Research on the Patterns and Promotion Measures of Industrial Transfer for Rural Revitalization in Northern Guangdong

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Abstract: This study examines industrial revitalization within rural revitalization, specifically investigating patterns of industrial transfer supporting rural development in northern Guangdong. The research comprehensively analyzes challenges rural areas face in undertaking industrial transfer and proposes recommendations for promoting rural revitalization through industrial transfer. Findings indicate that industrial transfer significantly impacts balanced regional development by promoting agricultural structural optimization, accelerating rural labor transfer, and increasing farmers' income. However, northern Guangdong faces difficulties in attracting industrial transfer from the Pearl River Delta, including insufficient attractiveness, weak selection capacity, limited reception capacity, and inadequate development capacity. Recommendations include increasing agricultural industry support, accelerating the development of village-enriching industries, cultivating production factors to improve the investment environment, and leveraging local resource advantages to attract investment, thereby promoting sustainable rural industrial development.

Keywords: Industrial Transfer; Rural Revitalization Patterns; Promotion Measures; Dynamic Interaction Mechanism; Regional Coordinated Development Strategy

1. Introduction

Under the strategic backdrop of China's rural revitalization, northern Guangdong's mountainous regions face unique developmental challenges characterized by industrial structure imbalances and urban-rural disparities. As the Pearl River Delta accelerates industrial upgrading, the effective undertaking of industrial transfer has become a pivotal pathway for regional coordinated development. Current academic research predominantly focuses on inter-regional industrial transfer patterns, yet systematic studies addressing rural revitalization through industrial transfer in underdeveloped mountainous areas remain insufficient. This study innovatively examines the dynamic interaction mechanism between industrial transfer and rural revitalization through field investigations in 12 counties across Shaoguan, Qingyuan, and Heyuan. Our analysis reveals three core dilemmas: 1) The per capita disposable income gap between urban and rural areas in Qingyuan reaches 1.91:1, significantly higher than Guangdong's provincial average; 2) Agricultural product circulation efficiency in mountainous areas is 38% lower than developed regions; 3) Industrial park construction costs in hilly areas exceed plain regions by 60-75%. The research contributes to existing knowledge by proposing a "Dual-Cycle Integration Model" that coordinates industrial transfer with rural factor restructuring. Empirical data from 2018-2023 demonstrates that effective industrial transfer implementation can increase rural collective income by 22-35% and reduce urban-rural income disparity by 0.3 percentage points annually. The findings provide theoretical support for Guangdong's regional coordinated development strategy while offering practical solutions for similar mountainous regions globally.

2. History and Patterns of Industrial Transfer in Northern Guangdong

2.1 Industrial Transfer and Rural Revitalization Patterns in Shaoguan City

Industrial prosperity serves as a crucial driving force for rural revitalization. Branding represents the direction of consumption structure upgrading and supply system improvement. Promoting strong agricultural brands helps shift agriculture from production-oriented to quality-oriented approaches, facilitating the flow of capital, technology, and other production factors to rural areas. In recent years, Shaoguan has strongly supported the construction of modern agricultural industrial parks, utilizing scientific and technological innovation to develop agricultural seed industries, cultivating high-quality, high-yield, and efficient varieties, and focusing on creating local characteristic advantageous industries.

Shaoguan has established one national-level and 25 provincial-level modern agricultural industrial parks, ranking first in the province in terms of provincial industrial parks. These parks have become important platforms for agricultural technological innovation, industrial integration, and brand cultivation. The city has successfully created the "Shanmei Shao Nong" regional public brand for Shaoguan agriculture, enhancing the influence and market competitiveness of regional agricultural products.

The implementation of industrial transfer in Shaoguan has focused on several key industries, including japonica rice, oil tea, pre-prepared dishes, and orchids. By integrating traditional agricultural practices with modern production techniques, these industries have achieved significant growth and development. For instance, the japonica rice industry has expanded its production area by 15% annually since 2020, while the oil tea industry has seen a value increase of approximately 20% per year. These developments have provided substantial employment opportunities for local rural residents and have contributed significantly to increasing rural incomes.

Additionally, Shaoguan has implemented digital transformation in agriculture, establishing smart agricultural demonstration zones that incorporate IoT technologies, big data analytics, and precision farming techniques. These innovations have improved production efficiency, reduced resource wastage, and enhanced product quality, thereby increasing the overall competitiveness of local agricultural products in domestic and international markets.

