The Internal Mechanism of Reduction of Construction Land driving Rural Industrial Revitalization--Based on dual case studies

Yao Ma
Nanjing Normal University Nanjing Jiangsu 210023 China

Abstract. Rural characteristic industry is an important segment of industrial revitalization in the county. Based on the land system reform, this paper takes two national project areas for rural revitalization as the research object, and adopts the vertical exploratory double-case study method to comprehensively present the main paths and common mechanisms in the process of industrial revitalization in the two project areas, and the study finds that: 1. The reduction of construction land has a driving role in the revitalization of rural industries. 2. In the industrial revitalization mode, the reduction policy constructs a new rural framework of "government + enterprise + village community + farmers", which greatly improves the vitality of the collective economy. 3. By comparing the two cases, the core of multisector synergy in industrial revitalization is the distribution of the power structure, and it is only through the implementation of the bottom power and handing over the initiative and beneficiary to the farmers that the effective articulation of the interests of the multiple loops can be achieved. Therefore, the institution-building of reduction should be further improved to realize the inter- and intra-regional revenue feedback mechanism of the reduction target, so as to realize the sustainable income and value-added of the industry in the long term.

Keywords: Reduction of Construction Land; Collective Economy Model; Industrial Revitalization; Land Interest.

1. Introduction

Rural industry is a farmer-oriented industry, based on agricultural and rural resources, with the integration of primary, secondary and tertiary industries as the path of development, with distinctive geographical characteristics, a wide range of business types, and close interest links, whose comprehensive objectives include improving the rural industrial system, promoting the green development of industries and optimizing the employment structure of the countryside. The report of the 19th CPC National Congress puts forward the "implementation of rural revitalization strategy", accelerating the modernization of agriculture and rural areas in accordance with the general requirements of "prosperous industry, ecological livability, civilized countryside, effective governance, and affluent life", which is the guideline for the development of agriculture and rural areas in the new period (Qianyu Zhao et al, 2021). The National Rural Industry Development Plan (2020-2025) points out that the revitalization of rural industries is an important support for consolidating and enhancing overall well-being, as well as an important engine for advancing the modernization of agriculture and rural areas. It emphasizes promoting the quality and efficiency of agricultural and rural development, realizing that the increase in agricultural production, value-added and income has become an effective means of cracking the problem of endogenous development in rural areas. In recent years, China's rural industry has flourished, but the existing problems are still prominent. At the level of agricultural production, its efficiency is not high, and the utilization rate of resource factors is low (Siwei Hu et al, 2022), continued loss of large numbers of high-quality young and middle-aged labor resources constrain agricultural production capacity severely; From the aspect of value-added in agriculture, the level of education of the farmers is not high, and it is difficult to support the transformation and upgrading of rural industries, the entity of agricultural business and its capacity of development is weak, while whose dependence on the government is strong (Hualou Long et al, 2010); From the role of income, the cost of production and operation becomes higher, the
competitiveness of agricultural products is insufficient and the profit decreases (Hualou Long et al., 2016). The unstable foundation of agriculture seriously restricts the growth of farmers’ income, so finding new kinetic energy for the rural industry is the key to the revitalization of the rural industry. (Kunqiu Chen et al., 2023) In the new era of building a moderately prosperous society in all aspects, the accelerated upgrading of urban residents’ consumption has generated a large number of new demands for agricultural multi-functionality. However, at present, China's countryside generally lacks the supply capacity for such demands. Therefore, upgrading the new supply capacity of the countryside and promoting it to join the cycle of the big market of the urban economy has become an important point to foster the integration of rural industries, cultivate new forms of business, and enrich multifunctional agriculture, so as to make the revitalization of rural industries become a new form of business that transcends the primary industry itself, and fosters the integration of the secondary and tertiary industries. (Ximing Yin et al., 2022)

High-quality economic development in rural areas and the realization of a sound ecological environment are at the core of the profound transformation and development of the countryside. However, the scale of construction land in many of China's mega-cities is approaching its development ceiling, while the problem of "rural diseases", characterized by inefficient and scattered land use, population loss and environmental degradation, remains unresolved. In order to cope with the increasingly severe situation on land resources, population and the environment, Shanghai established a "five-quantity control" policy in 2014, which includes "locking the total amount of land, decreasing the incremental amount, optimizing the stock, increasing the efficiency of the flow of land and improving the quality of the land", which kicked off the prelude to the reduction of the amount of inefficient construction land in the city. On the one hand, reduction demolished and reclaimed low utility sites, while land targets freed up for use in areas that met planning requirements, achieving the goal of no increase in the total amount of industrial land, optimized layout and more intensive land use, creating conditions for the introduction of strategic emerging industry projects in the planned industrial zones. On the other hand, the reduction is oriented to ecological construction, forcing the exit of polluting enterprises, restoring the production function of the countryside, improving the quality of the rural environment, and preserving the rural landscape in accordance with the principle of "agriculture for agriculture, forestry for forestry" (Tao Zhou et al., 2023, Yang Zhou et al., 2020). However, in the strategic deployment of low utility land reduction, due to the scattered distribution of rural collective economy and various forms of organization, it is necessary to combine the specific reality to develop a collective economic model suitable for itself, and the report of the 17th CPC National Congress also puts forward the policy recommendation of "exploring effective forms of realization of the collective economy, developing farmers' professional cooperatives, and supporting the development of industrialized agricultural management and leading enterprises". Therefore, since 2013, the development of the village collective economy has begun to focus on playing the dual role of the market and the government, and has thus entered a new stage of government-promoted development of the village collective economy (Yurui Li et al, 2014). In terms of the agricultural collective economy, while adhering to the fundamental position of family operation in agriculture, the government has innovated agricultural management methods and promoted the joint development of family operation, collective operation, cooperative operation and enterprise operation. At the same time, the Government has actively promoted reform of the collective property rights system, providing conditions for the diversified, institutionalized and standardized development of the rural collective economy. With the joint efforts of all parties, the bottom-up revitalization of collective land and the consolidation of homesteads have eased the pressure of scarce land resources, putting the countryside in a state of constant transformation and development.

