



Research on the Mutual Construction Mechanism Between Modernization of Grassroots Governance and Rural Talent Revitalization from the Perspective of System Coupling

Xin Lu

Harbin University of Commerce, Harbin, Heilongjiang Province, China

1x2002074@126.com

Abstract. Currently, modernization of grassroots governance and rural talent revitalization often face the dilemma of being disconnected in practice. This study introduces the perspective of "system coupling," defining the two as interwoven and symbiotic subsystems, and constructs an analytical framework encompassing "environment-interface-circulation." The research identifies three key "coupling interfaces"—grassroots Party organizations, new collective economies, and digital tools—which drive the effective alignment and mutual transformation of governance needs and talent supply through political integration, interest linkage, and technological connectivity mechanisms. The findings indicate that the core to resolving the coordination dilemma lies in shifting from "resource input" to "interface construction," systematically optimizing the environment, reshaping interfaces, and facilitating circulation, thereby promoting deep interweaving and collaborative development of the two systems.

Keywords: system coupling; modernization of grassroots governance; revitalization of rural talent; collaborative development

1 Introduction

The implementation of the rural revitalization strategy is a major measure to solve the "three rural issues" in the new era. The 19th National Congress of the Communist Party of China explicitly stated that "the issue of agriculture, rural areas, and farmers is a fundamental issue related to the national economy and people's livelihood, and must always be given top priority in solving the 'three rural issues'[1]. The Fourth Plenary Session of the 20th Central Committee of the Communist Party of China further pointed out that we must 'take the path of socialist social governance with Chinese characteristics' and 'improve the social governance system'[2]. Advancing the modernization of grassroots governance and achieving rural talent revitalization are two sides of the rural revitalization strategy.

Foreign studies provide relevant perspectives. Sukri et al. (2025) found that village governance in Indonesia is turning to self calibration based on local experience and

cultural identity[3]. This confirms the importance of the governance system actively adapting to the environment. Vidal and Alarcon (2026) pointed out that the enterprise led renewable agriculture project reshapes the rural power structure through different governance logics[4]. This is similar to the mechanism of rebuilding the "interest governance community" in the new collective economy. Niastuti et al. (2026) summarized that although the transparency of the rural digital financial system in Indonesia has been improved, its effectiveness is subject to the local implementation capacity[5]. This provides evidence for the theory of technology enabling boundary in this study. Most existing explanations follow a "one-dimensional" logic: either viewing talent as a "scarce resource" to fill governance gaps, or viewing optimized governance as an "external environment" to attract talent. Regarding the modernization of grass-roots governance, research has formed multiple perspectives for interpretation. The research of Chen Wenhua and Li Haijin (2023) and Chen Wansha and Chen Mingming (2023) systematically demonstrates the organizational advantages and practical paths of party building leadership in integrating grassroots governance systems from the perspective of "political parties leading society"[6]. At the same time, Chen Shixiang and Niu Yifan (2025) focus on the other side of technological governance[7]. Their analysis reminds us that while digital technology empowers process reengineering, there are also effective boundaries and the risk of "adding burden"[8]. Yan Fei (2020) calls for the construction of a "three governance combination" system[1], and the case studies of Xiong Chunwen and Xiao Weina (2025) highlight the key role of collective economy in linking interests and consolidating society[9].

At the same time, the discussion on the revitalization of rural talents is more from the specific object[10]. Shijinqun (2023) focused on youth groups and analyzed the dynamic mechanism and practical obstacles of their participation in grass-roots governance. Another type of research emphasizes the functions of key organizations. For example, Wang Peng, Liu Yan (2025), zhufengming (2025) and Li Quanling (2025) all point out that rural grass-roots party organizations need to actively adjust their functions in absorbing, cultivating and leading talents[11][12][13]. In addition, the research of Tian Shuai (2024) shows that basic support work such as village level archives management also provides a new perspective for the information connection between talent and governance[14].

In order to clarify the above interaction mechanism, this study introduces the perspective of "system coupling". This paper attempts to understand governance modernization and talent revitalization as two relatively independent and deeply embedded subsystems, and is committed to building an integrated analytical framework, in order to systematically diagnose the structural crux of their coordination imbalance, and explore the specific path of their mutual construction.

2 Theoretical Basis and Framework Construction

(1) modernization of grassroots governance

In this study, the modernization of grass-roots governance is not a static process of simply replacing the institutional provisions. It is a complex system that is constantly developing and changing in the actual operation of the countryside.