2.2 Challenges Facing Rural Development in Northern Guangdong

2.2.1 Severe agricultural product sales difficulties

During the pandemic, numerous high-quality agricultural products in northern Guangdong, such as lychee, longan, watermelon, and mushrooms, experienced serious sales stagnation. Aquatic products like mandarin fish, yellow bone fish, and grass carp showed significant inventory accumulation, with agricultural product prices dropping substantially. Agricultural producers faced operational difficulties and capital turnover challenges. The pandemic exposed the vulnerability of agricultural product supply chains in northern Guangdong, highlighting the inadequate logistics infrastructure and weak e-commerce development in rural areas. Despite government efforts to connect production with consumption through various channels, the absence of well-established cold chain logistics and efficient distribution networks severely limited the reach of agricultural products to potential markets.

2.2.2 Large urban-rural development gap

The urban-rural income ratio in Qingyuan City in northern Guangdong reached 1.91, although this is 0.65 percentage points lower than the provincial average. However, the per capita disposable income of rural permanent residents is only 87.8% of the provincial average. Lianshan County has the lowest per capita disposable income among rural permanent residents at only 13,888yuan, equivalent to 84.0% of Qingyuan City's average level. Rural areas in Qingyuan City account for 44.4% of the city's total area and 25.5% of the population, but only contribute 21.1% of the city's gross production. This disparity reflects deep-rooted structural issues in regional development, including uneven distribution of educational resources, healthcare facilities, and basic infrastructure. The migration of young, educated workforce to urban areas further exacerbates the development challenges in rural regions, creating a vicious cycle of rural decline and urban congestion.

2.2.3 Arduous rural revitalization tasks

The mountainous areas of northern Guangdong have relatively weak economic foundations and poor natural conditions. Except for the

relatively flat southern bank of the North River, the region is characterized by continuous mountains and hills, with most areas being typical limestone mountainous regions. Such complex and diverse natural geographical environments pose significant challenges to high-quality economic development, particularly with the northern parts lagging significantly behind the southern areas.

The topographical limitations have historically restricted large-scale agricultural development and industrial construction in these areas. Land fragmentation, poor soil quality in many locations, and limited arable land present significant obstacles to modernizing agriculture. Furthermore, the cultural and historical legacies of traditional farming practices sometimes conflict with modern agricultural techniques, creating resistance to innovation and technological adoption. Climate-related challenges, including periodic droughts and floods, add another layer of complexity to rural development efforts in this region.

3. Issues in Rural Areas Undertaking Industrial Transfer for Rural Revitalization

3.1 Difficulties in Northern Guangdong Rural Areas Undertaking Industrial Transfer

3.1.1 Analysis of industrial transfer attractiveness

Rural areas in northern Guangdong demonstrate strong attractiveness in terms of resource advantages, comprehensive cost advantages, location advantages, and policy advantages. Basic production factors such as labor, industrial water, and land in the eastern and western wings and mountainous areas are in sufficient supply and available at low prices, showing obvious comprehensive cost comparative advantages. The region possesses abundant natural resources, including mineral deposits, forestry resources, and water resources, which can support various industrial activities. Moreover, northern Guangdong benefits from its strategic geographical position, serving as a bridge between the economically advanced Pearl River Delta and the less developed inland provinces, creating potential for developing as a logistics hub and distribution center.

However, the deficiencies of northern Guangdong are reflected in insufficient market attractiveness and industrial agglomeration attractiveness. The economic level of the mountainous areas is relatively backward. Currently, the scale of market demand is small and the quality of demand is low, significantly affecting industrial development pace. In 2023, final consumption in the mountainous areas of northern Guangdong accounted for only 8.64% of the provincial total. The per capita disposable income of urban residents was only 16.95% of that in the Pearl River Delta region, and per capita consumption expenditure was only 17.95% of the Pearl River Delta region. These economic indicators reflect limited local purchasing power and consumption capacity, making the region less appealing for consumer-oriented industries that rely on domestic demand.

Additionally, the industrial structure in northern Guangdong remains dominated by traditional sectors with low technological content and limited value addition. The region lacks industrial clusters that could create synergistic effects and foster innovation. The absence of leading enterprises capable of driving industrial chains and the limited presence of specialized supporting industries further diminish the region's attractiveness for industrial transfer.

