

EXPLORATION OF PUBLIC HUMAN CAPITAL DEVELOPMENT PATHWAYS IN RURAL GOVERNANCE BASED ON NEW QUALITY PRODUCTIVE FORCES

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Abstract

The term "new quality productive forces" emerged during China's phase of high-quality development. It represents advanced productive forces in the new era, characterized by innovation, high technology, high quality, and high efficiency. This concept breaks away from traditional economic growth models and aims to achieve advancements through revolutionary breakthroughs in technology, innovative allocation of production factors, and deep industrial transformation. Its continued development brings new ideas, technologies, and models to rural governance and drives rural economic and social prosperity through efficient management and high-quality services, significantly improving the living standards of farmers. This study adopts a literature review approach to explore the challenges that rural governance in China faces under the high-quality development of new quality productive forces. These challenges include: insufficient human capital stock and quality in rural areas, relatively lagging rural infrastructure and digitization, barriers to urban-rural factor mobility, mismatches between existing production relations and the development needs of new quality productive forces, and inefficiencies in the agricultural technology innovation system. Drawing on human capital theory, endogenous growth theory, and empowerment theory, we propose a set of targeted development pathways aimed at promoting the efficient development and sustainable value growth of public human capital in rural areas.

Keywords: New quality productive forces, rural governance, human capital, China

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Introduction

In September 2023, during his visit to Heilongjiang, Chinese President Xi Jinping introduced the concept of "new quality productive forces" for the first time. This concept holds significant

meaning for achieving high-quality development in China and for the sustainable development of the global economy. When key technologies achieve breakthroughs and qualitative changes occur, the core elements of productive forces inevitably change, leading to the emergence of "new quality productive forces." These new productive forces represent the evolution of advanced productive forces, encompassing the qualitative transformation of laborers, materials, and labor objects, with optimal combinations that possess strong developmental momentum. They can guide and create a new era of social production (Shen & Liu, 2024). Rural governance in China is a long-standing and evolving issue. Although China has begun exploring mechanisms for empowering new quality productive forces in various fields, research on their application in rural governance is still limited, particularly in how these new forces empower public human capital in rural areas. Therefore, this study aims to fill this research gap. On the one hand, we analyze the stock of public human capital in rural governance under new quality productive forces, exploring how to effectively develop public human capital and empower the institutional resources of rural governance to enhance governance effectiveness. On the other hand, the study focuses on how the development of new quality productive forces can promote the improvement of rural public human capital.

1 The Characteristics and Logic of New Quality Productive Forces

New quality productive forces are advanced contemporary productive forces spawned by technological breakthroughs, the innovative allocation of production factors, and the deep transformation and upgrading of industries. It is based on the qualitative change of workers, labor means and labor objects, and centers on the improvement of total factor productivity. In rural governance, new types of workers are the key, they are innovative and practical, pushing the technological revolution, optimizing resources, and promoting productivity leapfrogging. New types of workers use new technologies, such as big data, cloud computing, and AI, to improve productivity, contrasting with traditional hand tools, and promoting construction, change, and service process intelligence (Sun & Ma, 2023).

Rural governance is the foundation of national governance, The most arduous and heavy task in comprehensively building a socialist modernized country still lies in rural areas. To

achieve the modernization of common prosperity for all people, it is necessary to prioritize the development of agriculture and rural areas, promote urban-rural integration, and comprehensively promote rural revitalization (Wu & Li, 2023), but China's rural governance level and economic development are relatively backward. Human capital is the source of socio-economic growth and can effectively solve the problem of poverty. New quality productive forces make rational use of public human capital, promotes the construction of digital villages, and improves the quality of productivity with science and technology innovation as the core. The government promotes rural governance through policy and implementation, empowers villagers with autonomy, and promotes effective governance. After the new quality productivity empowers rural governance, the traditional object of governance is transformed into the integration of digital information and digital technology to promote the production and life of rural society.

Through a review of research literature, we have clarified the internal logic of how new quality productive forces empower public human capital in rural governance in China, achieving high standards for new quality productive forces and cultivating high-quality public human capital still face several challenges that require further exploration and solutions. We try to propose a development path through human capital theory, endogenous growth theory and empowerment theory.