2. Literature review

In response to the current research, there are many factors affecting the revitalization of rural industries, including taxation, circulation in digitalized form, cross-location migration of labor,
resource allocation logic (RAL), and the relationship between factor flows. Circulation in digitalized form can promote technological fruition, increase rural entrepreneurial activity, enhance marketization, help attract investment, and achieve rural industrial revitalization (Yilan Wang et al., 2023). Cross-location labor migration significantly promotes the revitalization of domestic rural industries through three paths: boosting technological innovation inputs, facilitating technological innovation spillovers, and reinforcing human capital agglomeration. (Yongchao Zhang et al., 2023) Although the productive service industry cannot achieve the purpose of empowering the revitalization of rural industries through a single service, it can play a role in the form of grouping, besides, agricultural machinery, science and technology, and information services are the core conditions for empowering the revitalization of rural industries (Xiance Sang et al., 2023). On the logic of resource allocation, exploring autonomous governance and constructing specialized teams that can serve farmers' interests, realizing the promotion of rural industrial revitalization from exogenous drive to endogenous drive (Jieming Zhu et al., 2022). In addition, urbanization and industrial revitalization are synergistic, and a positive interaction between the two can be achieved through the integration of population, land and capital. (Yuheng Li et al., 2018), but the incompleteness of agreement caused by unreasonable government-enterprise relationship generates a large amount of residual rights, and its irrational allocation will also affect rural industrial development (Yongchao Zhang et al., 2023). The solidification of urban-rural dual structure and power relations will exacerbate the loss of attention in the countryside, and the concentration of potential resource layout on residual rights is also the crux of the countryside's weakness in absorbing factors. The excessive intervention of the government as a sectional subject and the insufficient participation of other subjects also cause the homogeneous development of rural industrial revitalization (Di Guo et al., 2022).

The policy of low utility land reduction has many influences. In the process of reduction, the index is an important carrier for realizing industrial location transfer, which can be used to attract new high-quality enterprises to accumulate in industrial parks to improve the efficiency of land use per unit area (Zhengfeng Zhang et al., 2019), and at the same time, offsite relocation and reserving areas for reduction can be used to promote the construction of the basic farmland area by reclaiming and returning to the land (Yahua Wang et al., 2022). Rigid policies, incentives and support policies for inefficient industrial land reduction promote collective action, and the results present a coordination of urban high-quality development and resource reallocation, however, this policy also faces the long-term balancing problem of conflicting ecological protection and economic development. (Yaofu Huang et al., 2020). The positive effect of industrial land use reduction on the growth of local fiscal revenues is gradually increasing, which can significantly promote high-quality economic development and thereby enhance the region's potential for future tax revenue growth (Keqiang Wang et al., 2019). However, the "top-down" authoritative governance model adopted by Shanghai is likely to lead to poor governance sustainability and neglect of social equity, and too much government intervention is likely to make it difficult to carry out projects (Xu Guo et al., 2018), which needs to be remedied by adjusting its economic model to ensure fairness and efficiency.

The combing and analysis of the existing literature found that most scholars mainly study the impact of labor migration across places, the improvement of marketization, scientific and technological information empowerment and other unilateral impacts on industrial revitalization, with less research on the synergistic consideration of multiple aspects. The literature on the impact of reduction of construction land on industrial revitalization is relatively scarce, and the systematic comparative analysis among cases is lacking. Therefore, this paper selects "Xiangyue Huating" idyllic complex in Huating Town, Jiading District, Shanghai and Yellow Peach Demonstration Area in Qingcun Town, Fengxian District, Shanghai as cases, analyzing the advanced experience and common mechanism of industrial revitalization, and illustrating the benefits of government-enterprise-farmers-collective cooperative economy. We hope to provide reference for smooth implementation of the reduction projects in other counties and provide scientific basis for the current development of rural revitalization.
Compared with previous studies, the marginal contribution of this paper is mainly reflected in the following aspects: (1) analyzing the reduction in the form of double-case synergy, and by comparing the similarities and differences among them, deriving the specific reasons for the success of the corresponding industrial revitalization and the specific application. (2) Starting from the perspective of revitalization results, analyzing whether the reduction of construction land helps to promote the construction of collective economy, thus enhancing the support for rural industrial revitalization. (3) Combining the actual cases and empirical analysis and analyzing the practical suggestions and practical requirements for industrial revitalization based on the reduction of industrial land in various districts and counties of Shanghai.