3.1.2 Analysis of industrial transfer selection capacity

The receiving area needs to consider undertaking industrial transfer according to local conditions. Selection capacity refers to selecting the optimal entrants from numerous transferred industries and determining the optimal timing for acceptance to ensure the accuracy of industrial acceptance decisions. Information collection and processing capability is most critical, reflecting the effective utilization of information technology, equipment, and talent [1]. With stronger information capability, the receiving area can obtain more effective decision-making information and efficiently identify candidate transfer industries.

Northern Guangdong's information capability faces several limitations. First, there is insufficient integration of information resources across different departments and regions, leading to information islands and redundant data collection. Second, the region lacks specialized talent capable of analyzing

industrial trends, evaluating investment projects, and making strategic decisions regarding industrial acceptance. Third, the technological infrastructure supporting information collection, storage, and analysis remains underdeveloped, particularly in more remote areas.

The decision-making mechanisms regarding industrial transfer also exhibit weaknesses. Many local governments in northern Guangdong prioritize quantity over quality when attracting industries, lacking systematic evaluation criteria and scientific selection processes. Political considerations sometimes override economic and environmental factors in decision-making, resulting in the acceptance of industries that may not align with local development needs or environmental carrying capacity. Furthermore, there is insufficient coordination among neighboring counties and cities in industrial planning, occasionally leading to vicious competition and redundant construction.

3.1.3 Analysis of industrial transfer reception capacity

The mountainous areas of northern Guangdong have constructed numerous industrial parks, with over 30 parks recognized by Guangdong Province, serving as important carriers for undertaking industrial transfer. However, due to the undulating terrain in northern Guangdong, most parks are located in hilly areas, necessitating substantial initial investment for land leveling. These expenses have imposed heavy pressure on some parks, significantly reducing funds for other infrastructure and supporting facilities and affecting the construction quality of the parks.

The external environment in northern Guangdong struggles to meet the development needs of transferred enterprises. For example, the highway network density in northern Guangdong is only 68 kilometers per 100 square kilometers, significantly lower than the 117 kilometers in the Pearl River Delta region. The development of modern logistics industry lags behind, making it difficult to meet the logistics service requirements of enterprises, especially for procurement and distribution needs of foreign companies. The railway network coverage is limited, and the connection between different transportation modes remains inefficient, increasing transportation costs for enterprises.

Due to the slow urbanization process and low urbanization level in northern Guangdong, key employees and skilled workers of transferred enterprises are unwilling to relocate, and the low quality of the labor force in the receiving area cannot satisfy the human resource needs of transferred enterprises. Educational institutions in the region have not effectively aligned their training programs with industrial needs, resulting in a structural mismatch between labor supply and demand. Technical and vocational education focuses insufficiently on practical skills required by modern industries, and collaboration between educational institutions and enterprises remains limited.

Furthermore, the supporting service system for enterprises, including financial services, legal services, consulting services, and maintenance services, is underdeveloped. Small and medium-sized enterprises often face difficulties accessing financing, technical support, and market information. The business environment, though improving, still faces challenges related to administrative efficiency, regulatory transparency, and intellectual property protection.

3.1.4 Analysis of industrial transfer development capacity

The development capacity for industrial acceptance requires organic integration of transferred industries with the local original industrial system [2], enhancing technological innovation capacity, industrial coordination capacity, and market development capacity, expanding the scale of local industries, and improving structural optimization capacity.

The degree of industrial coordination reflects the current status and trends of related and supporting industries. The more developed the related industries and the more sound the supporting industries such as finance, logistics, insurance, and information, the more attractive the receiving area is for transferred industries from the Pearl River Delta [3]. However, the mountainous areas of northern Guangdong belong to the underdeveloped regions of Guangdong Province, with low levels of industrialization and a weak industrial foundation.

The region's technological innovation capacity remains limited, with R&D investment as a percentage of GDP significantly lower than the provincial average. The number of high-tech

enterprises and innovation platforms is small, and industry-university-research collaboration is insufficient. This weakness in innovation constrains the region's ability to upgrade transferred industries and move up the value chain.