(2) construction of "governance talent" system coupling analysis framework

In order to deeply analyze the complex relationship between the two systems of grass-roots governance and rural talents, this study introduces the "system coupling" theory as the core analysis tool. This theory holds that two or more systems can form a relationship of interdependence, mutual adaptation and common development through the continuous exchange of matter, energy and information.

The theoretical relevance is as follows: first, grass-roots governance and talent revitalization are each a system, which contains many interactive elements. Second, in the actual process of rural development, governance activities and talent elements are closely interacting and exchanging resources at all times. Third, the root cause of many governance problems or talent problems seen in reality is often not the failure of one system, but the lack of coordination and mismatch between the two systems. Therefore, from the perspective of system coupling, we can get rid of the limitations of only looking at governance in isolation or only looking at talents in the past, and truly understand how they develop together as a whole.

3 The Realistic Dilemma of System Collaboration

In practice, the interaction between the two systems of "governance" and "talent" often falls into two vicious cycles that are mutually reinforcing and difficult to get rid of.

On the one hand, it is a cycle of "talent suspension" and "systematic exclusion". The so-called "inaccessibility" stems from "institutional exclusion". The existing decision-making process and power structure in rural areas often do not reserve institutionalized participation channels for returning youth, professional and technical personnel and other foreign or local new talents, making them lack legal identity and voice in major public affairs. Even if some talents participate through informal channels, it is easy to fall into the state of "function suspension" and cannot be integrated into the deep structure, long-term planning and collective action mechanism of rural governance. Their functions will float on the water and become "external tools" that can be replaced at any time.

On the other hand, it is the cycle of governance involution and resource dissipation. Many grass-roots governments have fallen into the quagmire of "involution governance". This kind of operation mode essentially repels changes and new things, resulting in the slow response and even numbness of the governance system to the new ideas and technologies brought by talents. The direct consequence is the serious "resource dissipation" and the dilution and waste of the governance system. Talents

feel powerless and frustrated in this process, and their vitality decreases, which further aggravates the closeness and rigidity of the governance system.

4 Mechanism Exploration: Key Coupling Interface and Mutual Construction Mechanism

(1) Political integration interface: the "hub type coupling" mechanism of grass roots Party Organizations

The grass-roots party organization is the core political hub connecting the country and the countryside. Its core advantage is that it can carry out political integration through organizational innovation, simultaneously optimize the governance structure and develop human resources.

The coupling effect starts from the remodeling of the governance network. Through the "regional party building" and other modes, the party organization has broken the administrative and field barriers, and brought potential talents such as enterprise backbones inside and outside the countryside and Xinxiang talents into the governance network, making the system from closed to open. After the completion of the network, the key is to accurately connect the demand and resources. Relying on the "villagers' meeting" and other platforms and the list management mechanism of "needs, resources and projects", the party organization has transformed the vague rural demands into clear governance tasks, and at the same time has made the talents' specialties explicit, realizing the leap from "talent introduction" to "accurate talent utilization". The deeper coupling lies in the construction of value identity.

(2) Economic and social interaction interface: the "interest governance community" mechanism of the new collective economy

Economy is the cornerstone for talents to take root. The new rural collective economic organization has developed into a "benefit governance community" integrating industry, governance and attribution, providing a solid practical carrier for talents.

Its coupling logic starts from the connection of interests. Through the reform of the joint-stock cooperative system, technical talents such as business experts have formed an economic community of "benefit sharing and risk sharing" with the village collective by taking shares. Personal benefits are directly linked to collective benefits, and a long-term incentive basis has been constructed. The economic community naturally spawns the governance community. As shareholders, talents extend the right of economic discourse to the right of governance participation through the framework of member congresses. The major decision-making of the collective economy itself is the core public issue.

(3) Technology enabling interface: the "connection activation" mechanism of digital tools

In the context of population mobility, digital technology constitutes a "virtual coupling interface" to activate potential human resources subject to geographical constraints. First of all, it connects scattered talents at low cost, uses wechat groups, online discussion platforms and other tools to reduce the cost of participation, and allows local elites and experts to participate in decision-making remotely and pool

intellectual resources. Secondly, through the process of transparency and clarity of rights and responsibilities to activate the willingness to participate, the platform immediately released the "three services" disclosure and project progress, increased governance transparency, "micro power" list standardized the operation of power, reduced the uncertainty and concerns of participation, and enhanced the sense of trust of talents. However, technology empowerment has boundaries, and its effectiveness depends on the support of offline entity organizations.