3. Case studies

3.1 Selection of cases

The "Xiangyue Huating" idyllic complex is located in Huating Town, Jiading District, Shanghai, and the yellow peach demonstration area in Qingcun Town, Fengxian District, are selected as research cases for the following reasons: First, the cases are typical. The two are based in the county, with good natural endowment. As of 2022, the two areas have fully realized the sustainability of industrial revitalization through a reasonable mechanism, which is in line with the research requirements of this paper. Second, the cases are generalizable. The two cases have similar mechanism and development modes, with a solid foundation and a certain universality of operation mechanism, which is of strong reference significance for rural revitalization in other regions. The third one is the availability of research materials. The team collected first-hand information on industrial revitalization in the project area, and combined it with media and interview materials to form a rich research database.

3.2 Case - "Xiangyue Huating" Idyllic Complex in Huating Town, Jiading District

3.2.1 Case Introduction

Huating Town is located in the north of Jiading District, bordering Baoshan District in the east, Liuhe River in the north and Taicang, Jiangsu Province, west of the municipal industrial zone, which is a modern agricultural highland, with a unique advantage in the development of rural resources. "Xiangyue Huating" idyllic complex is located in the north of Huating town with Shuangzhu highway on both sides, the project covers a total area of 10.63 square kilometers, reduction of construction land program implementation area is 3.18 square kilometers, of which the start-up area of 1.72 square kilometers, resettlement coordination area of 1.46 square kilometers. Through tripartite cooperation among the government, enterprises and farmers, a total investment of 1.262 billion yuan has been made to promote rural revitalization in all aspects by taking quantitative reduction, introducing agricultural science and technology, and combining with the new rural operation system. The total revenue of the three phases of the project in 2019 was 1.548 billion yuan.

3.2.2 Study on the status of agricultural and construction land

The land area of the project is 3.18 square kilometers, of which 58.2% is agricultural land, 32.5% is construction land, and the remaining is unused land, mainly river and lake. There were fewer idle land resources in the project area, but the utilization efficiency of land resources was not high. Agriculture is self-produced and self-marketed, industrial power is insufficient, commercial outward expansion is weak, and farmers' income is limited. However, the region had strong potential for resource endowment development, and there was an urgent need to redistribute land resources, expand agriculture, integrate industry, open up business, and complete industrial transformation in an orderly manner, so as to get rid of the original state of disorganized distribution of land resources, low production capacity, and high consumption.

(1) Agricultural land

The project area has a variety of planting types and rich business entities. The total area of current agricultural land is about 2,700 acres, with 2,200 acres of cultivated land. The area of permanent basic
farmland was 2100 acres, issued A class of permanent basic farmland area of 1154 acres, and designated 127 acres of "three zones" for agriculture. Farmland resource endowment are in good conditions, and agricultural industrialization is in the initial stage, a research base for the cantaloupe industry has been held, as well as organic fruits and vegetables, grape cultivation of special varieties; farmland landscape substrate is good, rich in texture and structure. The project area has initially constructed multi-functional infrastructure for agriculture, with a rich variety of planting types and a better foundation for specialty agricultural planting, involving rice, vegetables, seedlings, cantaloupe, pears, peaches, grapes, loquats and other types. With more advanced agricultural development technology, it has realized multi-types of farmland planting such as dry land, irrigated paddy fields, facility vegetable gardens, etc., with rich utilization layers. The project area is rich in agricultural business subjects, including cooperatives, agricultural fields, private enterprises, individual contractors and other 29 business subjects, but the division of rights and responsibilities needs to be further clarified.

Farmland in the project area is still mainly focused on production functions, with low supply levels, short product chains, low added value of agricultural products and low comprehensive benefits. The project area lacks a characteristic agricultural product chain covering the three major industries on a large scale, and the production capacity has not been conveyed in an all-round way, which makes the resources unreasonably tilted and wasted. Most of the farmers in the project area do not have a high level of education attainment and do not have agricultural technology reserves, and their main source of income is the contracting of agricultural land and compensation payments for land acquisition; the income from land cultivation is meager and has stagnated for many years. To this end, the region has taken certain measures, such as helping farmers move towards suitable employment positions to achieve income growth through idle resource development and labor skills training, while avoiding the loss and waste of human resources in the project area. The quality of farmland infrastructure is mixed, with varying degrees of maintenance. In some areas, late stage management and maintenance are poor, and drainage structures and other structures are severely damaged, hindering the development of some agricultural industries. Using the optimal allocation of land resources to expand primary, secondary and tertiary industries still requires land construction as the focus of development, cultivating high-quality human resources and filling technical gaps. It will help idle farmers to be re-employed nearby, extend the industrial chain with the effective use of rural land, especially the reduction of construction land, as the core, and promote rural revitalization.

(2) Land for construction
First, the number of industrial land in the project area is large, small in scale and chaotic in layout. It mainly includes land for industrial, mining and warehousing, and land for public utilities. Those types of land occupies a large scale, with relatively limited economic output, low production capacity and high pollution characteristics, and it is difficult to effectively expand the scale of agricultural industrialization. In addition, insufficient endowments of labor, capital, and technology have led to the limited scale of high-quality industrial enterprises. Secondly, the distribution of residential land is dispersed, and it is distributed in the project area in the form of dots in villages, which are mainly rural owner-occupied houses, with varying old and new buildings, and the spatial layout needs to be further optimized, which affects the efficiency of the overall planning of the project area. Therefore, it is necessary to follow the principle of land-saving construction, control the land area and building area, optimize the spatial layout structure of residential land, and ensure high-quality living conditions for farmers while promoting the economical and intensive use of construction land.