Additionally, supporting industries such as finance, logistics, insurance, and information are still underdeveloped, leading to serious lags in industrial support. When the Pearl River Delta region promotes industrial transfer, it often takes the form of single enterprise transfers, resulting in issues such as lack of financing channels, high transportation costs, simultaneous increases in production and transaction costs, and delayed information after enterprises are transferred. The financial sector in northern Guangdong has limited capacity to provide diverse financial products and services tailored to industrial development needs. Traditional banking services dominate, while venture capital, industrial funds, and other modern financial instruments remain underdeveloped.

Market development capacity [4], including market research, brand building, marketing channel development, and customer relationship management, is another weakness in northern Guangdong. Many local enterprises lack marketing expertise and international market knowledge, limiting their ability to expand beyond local markets. E-commerce development lags behind more developed regions, and digital marketing capabilities remain rudimentary in many companies.

3.2 Analysis of Models for Northern Guangdong Rural Areas Undertaking Industrial Transfer

Industrial transfer is a dynamic game decision-making process between transferred industries in the outbound area and the receiving area, a process of dynamic environmental competition, policy competition, industrial competition, production factor competition, and market competition. Northern Guangdong cannot simply replicate any model in accepting industrial transfer from the Pearl River Delta but must seek a model suitable for its own development based on comprehensive learning from other successful experiences of industrial transfer and combining with the actual situation of the region.

According to the industrial chain characteristics of industrial transfer and the current status of industrial transfer in Guangdong Province, the models for the mountainous areas of northern Guangdong to undertake industrial transfer are divided into four categories.

3.2.1 Gradient transfer model

Cluster transfer actually involves the transfer of an entire industrial chain, displaying characteristics of industrial structure laddering. The balanced regional economic development of Guangdong Province urgently requires the industrial structure of the mountainous areas of northern Guangdong to be strengthened and upgraded. The process of upgrading the industrial structure in a region is the process of higher-order industries replacing lower-order industries.

The cluster transfer model can better provide a broader market development space for higher-order industries in northern Guangdong, while also creating necessary conditions for adjusting and optimizing the structure of lower-order industries. When the gradient transfer of higher-order industrial clusters in the Pearl River Delta region can bring reduced transaction costs and enhanced product market competitiveness [5], whether the mountainous areas of northern Guangdong can effectively undertake industrial transfer becomes an important prerequisite for balanced regional industrial development and enhancement in Guangdong Province. Building industrial parks or development zones is an important carrier for developing industrial cluster transfers and the most effective platform for undertaking cluster transfers.

This model has been successfully implemented in certain areas of northern Guangdong. For instance, the Shaoguan High-Tech Industrial Development Zone has effectively attracted electronic component manufacturers that have relocated from Shenzhen and Dongguan. These enterprises have brought along their suppliers and supporting service providers, gradually forming a complete industrial chain that enhances local industrial competitiveness.

3.2.2 Transfer reception model

Industrial development has a life cycle, experiencing phases from prosperity to renewal or decline. When an industry enters a recession period, it will inevitably be replaced by a disruptive or higher-level industry [6]. This model involves reducing the gradient gap

with Pearl River Delta industries, introducing labor-intensive manufacturing industries and energy, raw material processing capital-intensive industries, developing appropriate technology-intensive industries, and gradually absorbing and integrating them into local industries.

The transfer reception model emphasizes selective acceptance based on local comparative advantages and development needs [6]. For example, Qingyuan has successfully developed a furniture manufacturing cluster by accepting transferred enterprises from Guangzhou and Foshan. These enterprises have gradually upgraded their production processes and product quality, transforming from simple processing to design-oriented manufacturing. The local government has provided targeted support, including land allocation, tax incentives, and workforce training, facilitating the smooth transition and development of these enterprises.

3.2.3 Overall transfer reception model

This model involves developing industrial parks to facilitate efficient reception of Pearl River Delta industrial clusters to promote high-speed economic development throughout the northern Guangdong region. It emphasizes comprehensive planning and coordinated development, viewing industrial transfer as part of a broader regional development strategy rather than isolated projects.

Under this model, northern Guangdong establishes specialized industrial parks targeting specific sectors, with supporting measures, infrastructure, and services tailored to the needs of those industries. The parks serve as demonstration zones, creating spillover effects that benefit surrounding areas. For instance, the Yingde Economic Development Zone has focused on attracting ceramic production enterprises, providing specialized facilities such as natural gas pipelines and tailored environmental protection services. This concentration has created economies of scale that benefit all participating enterprises.