5 Path Innovation: A Strategy to Promote System Synergy

(1)Optimizing the coupling environment: promoting the reconstruction of power and responsibility and the construction of inclusive culture

The realization of benign coupling is primarily to create a macro environment with clear rights and responsibilities, openness and inclusiveness. At present, the root obstacle restricting the coordination of the system is the "endpoint logic" that the "rights, responsibilities and interests" do not match at the grass-roots level, especially at the township level. Therefore, the starting point of path innovation is to promote the structural reconstruction of the power responsibility relationship between counties and townships.

(2)Reshaping the coupling interface: strengthening the leadership of Party organizations and building a pluralistic Consortium

Coupling interface is a platform for collaborative generation, and its effectiveness directly determines the quality of system interaction. The primary task is to deepen the functional adjustment and organizational innovation of rural grass-roots party organizations. The party organization needs to change from the traditional management leading type to the service leading type, and strengthen its core hub function of integrating resources, building a platform and providing political guidance. This requires that grass-roots party organizations not only embed in the rural social network, but also actively weave and expand this network. Through flexible forms such as "regional party building", diverse talents and organizations separated from the system are absorbed into the governance concentric circle with the party organization as the core.

(3)Smooth coupling flow: innovation incentive mechanism and construction of digital matching platform

Coupled flow is a processing plant for energy exchange between systems, and its flow must be smooth, accurate and sustainable. The key is to design a contribution feedback system that combines material incentives with spiritual identity and links short-term returns with long-term expectations. We can explore the implementation of the "rural governance contribution points" system to quantify the participation behavior of talents in discussion and negotiation, technical services, public welfare volunteers and other aspects. The points can be used to exchange for substantive rights and interests such as community services, credit loan preferences, and collective income dividends. At the same time, we should improve the non economic honor awarding system such as "honorary villagers" and "rural consultants", and give them a sense of

ceremony and substantive rights to participate in the proceedings, so as to effectively transform personal contributions into cumulative and perceptible social capital and political recognition.

6 Conclusion and Prospect

It is found that the realization of collaboration depends on the specific practice carrier that can effectively connect and transform the needs of both parties, namely the "coupling interface". Among them, the grass-roots party organizations, as the political hub, play the core "hub coupling" function by expanding the organizational network, building a docking platform and giving social recognition. By building a "interest governance community", the new collective economic organization firmly binds the economic success of talents with the collective development of rural areas, and becomes a solid carrier for talents to take root and provide sustainable governance momentum. As a virtual interface, digital tools activate discrete talent resources and expand the space-time boundary of governance participation through low-cost connection and process transparency. These three types of interfaces together constitute the key operating mechanism to drive the two systems from "disconnection" to "symbiosis".

Looking forward to the future, there are at least two directions worthy of in-depth discussion: first, under the background of the continuous evolution of population structure and the continuous renewal of rural business forms, how the coupling interface itself dynamically evolves to adapt to the new talent forms and governance needs. Second, attention should be paid to the potential risks and costs in the coupling process, such as the operational risks of the new collective economy and the digital divide that may be exacerbated by the uneven degree of digital empowerment, so as to provide a more comprehensive knowledge base for the construction of a more resilient rural collaborative development system.

References

1. Yan Fei. Building a new pattern of social governance combining rural grassroots autonomy with Rural Revitalization Strategy [j]. Nanjing Social Sciences, 2020, (11):55-61. DOI:10.15937/j.cnki.issn1001-8263.2020.11.008.
2. Chenjun Ya. Township "endpoint logic" and the grass-roots path of national governance modernization [j]. Jianghuai forum, 2025, (06):74-81. DOI:10.16064/j.cnki.cn34-1003/g0.2025.06.002.
3. Sukri I A ,Kusumastuti R ,Lutfi A . Recalibration of village governance models in developing local economy[J].Cogent Arts & Humanities,2025,12 (1): DOI:10.1080/23311983.2025.2583604.
4. Vidal F J ,Alarcon S . Beyond metrics: Corporate governance and the reordering of rural power in regenerative agriculture[J].Journal of Rural Studies,2026,123 104081-104081. DOI:10.1016/J.JRURSTUD.2026.104081.
5. Niastuti D ,Kurrohman T ,Sayekti Y . Influence of Siskeudes Implementation on Transparency and Accountability in Village Financial Management in Indonesia: A Re-