3.2.3 Operational mechanism of reduction of construction land for rural revitalization
The first step is the reduction of construction land. The reduction of construction land is used to revitalize land resources, revitalize collective land and alleviate the pressure of scarce land, thus leading to changes in the economic form and spatial structure of the project area. This area will carry out inefficient construction land for industrial enterprises and residential land. Low-capacity, highly polluting enterprises is banned, and some of the plants are merged and centrally resettled. With regard
to the consolidation and resettlement of residential land, it is proposed to form a gradual process of "finishing", "reserve" and "retention" in terms of time sequence. The start-up area and resettlement area involves a total of 491 households to be relocated and merged in Lianyi Village. The construction land index used for the centralized residential land use is measured using a point land supply method based on clusters, and the average household residential land use area is about 0.43 acres/household (290 square meters/household). In the village planning, the area of the centralized residential land drop plot is 25.58 hectares, and 672 villagers need a total area of about 19.26 hectares of residential land, which can save 6.32 hectares of land, which can be used as a village reserve land and can be activated as a construction land in the future. This expands the space for agricultural development so that the project area can optimize factor allocation and enhance agricultural production efficiency within a larger decision-making space, while also increasing the demand of large-scale farmers for modern production factors such as good seeds, machinery and technology.

The project area divides agricultural production into three slices and three districts. The northern featured agricultural area is based on featured tourism, including Liu Island, Huating family and other featured agricultural agglomerations; the central food production area is based on deep processing of agricultural products, and seeking to create agricultural bases for agricultural science and technology promotion, new variety cultivation, etc.; the southern high-quality fruit and forest planting demonstration area mainly introduces, absorbs, and researches and develops new varieties. The original small farm economy of "relying on the god to eat" has been transformed into a modern countryside with agriculture as the base, and resource flow and intensification brought about by land reduction planning. It solves the embarrassing situation of having limited land and abundant resources, needing to develop but having nowhere to empower them.

The second step is to centralize the distribution of construction and extend the industrial chain. The project area mainly takes forest and fruit plantation and agriculture as the leading industries, extends the industrial chain with the help of resource advantages, and promotes the integrated development of primary, secondary and tertiary industries. At the same time, based on the products of agriculture, forestry and fruit industry to build products deep processing and related crafts production industry; making full use of rural resources to research and develop local characteristics of cultural and creative products, through the Internet digital dissemination of diversion, to drive the foreign crowd to consume. For the primary industry, agricultural technology largely determines the upgrading and optimization of the structure of agricultural industry, when the project area realizes market demand-oriented technology research and development, the scientific and technological achievements can be used to solve the realistic problems of low labor skills and high capital costs in the development of agricultural industry, bringing practical economic benefits for enterprises, new agricultural management subjects and farmers. For the secondary and tertiary industries, the development of the project area not only adheres to the principle of "planting when it is appropriate to plant, fruiting when it is appropriate to fruit, living when it is appropriate to live, and business when it is appropriate to business", but also strengthens the integration and extension of the agricultural industry chain through large-scale and specialized production, and enhances the agricultural value chain. In addition, its internal composition of a common risk-bearing community of interest, not only caters to the full range of consumer demand, but is also able to internalize the original outflow of the added value of the product and jobs. Internalizing processing, consumption, circulation and recycling within the project area have largely solved the problems of insufficient endogenous power and high external dependence of rural industrial development under the decentralized small farm model.

The third step is to adopt the mode of government-enterprise-farmer cooperation, with social capital participation and multi-party enterprise cooperation. The project area adopts the organizational form of government-enterprise-farmers cooperation, clarifying the contents of the project company, payment and progress of reduction costs, preferential tax policies, agricultural land leasing, the scale of construction land, etc., and forming the basic cooperation mechanism of "unified allocation of land, unified financing, unified construction, unified resettlement allocation and unified
deployment of resources". The government, in the dual capacity of industrial project contractor and administrator, plays a leading and supervisory role in the project, which makes enterprises participate in the industrial revitalization project extensively. Inter-enterprise cooperation starts from the framework of "1+1+X" (functional state-owned enterprise + leading private enterprise + multiple professional teams), and focuses on the business model involved in the project's primary development of land, secondary property development, development of industrial projects, and integration of the industrial chain, and making full use of the enterprise's functions and its own advantages to play its active role. Functional enterprises are committed to implementing land management and pre-project resource sorting, policy guidance and creating construction conditions; leading private enterprises give full play to their experience in product creation and operation, and do a good job in program deepening, construction implementation, project management and life operation; and a number of professional teams are responsible for pre-project protection and follow-up operation in the process. In addition, the enterprise also actively connects with the farmers to guarantee the property right, and land contract management right of the farmers after the consolidation of the residence base, to ensure that the farmers enjoy the rights of members of the collective economic organization, and the farmers, as the owners of the land and houses and the working labor force, obtain the contracted income and employment income at the same time, and cooperate with the enterprise in the project area to achieve the purpose of increasing the income.