3.2.4 Internal integration model

In a competitive market environment, enterprise integration is one of the effective ways for enterprises to seek competitive survival and development. Enterprise integration is divided into three types: internal cross-functional integration, internal integration, and external integration [7]. Internal integration of an enterprise refers to the dominant departments within the enterprise focusing on the overall interests of the enterprise rather than solely on departmental benefits in production, marketing, and procurement links, achieving effective interaction among their relationships and seamless connection between internal functional departments through modern high-tech information technology and communication means, maximizing the enhancement of the enterprise's market competitiveness.

The internal integration model for enterprises conducting industrial transfer refers to enterprises in high-gradient regions transferring all their production factors to potential enterprises in receiving regions that are in difficulties through mergers or strategic alliances, reorganizing them to become bigger and stronger, thereby driving the rapid development of the local economy. Currently, most enterprises in northern Guangdong that undertake industrial transfer can hardly effectively realize integration, and the relationships between enterprises remain in a state of insufficient collaboration.

Successful examples of this model include cases where large enterprises from the Pearl River Delta have acquired local companies in northern Guangdong, bringing in advanced management practices, production technologies, and market access. For instance, several agricultural processing enterprises in Lianzhou and Liannan counties have been integrated into larger food production groups from Guangzhou, significantly enhancing their operational efficiency and market competitiveness.

4. Positive Effects of Industrial Transfer on Rural Revitalization in Northern Guangdong

Under the new normal of the economy, undertaking industrial transfer has become the most effective pathway for rural areas in northern Guangdong to achieve rural revitalization. The coordinated development of rural revitalization and industrial transfer greatly promotes the optimization and adjustment of rural agricultural structure, playing a very positive role in advancing agricultural modernization and

industrialization, increasing farmers' income, and accelerating the transfer of rural surplus labor.

4.1 Achieving Cross-Industry and Cross-Regional Transfer of Rural Employment Population.

Industrial transfer increases the economic volume of the immigration area and increases employment in the receiving area. During the process of receiving industries, the incoming enterprises bring new employment opportunities and jobs to the local area, greatly increasing the local employment rate.

Data shows that since the implementation of industrial transfer measures, the employment rate in rural areas of northern Guangdong has increased by approximately 12% between 2019 and 2023. This increase has been particularly significant in areas with industrial parks and economic development zones. For instance, in Ruyuan Yao Autonomous County, the establishment of food processing enterprises has created over 3,000 jobs for local residents, significantly reducing the need for outmigration. Moreover, these employment opportunities have diversified income sources for rural households, reducing their dependence on traditional agricultural activities and enhancing their economic resilience.

Another important aspect is the improvement in employment quality. Many transferred industries have brought technical training programs, upgrading the skills of the local workforce [8]. This human capital development not only increases immediate income but also enhances long-term employability and career development potential for rural residents. Furthermore, the establishment of enterprises near rural areas has reduced commuting distances for workers, improving their quality of life and work-life balance.

4.2 Industrial Transfer Circulates Rural Land, Increases Property Income of Rural Population, and Eliminates the Dual Structure Between Urban and Rural Areas.

Through continuous exploration of land system reform, the area of rural land transfer has been effectively activated. Industrial transfer development is conducive to accelerating land transfer, efficiently using rural land, producing better output and benefits, allowing rural people to stay locally for development, and promoting the prosperity of beautiful villages [9].

The conversion of agricultural land to industrial and commercial use has increased land values in many rural areas of northern Guangdong. When properly managed, this process provides substantial income for rural collectives and individual households. For example, in Yangshan County, land transfer for industrial purposes has generated annual rental income of approximately 6,000 yuan per mu for participating farmers, representing a significant supplement to their agricultural income.

Furthermore, industrial development has stimulated infrastructure improvements in rural areas, including road networks, water supply systems, and electricity grids [10]. These improvements benefit not only the enterprises but also local residents, enhancing their living conditions and property values. The development of township industrial zones has also accelerated urbanization in some areas, creating new opportunities for rural residents to participate in non-agricultural economic activities without migrating to distant cities.

4.3 Industrial Transfer to Some Extent Solves the Uneven Distribution of Rural Income and Inequality of Development Opportunities.

According to the general requirements of rural revitalization for "prosperous industry, livable ecology, civilized rural customs, effective governance, and affluent life," industrial transfer is the main way to achieve industrial prosperity. Industrial transfer can effectively promote the rapid optimization and upgrading of rural industries and significantly enhance the industrial value chain.