2 Challenges

2.1 Insufficient Human Capital Stock and Quality in Rural Areas

Rural governance in China faces challenges due to insufficient human capital stock and quality. First, traditional mindsets have made it difficult to effectively implement the advanced concepts of "new quality productive forces" in rural areas. Historically, rural society has been based on "farming culture" and "familiar relationships", with a strong focus on self-sufficiency (Wang & Zhu, 2017). Second, in rural governance, most of the governance is carried out by local villagers who are not familiar with the new technologies and digital operations associated with new quality productive forces. Some digital innovations remain superficial and have not genuinely been implemented to serve the people, resulting in low acceptance and participation rates for

digital technology in rural areas. This has left digital governance under new quality productive forces "floating" above rural society rather than deeply integrated into it. Third, rural areas have long been focused on agriculture, leading to a relatively homogeneous talent structure with a lack of diverse talent reserves. Furthermore, Due to the constraints of traditional thinking and different levels of education, rural residents have a low acceptance of emerging professions and industries, which to some extent affects their acceptance and use of digital governance (Wang et al 2023). Fourth, there is no systematic talent development mechanism in rural areas. Talent development relies mainly on awards and subsidies from various departmental projects (Liu et al., 2022). resulting in many talented individuals being unable to stay in rural areas. Those who return to start businesses face a lack of support, and young people are reluctant to return to rural life. The combined impact of these factors limits the optimization of the public human capital structure.

2.2 Lagging Infrastructure and Digitalization in Rural Areas

China's rural regions lag behind urban areas in terms of infrastructure and digitalization (Yuan, 2022; Liu, 2024). The main reasons for this include: first, although rural network infrastructure is fully covered, network speeds, stability and applications still need to be improved compared to those in cities. Second, the digital transformation of traditional infrastructure in rural areas has been slow, and digital applications, such as smart agriculture and digital financial services, are lagging behind those in urban areas. Third, rural economies are slower to develop, with a low market share, making it difficult to attract investment and innovation and leading to a brain drain.

2.3 Barriers to Urban-Rural Factor Mobility

In some rural governance systems, the personal abilities of village Party organization members are not aligned with the needs of the governance system. In some cases, relationships are prioritized over abilities, leaving those who are truly capable and passionate excluded from governance roles (Ji, 2023). Second, the modernization of rural governance is hindered by slow progress in the development of the rule of law. There is tension between traditional rural social customs and modern legal principles, and there is a need to improve the legal literacy of village organizations and officials (Li, 2023). Third, rural areas struggle to attract and retain high-

quality scientific and technological talent, which is tied to the income disparity between urban and rural areas. In China, the income gap between urban and rural scientific and technological workers can be as high as threefold. Given the imbalance in urban-rural development, high-tech industries like information technology and finance in cities offer higher salaries and better career prospects, attracting a large amount of scientific and technological talent. In contrast, rural areas, primarily focused on agriculture, livestock, and rural industries, have lower market shares, making it difficult to attract and retain talent. This exacerbates the gap in human capital between urban and rural areas, leading to difficulties in retaining high-quality talent in rural regions, and thus, public human capital struggles to accumulate in rural areas.

2.4 Mismatch Between Current Production Relations and the Development Needs of "New Quality Productive Forces"

There is currently a mismatch between production relations and the development needs of new quality productive forces in China's rural governance. This mismatch may stem from a lack of local high-quality talent. Most of the talent in China's rural areas is local, and the majority of farmers have only primary or secondary education. As a result, there is a significant shortage of high-quality talent, which makes it difficult to advance rural governance. Additionally, the severe issue of rural talent drain has negatively impacted the sustainable development of rural areas and the process of agricultural modernization. According to China's seventh population census, less than 30% of rural residents aged 15 to 39 live in rural areas, exacerbating the scarcity of rural talent resources.