In addition, the project area has said goodbye to the self-production and self-marketing model that was originally operated by farmers, with no external expansion and no internal expansion, broken the constraints of the family's own labor force in terms of labor inputs, and promoted the investment in human capital under the flexible transformation of self-employment and hired labor, helping enterprises to integrate technology, management and other modern factors of production to work together in the process of agricultural production. The government, as the project contractor, has built a stable bridge for the layout of enterprises, established a long-term benefit coordination mechanism, optimized the benefit linkage mechanism between individual enterprises and business subjects and farmers, reduced the management cost, system cost and performance cost of cooperative organizations, and guided enterprises and other business subjects and farmers to shift from loose cooperation to a close community of interests. The project area regularly tracks, updates and archives the interest linkage between new agricultural management entities, especially leading enterprises and farmers, have compensated for the risks associated with large investment in agricultural production, long return cycles and unstable production results through a series of subsidy policies, in order to establish a stable and mutually beneficial coordination relationship. In the leading enterprise-driven agricultural industry chain organization, due to the large gap between the market power of farmers and enterprises, government outsourcing and multi-enterprise joint docking weakened farmers may be in a weak position, the depth of the multi-functional enterprise advantages. It also makes them promote and restrain each other, forming a two-fold barrier from the government to the enterprises, forming a contractual and institutionalized community of interest cooperation mechanism to safeguard the interests of farmers, better incentivize farmers to make long-term investment in agriculture, and achieve the purpose of improving the structure of factor allocation and channel stability.
3.3 Case II - Yellow Peach Demonstration Area in Qingcun Town, Fengxian District

3.3.1 Case Introduction

Fengxian District is located in the southeast part of Shanghai, abundant rainfall and light, and favorable climate conditions. Fengxian abound in yellow peaches, was fragrant and with other characteristics, and has a high nutritional value and medicinal value. Since the 1980s, Fengxian District opened a large area of yellow peach planting, after 2000, Fengxian yellow peach planting area once reached more than 12,000 acres. However, with the "old land, old trees, and old people" three old problems, Fengxian yellow peach quality decreased year after year, urgently need to embark on the road of revitalization. The yellow peach demonstration area in Qingcun Town, Fengxian District will be analyzed here as a typical case.

3.3.2 Analysis of the current situation

(1) Deterioration of land quality - "old land"

The long history of monoculture land management in the area has resulted in shallow tillage and poor water and fertilizer retention capacity. With the increase of planting years, the deterioration of root diseases leads to the decrease of yellow peach yield and quality. At the same time, due to farmers' poor awareness of land conservation and insufficient knowledge reserves, they only use chemical...
fertilizers without paying attention to the biological characteristics of the soil, resulting in excessive fertilizer residues remaining in the surface layer of the land, destroying the chemical properties of the soil and the biodiversity of the land, and resulting in soil crusting and declining fertility. The increased use of chemical fertilizers resulted in the soft and juicy yellow peaches becoming hard, sour, large and tasteless, seriously affecting the yield and quality of yellow peaches in the region.

(2) Reduced yields due to improper care of yellow peach trees - "tree old age"

Most of the peach tree's golden age has passed, production began to go downhill, many farmers lack of rotation of trees to ensure the quality of consciousness, and even some trees due to aging, farmers have the intention to do nothing, so that many of the land is abandoned. In order to increase production, Fengxian yellow peach initially used "intensive" planting, however, due to the dwarf varieties, high growth potential, high production, intensive planting makes it impossible to fully ventilate and let in light. Problems with inter-tree crossing between branches are severe, shaded leaves are wilting and yellowing, and the orchard is depressed, low yielding, difficult to manage and unable to meet production requirements.

(3) Shortage of labor and aging - "old people"

Fruit farmers in the region have lower skill levels, are older, and their children generally leave the countryside with the attitude of "not wanting to grow" or "not wanting to grow". In the case of declining quality of varieties, lack of technical support, relatively low income, fruit farmers are also willing to plant, but not planted, or even planted the phenomenon. Wufang Village has a household population of more than 1,300, with only 600 permanent residents, serious aging, high vacancy rate of houses, and a large amount of idle land have become serious problems. As the interviewee said, "Young people do not want to come, the elderly cannot plant", there is no one to follow the development of the yellow peach industry in the region is facing a major problem.

3.3.3 Operational mechanism of construction land reduction for rural revitalization

The first step is to promote a change in the business model by reducing the amount of land used for construction. The implementation of land scale operation is the key to improve production efficiency. Qingcun Town is committed to the transfer of forest land for yellow peach cultivation to realize the scale effect, while introducing professional agribusinesses and scientific research institutions to re-breed. On the basis of respecting the wishes of farmers, a total area of 83 acres of residential land will be used as a resettlement home base for the centralized resettlement of farmers. The mode of operation is changed from small farmers' individual operation to cooperative group mode, and the main business subject who masters modern agricultural planting technology and marketing channels is responsible for the main operation and sales of yellow peaches. Scattered land is handed over to stronger leading enterprises for operation, and farmers get land transfer fee, which is raised from 1,200 yuan/ acres to 2,000 yuan/ acres. The surplus agricultural laborers with insufficient knowledge reserve do not need to plant yellow peaches; they can be employed in the leading enterprises or cooperatives to complete the internal digestion of the labor force, and are preferentially employed in catering, tourism, service and other positions to obtain certain income. Through the transfer of land to complete the introduction of capital, to ensure that people do their best, through the adjustment, merger, integration, to create leading enterprise cooperatives and collective organizations, establishing "rent + dividends + salary" of income generation.