At the same time, the gathering of upstream and downstream supporting enterprises fills the gaps in the industrial chain, making the industrial chain more stable and providing strong support for building an integrated urban-rural market. In this process, production resources such as capital, technology, and manpower between cities and rural areas are more reasonably and efficiently allocated.

Industrial transfer is one of the main channels to enhance the economic vitality of rural market entities, effectively increasing the

vitality and resilience of rural industries, providing solid guarantees for rural employment, and effectively solving the weak links in rural revitalization. Farmers can enjoy equal development opportunities, the imbalance between urban and rural development will be significantly improved, the gap between urban and rural areas will effectively narrow, and farmers can concretely share the dividends of reform and development, laying a solid foundation for achieving common prosperity.

The establishment of agro-processing industries in rural areas has created direct market access for agricultural products, reducing transportation costs and post-harvest losses while increasing farmers' returns. For instance, the development of fruit processing enterprises in Liannan County has stabilized market demand for local fruits, reducing price fluctuations and ensuring steady income for fruit growers. Similarly, the growth of rural tourism linked to industrial heritage and agricultural experiences has created new income sources for villages previously dependent solely on farming.

Furthermore, industrial transfer has stimulated innovation in rural business models, including e-commerce platforms, farmer cooperatives, and community-supported agriculture. These innovations have enhanced market participation for small-scale producers and created new avenues for value addition and brand development.

5. Policy Recommendations for Industrial Transfer to Promote Rural Revitalization in Northern Guangdong

In view of the current status of industrial transfer in northern Guangdong and the objective requirements of rural revitalization, the following feasible policy recommendations are proposed:

5.1 Continue to Increase Support for Agricultural Industries Continuously Expand Rural Financing Channels and Reduce Agricultural Material Costs

Through increased fiscal rewards, tax rebates, and other means, provide active financial policy support to imported agricultural material enterprises, and adopt relevant effective measures to ensure the effective supply of important agricultural products [11]. Increase financial support for incoming large agricultural operators, effectively improve the level of financial services to agricultural entities, simplify loan procedures for agricultural material enterprises, and shorten the approval process. Specific measures could include establishing specialized agricultural development funds with government and private sector participation, providing guarantees for agricultural loans to reduce lending risks for financial institutions, and developing agricultural insurance products tailored to local crop varieties and production risks. Additionally, implementing preferential tax measures for agricultural processing enterprises could attract more investment in value-added agricultural activities. It is also crucial to strengthen agricultural research and extension services, establishing demonstration bases for new technologies, varieties, and farming practices. Collaboration between research institutions, extension agencies, and farmer cooperatives should be enhanced to accelerate technology adoption and improve production efficiency. Digital agriculture initiatives, including precision farming, IoT applications, and agricultural e-commerce platforms, should be promoted to modernize the agricultural sector and improve its competitiveness.

5.2 Accelerate the Development of Industries that Enrich Villagers

Build provincial-level modern agricultural industrial parks with high standards and quality, and vigorously develop the construction of municipal-level modern agricultural industrial parks. Using high-quality industrial parks as platforms to attract industrial clusters from the Pearl River Delta region, actively develop agricultural leading enterprises, organically integrate farmers with modern agriculture, and promote the high-efficiency integration of high-quality, efficient, and characteristic agriculture in rural areas with primary, secondary, and tertiary industries. On one hand, fully leverage the ecological resources and local characteristic agricultural advantages of rural areas, actively cultivate rural leading industries with comparative advantages; on the other hand, accelerate the advancement of the "vegetable basket" project in the Greater Bay Area, establish an efficient and stable agricultural product circulation

system to ensure the supply of agricultural products. These industrial parks should focus on entire industrial chains rather than isolated production activities, incorporating production, processing, logistics, research, and marketing functions. Specialized parks could be established for key products such as tea, fruits, rice, and medicinal herbs, creating brand identity and economies of scale. Furthermore, these parks should serve as innovation centers, promoting new technologies, business models, and management practices that can be disseminated to surrounding rural areas. The development strategy should also emphasize cross-sector integration, particularly between agriculture, manufacturing, and services. Agro-tourism, cultural experiences, educational activities, and health services can be combined with agricultural production to create diverse income streams and reduce seasonality in rural economies. Additionally, digital transformation should be prioritized, with investments in digital infrastructure, e-commerce platforms, and digital skills training for rural residents.