2.5 Inefficiency in the Agricultural Technology Innovation System

The quality of rural governance is closely related to the high-quality development of public human capital, especially in terms of the efficiency of the agricultural technology innovation system. (Kusakina & Sokolov, 2022). The efficiency improvement of China's agricultural technology innovation system is facing challenges, mainly due to the scattered organization and management of innovation entities, insufficient efficiency in the transformation of scientific and technological achievements, and a lack of innovation investment in agricultural enterprises. These issues collectively point to the urgency of strengthening the innovation system in terms of regional coordination and funding allocation (Jin et al., 2023). In addition, there is a

disconnect between agricultural technology innovation and agricultural production practice, partly due to the imperfect education and training system in rural areas, especially the lack of policy support in the cultivation of technical knowledge and skills.

3 Development path

In addressing the challenges of public human capital development in rural governance, we have outlined a series of strategies and methods guided by theory, all aimed at improving the overall effectiveness of rural governance. To achieve these goals, we try to design some development pathways based on human capital theory, endogenous growth theory, and empowerment theory.

Human capital theory originally emphasized improving individual productivity through education, training, and health investments. However, under the framework of new quality productive forces, this theory further highlights the importance of innovation capabilities, technological proficiency, and adaptability. Therefore, in the context of new quality productive forces, optimization suggestions for public human capital in rural governance have been proposed. First, for local talent, "specialized" talent training should be conducted, using a model that combines "online + offline" and "indoor training + outdoor observation," as well as "theoretical training + practical testing." This approach helps local talent learn by doing and do while learning, continuously enhancing practical capabilities and fostering individual innovation awareness (Bin & Qiong, 2024). Second, a consulting service platform should be established. This platform would provide consulting services to returning talent, local talent, and newly introduced talent, helping to reduce employment costs, improve labor productivity, optimize talent structures, and ultimately enhance the level of rural governance services.

The core of new quality productive forces lies in technological progress and innovation, which aligns with the emphasis on endogenous technological progress in endogenous growth theory. In the context of new quality productive forces, public human capital in rural governance needs to transform rural governance models, reform agricultural technologies and production methods, and improve production efficiency and product quality to achieve endogenous growth. More importantly, favorable market conditions and policy environments can promote the use and creation of new knowledge. In the context of new quality productive forces, rural public

human capital requires government policy support, such as financial subsidies, the construction of science and technology parks, and digital platforms for entrepreneurial innovation. This would incentivize more outstanding talent to engage in technological innovation and invest in human capital. Lastly, endogenous growth theory stresses that sustained economic growth is driven by internal factors, particularly the accumulation of technology and human capital. It argues that human capital accumulation is a key factor driving economic growth. The development of new quality productive forces relies on highly skilled labor. Comprehensive education system reforms are crucial to laying a solid foundation of talent for the development of new quality productive forces and creating a strong talent pool for human capital (Li & Wu, 2024).

Traditional empowerment theory distinguishes three analytical levels: individual, organizational, and community empowerment, which are interdependent and interact with each other (Mouchrek & Benson, 2023). First, in terms of utilizing public resources for rural governance, the rural living environment should be improved, and infrastructure and public service facilities should be constructed to create a supportive environment for public human capital. Building a positive cultural atmosphere in rural governance not only allows individuals to feel respected and valued within such a favorable environment but also enhances their self-esteem and confidence, encouraging more active participation in rural governance. Second, in the rural governance system, citizens should be empowered with governance rights to achieve multi-level co-governance. Digital platforms should be used to build multi-dimensional participatory channels, broadening the range of participants by establishing rural government service centers, forming village committees, and building discussion kiosks. This would increase awareness of rural governance participation and improve management capabilities. Third, digital empowerment should be applied to public human capital by utilizing big data technology to provide precise data support for rural governance, simplifying procedures, and improving efficiency. Technologies such as cloud computing, big data, the Internet of Things, and artificial intelligence should be used in agricultural production and management to create smart agriculture and technological agriculture. Additionally, digital tools can be used to protect and preserve rural culture.

Conclusion

From the perspective of new quality productive forces, this paper explores the necessity and urgency of developing public human capital in China's rural governance. By analyzing existing literature and proposing a series of practical development pathways based on human capital development, endogenous growth strategies, and digital empowerment strategies, we aim to inject new momentum into China's rural governance.

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