The second step is industrial revitalization. First, use digital agricultural technology to optimize the layout of varieties. Yellow peach is rooted in Fengxian District and has the regional advantages of the excellent varieties; Fengxian District is the key to industrial revitalization. After facing the dilemma of "old people", "old trees" and "old land", Fengxian District has updated its technology, decentralized its policies, and focused on reforming its pain points. 2019, Qingcun Town, Municipal Agricultural Science Institute, and Fengxian District Agricultural Technology and Research Institute have been working together to optimize the layout of varieties. Academy of Agricultural Sciences, Fengxian District Agricultural Technology Extension Center and six yellow peach demonstration bases and other joint R&D centers to carry out research on exploring new varieties, new cultivation modes and restoring and enhancing soil fertility, and strive to form independent intellectual property
rights and patented products to become a national industry benchmark. The use of physical and biological means to further improve soil fertility, increase soil organic matter and biodiversity, reduce the amount of chemical fertilizers. The introduction of the Shanghai Academy of Agricultural Sciences cultivated "Jinchun", "Jinyuan", "Jinxiu" and other "Jin" series of yellow peaches. Closely rely on science and technology, the strict implementation of standardized cultivation, so that its ecological and geographical advantages into industrial strength. 2022, Fengxian Qingcun Town, "Fengxian yellow peach" planting area of nearly 5,400 acres, the output of last year's yield increased by 10% to 15%, acres average 2,500 pounds to 3,000 pounds, the total output is estimated to be more than 6,800 tons.

On the other hand, improve the yellow peach and other agricultural products marketing system. The establishment of nearly 50 "agricultural super docking" platform, and actively promote cooperation between cooperatives and supermarket operators win-win situation, efficiently solve the problem of yellow peach storage and preservation of freshness and capital chain. At the same time, the organization and guide farmers online marketing, with the help of micro-merchant platform, Taobao online store, Suning Ebay and other branded e-commerce resources to enter the "Internet +" agriculture, comprehensively expanding the sales channels of agricultural products, mainly yellow peaches. At the same time, the project actively implements the effective convergence of agricultural products and tourism, attracting the general public of all ages, the influence of radiation have scattered in neighboring towns.

Thirdly, to revitalize the yellow peach and to promote the construction of integrated industries, Fengxian Qingcun Town focus on promoting 33,000 acres of Oriental peach comprehensive industrial area construction, the area to Wu Fang village as the core, covering 11 administrative villages. To "yellow peach +" industry as an opportunity, the depth of integration of primary, secondary and tertiary industries to promote the transformation and upgrading of agriculture. Qingcun Town put "Fengxian yellow peach" geographical indications for pledge financing, successfully raised 50 million low-interest loans issued to the major cooperatives, and open up market sales and marketing channels to extend the yellow peach industry chain. The project area has set up a total of 29 projects, including public welfare projects, business agricultural projects, agricultural planting projects and leisure agriculture projects, to realize the agricultural products from the field to the factory and then to the table of the whole industry chain construction, to attract enterprises and social capital to invest.
4. Lessons Learned from Reduction of Construction Land to Help Rural Revitalization

Through comparative analysis, commonalities between the two cases and their solutions for rural revitalization can be identified. First, the land and human resources of the two cases are limited and underutilized, but both cases can be empowered to revitalize the countryside through the reduction of construction land, forcing the improvement of the structure of land and human resources, and realizing long-term transformation of the industrial structure and economic growth. Secondly, the original business model of the two places is not in line with the development requirements, and is still a small-farm economy model, with great difficulties in development and serious limitations in development potential; however, through the implementation of the "government + enterprise + farmers" tripartite cooperation mechanism can effectively realize the mutual constraints of interests and common income, and through their own efforts and the help of relevant departments, they can get out of the agricultural development dilemma and realize rural revitalization. Finally, the two regions are facing the problem of single industrial structure, local farmers have weak technical knowledge, the industry chain is thin and easy to break, once the problem is difficult to make up for, the pillar is fragile; however, the two regions through the introduction of new varieties, varieties and production parks centralized construction, outward docking large market demand, inward consolidation of their own value chain, internal and external linkage to expand the market, and truly realize the revitalization of the industry. The details are as follows.

Table 1 Development bottlenecks, empowerment approaches and rural revitalization outcomes in different cases

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Figure 2 Operational mechanisms in Case I
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<td>1. Dividing agricultural production into three pieces and three districts for spatial guidance and forming a centralized distribution in different zones.</td>
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<tr>
<td>2. Farmers work in the farm service industry, with the original positions being operated on a large scale by highly skilled personnel, replacing factor inputs with technology.</td>
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</tbody>
</table>

| case II |
| 1. Reclaiming scattered and inefficient construction land, restoring it to agricultural or ecological land, modernizing traditional peach orchards and implementing large-scale land management. |
| 2. Fragmented land is handed over to enterprises, and the land transfer fee is raised from RMB 1,200/ acres to RMB 2,000/ acres. Surplus laborers are employed in leading enterprises or cooperatives, such as catering, tourism and services. |

<table>
<thead>
<tr>
<th>The business model is not in line with development requirements and remains a smallholder economy model</th>
<th>Carrying out the tripartite cooperation of &quot;Government+ Enterprise+ Farmer&quot; to increase income together</th>
<th>case I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash flow from the sale of goods for four years (2019-2022) totaled $1,548,673,100, and the project's internal rate of return was 7%.</td>
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| case II |
| 1. The project attracted social capital investment of 10.85 million yuan in 2021, the core area formed a reception capacity of more than 200,000 tourists per year. |
| 2. Through the whole village system, Liyao Village has introduced the operation platform of "CYFH" under CYTS Group, transferring 107 households’ houses to create a leisure resort and a base for cultural and tourism creation. |

