas on the outskirts of major cities and further worsens population outflow and spatial hollowing-out in these peripheral zones. The core reason for this planning imbalance is the inability of planning philosophies systems and implementation capabilities to adapt to the rapidly changing practical needs of these peripheral rural areas.

3. Optimal Approaches to Rural Spatial Governance in the Peripheral Areas of Major Cities

Addressing the challenges in rural spatial governance of peripheral areas around major cities requires establishing a new governance framework for integrated urban-rural development that focuses on three key aspects including land management the flow of resources and rational planning and layout.

3.1 Implementing Diversified Land Use Management in Rural Areas on the Periphery of Major Cities

Land is the core carrier of rural spatial governance the implementation of diversified land use management stands as a crucial approach to resolving the problems of land-use fragmentation and spatial disorder in rural areas (Hao, S. H., 2024, 17-18). Firstly, comprehensive land consolidation across the entire region should be advanced to optimize the spatial layout of suburban areas. Through a process of demarcating consolidation zones, formulating implementation plans and optimizing spatial layouts, the consolidation of agricultural land, the reorganization of construction land and the protection and restoration of ecological land can be effectively coordinated, thereby achieving a refined adjustment of the national territorial spatial structure. At the operational level, whilst maintaining the

overall stability of the spatial layout, moderate optimization and adjustments can be made according to actual needs to strengthen the capacity for the coordinated and balanced management of natural resources.

Secondly, it is necessary to innovate land resource utilization models to unlock the value of existing resources. Given the mixed land-use characteristics of the peripheral zones of major cities, it is inadvisable to simply apply the management model of single-function zones; instead, land-use approaches that are functionally compatible and subject to flexible control should be explored. In some areas, guided by the principles of micro-renovation and refined operation, idle farmhouses have been converted into cultural and creative spaces and leisure venues, with villagers participating in the management by contributing their homestead land use rights as equity. This allows them to secure stable rental income whilst sharing in the appreciation of value generated by development. This model offers valuable insights for the diversified utilization of land. For idle resources arising from the relative concentration of farmers' residences, specialized and market-oriented operators can be introduced to establish a community of shared interests among enterprises, village collectives and villagers.

Relevant land policies need further improvement to support industrial development and urban-rural coordination. The transfer system of industrial land use rights can be optimized through flexible mechanisms that set rational transfer terms based on industrial characteristics and project development cycles so as to improve the overall efficiency of land resource allocation. The reform concerning the market entry of rural collective commercial construction land shall be promoted in an orderly manner to accelerate the formation of a unified and standardized construction land market covering both urban and rural areas. The adjustment mechanism for permanent basic farmland protection can be explored to reserve appropriate spatial flexibility for the construction and development of key regions. Land system innovation should adhere to the coordinated advancement of efficiency and equity to activate market dynamics protect the legitimate rights and interests of farmers and avoid excessive capital intervention and occupation in rural development space.

3.2 Improving Rural Living Standards and Promoting the Flow of High-Quality Resources to Rural Areas

The improvement of rural living quality provides the basic prerequisite for addressing the unidirectional flow of production factors and achieving integrated urban - rural development. Infrastructure construction must shift from basic coverage to the supply of high-quality and equally accessible services as indicated in reference (Sun, J. W., 2023). Substantial achievements have been obtained in the upgrading of transportation infrastructure and living conditions in suburban regions of large cities while obvious disparities in infrastructure development between urban and rural areas still persist. Active measures should be adopted to accelerate the extension of new-type infrastructure construction to rural areas so as to guarantee convenient transportation services and complete

supporting facilities. Such institutional and physical conditions are indispensable for the effective downward flow of urban resources and production factors to rural areas and form the essential foundation for advancing integrated urban-rural development.