- view[J].Journal of Global Economics, Management and Business Research,2026, 80-89.https://kns.cnki.net/kcms2/article/abstract?v=H26UkN0bSyShhWvd8CzOzeaSUde mE7EGP5NJZp8_r29-mjSHG_jpy7NfTLi1ZGCSA51LusEjAL_BAVYkoUrBo44-IMSUv KvK5nfozcVLhk3MbNGB6A5HVC_xiNLhCh5yD1ZR5Jn4APcj3X_dEkIMZcvH0Xrzcp SfT5Bob1HV7ixaFQqrHYBRlbtCg08L5MzCqIL41T5ztY=&uniplatform=NZKPT
6. Chenwen Hua, Lihai Jin. Ruling society by political parties: the evolutionary logic of the modernization of Chinese style Rural Governance in the new era [j]. theory monthly, 2023, (01):5-14.DOI:10.14180/j.cnki.1004-0544.2023.01.001.
 7. Chenshi Xiang, Niuyi Fan. The effective boundary and generation logic of the modernization of urban grassroots governance enabled by digital technology -- a case comparative analysis based on the framework of "elements mechanism objectives" [j]. theory and reform, 2025, (05):113-126+171-172.DOI:10.13553/j.cnki.llygg.2025.05.009.
 8. Donglei Ming. Research and deepening of rural governance transformation [j]. JOURNAL OF NANJING AGRICULTURAL UNIVERSITY (SOCIAL SCIENCE EDITION), 2025,25 (04): 32-44.DOI:10.19714/j.cnki.1671-7465.2025.0051.
 9. Xiongchun Wen, Xiaowei Na. The internal mechanism of coordinated development of rural collective economy and rural governance modernization from the perspective of Rural Revitalization -- Based on a case study of a village in North China [j]. JOURNAL OF NANJING AGRICULTURAL UNIVERSITY (SOCIAL SCIENCE EDITION), 2025,25 (05): 25-38.DOI:10.19714/j.cnki.1671-7465.2025.0062.
 10. Shijin Qun. A group of stone and gold Path analysis of guiding youth to participate in rural grassroots governance in the context of Rural Revitalization [j]. Zhongzhou journal, 2023, (11):69-76.https://kns.cnki.net/kcms2/article/abstract?v=H26UkN0bSyRsOD5YATVmQxO_TcBvjBxIPHN5Fqo4T4Y8AHZ6gHAPINHrphi_qUMH0zs4aPDb9wxbOg_E4PWAHc h9FTdShtA3mPvRhHgJT1_uul3zmLeMgBY7oDTP3zmQXK4WhQTjfuC2d2dfBoZmYG TeI_56azFvw0-rJkklR7T0OL7-WHfhJA==&uniplatform=NZKPT&language=CHS
 11. Wang Peng, Liu Yan. Realistic challenges and breakthrough paths of rural grassroots party organization construction in the process of rural governance modernization [j]. Dongyue Lun Cong, 2025,46 (09): 136-143.DOI:10.15981/j.cnki.dongyueluncong.2025.09.015.
 12. Zhufeng Ming. Analysis on the adjustment and realization path of the organizational function of rural grassroots party organizations in the modernization of rural governance [j]. Dongyue Lun Cong, 2025,46 (06): 26-33. DOI:10.15981/j.cnki.dongyueluncong.2025.06.003.
 13. Liquan Ling. Research on rural grassroots governance and rural grassroots party organization construction innovation [j]. China rice, 2025,31 (03): 119. https://kns.cnki.net/kcms2/article/abstract?v=H26UkN0bSyT-haRe33rIAT713k9JVdHqV6X04vuiiS3L4zItfXyN25jsDoohO_sEQXsWe0T6FgDZguEYnN5eDYIkGay_o0sDdQgfQC0cApWhgz0YZs2miqrrMYSCLglOINssbh4vLGrpkytXV-6LhPQD6EbKl8nY7YfNKn4ALf8o92jWInkL7g==&uniplatform=NZKPT&language=CHS
 14. Tian Shuai. Research on village level archives management and social governance innovation under the background of Rural Revitalization [j]. Shanxi archives, 2024, (10):54-56. https://kns.cnki.net/kcms2/article/abstract?v=H26UkN0bSyRz3nvDmqnUfMvizrRMmKAUqgEpbTFRtZRMpkKR_MxZyU3qVNHaVBlw983AlmLaIdR13zOmJpfuDNLYUJKApfAhBMxSMWA1_Ts2v9qhI7NSdtI_SVJk8nCPIRVR6zPmR_p398Cx8MCv33wrQY9pbl63gkr8E_kHDSCKCzeAxpLYw==&uniplatform=NZKPT&language=CHS

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