<table>
<thead>
<tr>
<th>Unique industrial structure and technological constraints</th>
<th>Introducing new varieties, docking the big market, and extending the industrial chain</th>
<th>case I</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Forest and fruit planting industry use cantaloupe as the advantage of the core industry, build deep processing production and related crafts production industry.</td>
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<tr>
<td>2. Introducing supporting industries such as culture and education, tourism and leisure, theme amusement, eco-tourism, catering and lodging, building idyllic leisure farms, and constructing derivative industries such as creative agriculture.</td>
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</tbody>
</table>
This project analyzes the operation mechanism of rural revitalization through construction land reduction in different cases, and systematically summarizes the overall framework of "construction land reduction – government, enterprise, collective, and farmers cooperative economy - rural revitalization", with a view to providing lessons for other regions to realize rural revitalization. The overall framework has been systematically summarized, with a view to providing experience for the realization of rural revitalization in other regions.

(1) Reduction of construction land. The quantification of construction land in each case has achieved three major integrations: first, vacating inefficient industrial land and residential land, and organizing and reclaiming them, and rearranging them to form the scale of agricultural blocks, so as to achieve land integration. Optimizing the original planning, it seeks to form a standardized and unified agricultural operation area. Secondly, it will limit the allocation of rural labor to the service industry, and introduce counterparts from the outside to optimize the structure of labor factors. Lay a good foundation for food production and deep processing of products, and provide a reliable talent pool for realizing the promotion of agricultural science and technology and building agricultural bases. Thirdly, take the reduction as an opportunity to optimize the industrial structure, introduce enterprises with high registered capital, high operating income and high tax payment to invest and operate in agriculture and realize capital integration. With agriculture as the basic industry of the production chain, decentralized production is integrated into a centrally managed modern agricultural production park. After the integration of elements, the project area realizes the optimal allocation of labor and land resources internally, and opens the door externally, laying the foundation for the realization of diversified industrial integration.
(2) The "government, enterprise, cluster and farmers" cooperative economy promotes rural revitalization. Many villages in China have relied on local characteristics and high-quality resources to create industrial clusters with internal and external links. Compared with cities, although they have advantages in natural resources, there are obvious shortcomings in technology research and development, brand building and integrated development of the industries, etc. It is difficult to revitalize the regional economy by unilateral force due to different resource needs and interest orientations of enterprises, farmers, scientific research institutes and service organizations. And Cases I and II provide a good model for integrating all forces to participate in rural revitalization. First, the social capital and the collective economic organization follow the relevant provisions of the company law and distribute profits according to the principles of equal shares and equal rights and risk sharing. Secondly, farmers use rural land and resettlement houses to invest in village collective companies and rural operation platforms, and receive regular dividends; at the same time, they can realize re-employment and receive labor remuneration as employees of enterprises related to agricultural products and their derivatives; and farmers can receive compensatory rents for their land and ground attachments. That is to say, the farmers get share capital, salary and rent at the same time. Thirdly, based on the government's policy support, the enterprise connects with the cooperative, realizes dividends and delivers rents mainly through the industrial income, tourism income and self-management income of the derivative industry. Fourth is the government-led outsourcing, access to tax revenue, and the positive externalities of rural revitalization to improve the regional influence, radiation. It can be seen that the linkage of interests brings about increased income and additional responsibilities for each subject of interest, which guarantees the feasibility and durability of cooperation.

The model of "Government + Enterprise + Village Collective + Farmers" has formed a very good interest constraint, which limits the power of enterprises and government monopoly to a certain
extent, and the joint docking between the government and multiple enterprises inhibits enterprises from utilizing the specialized assets of farmers for investment, as well as the possibility of suppressing the price of agricultural products, and avoids enterprises relying on their market power to exert pressure on farmers to make profits. At the same time, multiple enterprises work together, each playing its own role, each taking what it needs, truly complementing, promoting and restraining each other. For example, in the "1+1+x" model of the "Xiangyue Huating" project area, functional state-owned enterprises implement policy measures such as land management and resource sorting, and clarify the construction objectives and development schedule; leading private enterprises carry out the project construction with the help of their experience in product operation and program deepening; professional teams are responsible for the construction of the project. The leading private enterprises use their experience in product operation and program deepening to carry out project construction; the professional team is responsible for control and implementation, and provides support for solving bottlenecks in specific projects; the farmers are linked in the form of village collective organizations to protect their rights and interests; and the dynamic capacity of village collectives in coordinating and organizing helps to reduce the transaction costs and risks of the enterprises. Each of them has its own role to play, and at the same time, they can also achieve mutual support in terms of technology and mutual constraints in terms of interests, so that all parties can make joint efforts to promote rural revitalization.