Public services need to be upgraded as a means to narrow the urban-rural service gap, and addressing the prominent problem of insufficient public service facilities in the peripheral areas of major cities requires the establishment of a mechanism that ensures the provision of public services keeps pace with development and construction. The construction of supporting facilities should be integrated into project development conditions to guarantee their synchronous planning, construction and delivery. In the field of education, efforts should be made to explore approaches for extending high-quality educational resources to surrounding areas, while in the field of healthcare, cross-regional medical collaboration mechanisms should be established to realize information exchange and resource sharing. In response to the trend of an ageing rural population, rural elderly care service models suitable for local conditions should be developed.

Shaping distinctive rural landscapes and enhancing the quality of the living environment is an essential aspect of rural development as rural areas on the outskirts of major cities ought to be an upgraded version that retains rural characteristics while sharing in modern civilization rather than a downgraded version of the city. In areas where farmers live in relatively concentrated settlements the focus should be on preserving regional architectural characteristics and incorporating local cultural elements to avoid a uniform cookie-cutter appearance across villages. It is also necessary to ensure that the landscape does not become overly artificial and thus lose its natural pastoral charm by returning to natural rural elements and rationally allocating green spaces and planting to enable precious land resources to fulfil multiple functions including production ecology landscape and culture. The shaping of the rural landscape needs to both improve the living environment and preserve the memories of the countryside.

3.3 Planning Rural Industries in Accordance with Local Conditions to Develop the Rural Economy

A new framework for the coordinated development of urban and rural industries should be established. Rural areas on the outskirts of major cities should not merely be regarded as reserve resources for urban development, but should instead serve as ecological buffers for the city, recreational spaces for residents, and key hubs for emerging industries. Rural areas on the outskirts of major cities can draw on the resources of central cities to plan and develop a diverse range of industries. This will enable major cities to fulfil their role as centers of innovation and leadership whilst also driving industrial development in surrounding areas.

Distinctive rural industrial brands need to be cultivated to improve the added value of related industries. Suburban rural regions around large cities possess unique geographical advantages and act as important experimental areas for the integrated development of urban and rural areas. These regions undertake the spillover of urban industries while preserving the basic features of traditional agricultural civilization. Local agricultural development foundations can be used to construct a complete agricultural product

brand system. Rural tourism can be promoted through the deep integration of festival activities and cultural resources to form a benign interactive mechanism among cultural attraction consumption transformation and brand value enhancement. The core of rural industrial progress lies in the accurate positioning of regional comparative advantages and the effective avoidance of blind imitation and low-level redundant construction.

And, we must innovate the forms of collective economic organization to strengthen endogenous development momentum. In response to the widespread issue of sluggish collective economic development, rural reforms should be deepened to transform dormant resources into effective capital. Models for the consolidation and utilization of residential land plots could be explored; through small-scale land re-planning, utilization efficiency could be enhanced by bringing idle resources under collective ownership for unified renovation and development, whilst introducing social capital to invest in the cultural and tourism industries. Alternatively, social capital could be introduced to operate in partnership with historical and cultural resources, with village collective economic organizations taking equity stakes to share in the development profits. Establishing policy-driven mechanisms is key to achieving sustainable rural development.

4. Summary

Against the backdrop of integrated urban-rural development, rural areas on the outskirts of major cities are the regions where contradictions in the urbanization process are most concentrated, and they are also the most representative examples of integrated urban-rural development. Rural areas should not merely serve to facilitate urban development, nor should they be treated as “reserve land” that passively accommodates urban expansion. The essence of the development challenges faced by rural areas on the periphery of major cities in the context of urban-rural integration lies in the fact that, amidst rapid urbanization, the unique value of rural spaces has not been fully recognized, the endogenous driving forces of rural development have not been effectively activated, and a truly equal and complementary relationship between urban and rural areas has yet to be established. When cities continue to extend into peripheral areas driven by the logic of expansion, and when rural areas passively bear the various pressures resulting from urban spillover, urban-rural integration finds it difficult to escape the pattern of “urban dominance and rural dependence”. Against the backdrop of promoting integrated urban-rural development rural areas on the periphery of major cities ought to assume the responsibility of fostering functional complementarity facilitating the flow of resources and promoting cultural integration between urban and rural areas to better serve the rural revitalization strategy.

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