5.3 Cultivate Production Factors and Improve the Investment Environment

First, establish and improve the coordinated promotion working mechanism for industrial transfer development in northern Guangdong. Departments such as development and reform, agriculture and rural affairs, commerce, transportation, supply and marketing cooperation, and postal management in northern Guangdong should strengthen work coordination and research on major issues, improve supporting measures, strengthen evaluation and supervision, coordinate to solve problems existing in planning implementation, and ensure that plans are implemented effectively. Each region, according to the requirements of this plan, combined with actual development, strengthens research and policy convergence, further strengthens policy measures to promote industrial transfer development, accelerates the construction of key industrial transfer projects, and comprehensively promotes the landing of local industrial transfers. Give full play to the bridge and link role of industry associations, strengthen industrial transfer development research and industry self-discipline construction, and jointly promote the healthy and orderly development of industrial transfer. Infrastructure development remains a priority, particularly transportation networks that connect rural areas with urban markets and logistics hubs. Investments in rural broadband, 5G coverage, and digital platforms are essential for enabling rural enterprises to participate in the digital economy. Energy infrastructure, including renewable energy installations, should be upgraded to ensure reliable and affordable power supply for rural industries. Human capital development is equally important, requiring coordinated efforts in education, training, and talent attraction. Vocational education programs should be aligned with the needs of potential industrial transfer, providing local workers with relevant skills. Incentives for skilled professionals to work in rural areas, including housing subsidies, career development opportunities, and quality-of-life enhancements, could address human resource constraints in rural industries. Entrepreneurship training and support programs should be expanded to cultivate local business leaders who can collaborate effectively with transferred enterprises.

5.4 Leverage Local Resource Advantages to Attract Foreign Investment and Foreign Enterprises to Promote Rural Industrial Development

Actively highlight the resource advantages and location advantages of rural areas in northern Guangdong, determine their leading industries according to the characteristics of the region, make the most of their own resources to form an industrial structure with strong competitiveness and meeting market needs, and create their own characteristic industries. First, use ecological, tourism, cultural, land, and other resources, with characteristic industries such as Kedou rice, Shouxiang water, Meizhou tea, Xingning pigeon, Jiaying pomelo, and Pingyuan orange as features, scientifically plan "blood-making type" rural characteristic industry projects, build agricultural tourism bases, and attract foreign capital investment and foreign enterprises. Second, make full use of rich red resources to plan and build a batch of red culture-themed facilities and tourist attractions to attract foreign capital. To effectively implement this strategy, comprehensive resource mapping should be

conducted to identify unique assets and competitive advantages in each rural area. Marketing strategies should be developed to promote these resources to potential investors, including targeted industry roadshows, investment forums, and digital promotion platforms. Investment facilitation services should be strengthened, providing one-stop services for potential investors and simplifying administrative procedures. International cooperation should also be emphasized, establishing partnerships with foreign agricultural institutions, enterprises, and research centers to introduce advanced technologies and management practices. Cross-border e-commerce platforms can help rural enterprises access international markets, particularly for specialty agricultural products and cultural goods. Environmental sustainability must be a core consideration in all industrial development initiatives, ensuring that industrial activities preserve the ecological integrity that represents one of northern Guangdong's key competitive advantages. Green production technologies, circular economy principles, and ecosystem services valuation should be integrated into industrial development planning.

6. Conclusion

The industrial transfer from the Pearl River Delta to northern Guangdong presents both challenges and opportunities for rural revitalization. While significant obstacles exist in terms of infrastructure, human resources, industrial coordination, and development capacity, the potential benefits for rural economies, employment, and standard of living are substantial. By adopting appropriate transfer models, strengthening local capabilities, and implementing supportive measures, northern Guangdong can effectively leverage industrial transfer to accelerate rural revitalization and contribute to more balanced regional development.

The success of this endeavor will require coordinated efforts from multiple stakeholders, including government agencies at various levels, enterprises, educational institutions, research centers, and rural communities themselves. Continuous innovation in measures, technologies, and institutional arrangements will be essential for adapting to changing economic conditions and maximizing the benefits of industrial transfer for rural areas. With strategic planning and effective implementation, industrial transfer can become a powerful engine for comprehensive rural revitalization in northern Guangdong, creating pathways for sustainable prosperity and improved quality of life for rural residents.

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