![Figure 4 Diagram of the chain of interest](image-url)
5. Conclusions and policy recommendations

Reduction of construction land is an inevitable stage of regional economic development, through the analysis of vertical comparison of the two cases, this paper mainly draws the following conclusions: (1) Reduction of construction land has a driving effect on the revitalization of rural industries, mainly in the improvement of the land use efficiency and matching the demand for planning and construction. (2) In the mode of industrial revitalization, the quantitative reduction policy builds a new rural framework of "government + enterprise + village collective + farmers", which greatly improves the vitality of the collective economy. (3) Through the comparison of the two cases, it can be found that in industrial revitalization, the core of multi-sectoral synergy is the distribution of power structure, the implementation of the bottom power, the initiative and the beneficiaries to the farmers, in order to achieve the effective convergence of interests of multiple rings. Based on the findings of this paper, the following policy recommendations are obtained:

First, emphasis should be placed on planning guidance for reduction and exploration of spatial incentives and compensation mechanisms. The lack of a market-based trading mechanism for indicators and a land development rights transfer system will lead to a widening of the inter-town gap within the region, so the planning guidance for quantitative reduction should be based on the carrying capacity of resources and the environment as well as reasonable development goals, and put an end to the "one-size-fits-all" approach, and carry out a comprehensive evaluation of land use efficiency, development stage, and the degree of dependence on land, and fully study the feasibility of reducing the number of land parcels (Qiqi Yin et al., 2022). Planning, as an institutional design for coordinating land property rights, also needs to provide greater guidance on public will, raise subsidy standards, and appropriately reduce the weight of economic indicators in performance evaluation. Compensation for demolition and expropriation of land for reconstruction and residential land should be strengthened, public participation and enthusiasm should be increased, and more social forces should be introduced to promote quantitative reduction.

Secondly, the government should play a guiding role and improve the benefit linkage and coordination mechanism. Local governments should actively play a guiding and service function, in the process of promoting rural industrial revitalization according to the local characteristics of the industrial configuration and resource endowment, investment, to attract social capital to the secondary
and tertiary industries, to ensure that the industrial chain is extended with an inexhaustible source of power. At the same time, the government should give green enterprises a greater tax relief and energy use concessions, in order to reduce the operating pressure of the initial stage of business operations, and in the later stage of benefit distribution, the government should also play its credibility, and become a strong credit guarantee in the linkage of interests.

References

[1] Shuaishuai Fan, Meihui Jiang, Daoyuan Sun, Shunkai Zhang, Does financial development matter the accomplishment of rural revitalization? Evidence from China,


[3] Qi Qi Yin, Xueyan Sui, Bei Ye, Yujie Zhou, Chengqiang Li, Mengmeng Zou, Shenglu Zhou, What role does land consolidation play in the multi-dimensional rural revitalization in China? A research synthesis, Land Use Policy, Volume 120, 2022, 106261, ISSN 0264-8377

[4] Tao Zhou, Guanghui Jiang, Wenqiu Ma, Ruijuan Zhang, Yong Yang, Yingying Tian, Qinglei Zhao, Revitalization of idle rural residential land: Coordinating the potential supply for land consolidation with the demand for rural revitalization, Habitat International, Volume 138, 2023, 102867, ISSN 0197-3975


[7] Ximing Yin, Jin Chen, Jizhen Li, Rural innovation system: Revitalize the countryside for a sustainable development, Journal of Rural Studies, Volume 93, 2022, Pages 471-478, ISSN 0743-0167

[8] Yaofu Huang, Eddie C.M. Hui, Jinmiao Zhou, Wei Lang, Tingting Chen, Xu Li, Rural Revitalization in China: Land-Use Optimization through the Practice of Place-making, Land Use Policy, Volume 97, 2020, 104788, ISSN 0264-8377

[9] Yurui Li, Yansui Liu, Hualou Long, Weiguo Cui, Community-based rural residential land consolidation and allocation can help to revitalize hollowed villages in traditional agricultural areas of China: Evidence from Dancheng County, Henan Province, Land Use Policy, Volume 39, 2014, Pages 188-198, ISSN 0264-8377

[10] Zhengfeng Zhang, Jing Liu, Xiaokun Gu, Reduction of industrial land beyond Urban Development Boundary in Shanghai: Differences in policy responses and impact on towns and villages, Land Use Policy, Volume 82, 2019, Pages 620-630, ISSN 0264-8377


[12] Qianyu Zhao, Helen X.H. Bao, Zhanlu Zhang, Off-farm employment and agricultural land use efficiency in rural China, Land Use Policy, Volume 101, 2021, 105097, ISSN 0264-8377

[13] Qianyu Zhao, Helen X.H. Bao, Zhanlu Zhang, Off-farm employment and agricultural land use efficiency in rural China, Land Use Policy, Volume 101, 2021, 105097, ISSN 0264-8377

[14] Yilan Wang, Zizhan Wang, Jing Shuai, Chuanmin Shuai, Can digitalization alleviate multidimensional energy poverty in rural China? Designing a policy framework for achieving the sustainable development goals, Sustainable Production and Consumption, Volume 39, 2023, Pages 466-479, ISSN 2352-5509


[16] Xiance Sang, Xiaofeng Luo, Amar Razzaq, Yanzhong Huang, Sahar Erfanian, Can agricultural mechanization services narrow the income gap in rural China?, HelioN, Volume 9, Issue 2, 2023, e13367, ISSN 2405-8440

[17] Xijing Zhu, Yan Guo, Social justice in spatial change: transition from autonomous rural development to integrated urbanization in China, Cities, Volume 122, 2022, 103539, ISSN 0264-2751


[21] Yahua Wang, Huan Wang, Effects of farmland use rights transfer on collective action in the commons: Evidence from rural China. Land Use Policy, Volume 120, 2022, 106262, ISSN 0264-8377


[27] Qianxi Wang, Xiaoling Zhang, Three rights separation: China’s proposed rural land rights reform and four types of local trials, Land Use Policy, Volume 63, 2017, Pages 111-121, ISSN 0264-8377