

Status and Enlightenment of Social Capitals' Participation in the Comprehensive Land Consolidation and Rehabilitation at The Free Trade Port of Hainan

Jian Li¹, Na Tang² & Pengcheng Huang³

¹ College of Finance and Economics, Hainan Vocational University of Science and Technology, Haikou, China

² School of Financial Management, Hainan College of Economics and Business, Haikou, China

³ Deloitte Touche Tohmatsu, Guangzhou, China

Correspondence: Na Tang, School of Financial Management, Hainan College of Economics and Business, Haikou, China. E-mail: tangna2024/at/126.com

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Abstract

Implementing pilot projects for comprehensive land consolidation and rehabilitation is a major initiative to follow The Thought on Ecological Civilization and the instructions of General Secretary Xi Jinping on Zhejiang's "Thousands of Village Demonstration and myriad of Villages Remediation" program. It is also a key project to support the construction of Hainan Free Trade Port and facilitate the implementation of the rural revitalization strategy. From the current situation, land consolidation mainly relies on government-allocated special funds and bank loan. Against the backdrop of deepening reforms of investing and financing and land comprehensive consolidation encompassing all regions and factors, the contradiction between insufficient capital from government-allocated funds and increasing tasks of land comprehensive consolidation has become increasingly prominent. Bank credit funding tends to give rise to the hidden debt of government, leading it urgent to expand and improve diversified funding mechanisms to ensure the effectiveness of the effort for land comprehensive consolidation. This article is based on the status of comprehensive land consolidation in Hainan Free Trade Port, combined with the background of rural revitalization and urban-rural integrated development. It summarizes the modes of social capital participation in comprehensive land consolidation, analyzes the existing difficulties, and proposes corresponding countermeasures and suggestions.

Keywords: Hainan Free Trade Port, social capital, comprehensive land consolidation and rehabilitation

1. Introduction

1.1 the Requirement of High-Quality Development of Hainan, and Support of Establishment of Hainan Free Trade Port

In China, comprehensive land consolidation across the board is an improvement of natural resource application with the main tasks of land consolidation of agriculture and construction, rural ecological protection and restoration, as well as rural historical and cultural preservation. It is also crucial in serving the national strategy of rural revitalization. Since "the reform and opening-up", China's industrialization process has grown exponentially, driving economic development while also leading to excessive consumption of resources. Taking land resources as an example, in the early stages of the reform and opening-up, various regulations and management systems were flawed, lacking guidance for enterprises. Moreover, due to the disorderly nature of market development, conflicts occurred between land use and industrial planning and economic development, resulting in the wastage of various natural resources and the net loss of farmland in terms of the environment. Therefore, in 2018, China initiated comprehensive land consolidation projects across the country to address the shortcomings of traditional land management. By the end of 2023, a total of 448.8 billion Yuan(C.N.Y) had been invested in 1,304 projects nationwide, with a comprehensive consolidation area of 3.78 million Mu(chinese acreage) completed, and 470,000 Mu(chinese acreage) of cultivated land addition, 120,000 Mu(chinese acreage) of construction land deduction. A series of China's land comprehensive consolidation experiences that are promotable and replicable have been formed.

The total land area of Hainan Province is 3.5187 million hectares, accounting for 42.5% of the country's tropical land. Among it, approximately 3.3136 million hectares of land have been developed and utilized, representing a

significant proportion of the province's total account. Hainan is abundant in natural resources and boasts a beautiful environment, with tourism and the elderly care as its main industries. In 2023, Hainan's GDP growth rate was 9.2%, 4.96% points higher than the national average. Under the Free Trade Port policy, comprehensive land consolidation can help intensify land use and optimize spatial layout to facilitate the introduction of high-tech enterprises, achieve industrial clustering effects, and high-quality economic development.

Comprehensive land consolidation is able to optimize the allocation and utilization of resources in Free Trade Port, facilitating the dynamic integration of policy promotion and industrial optimization. As the construction of the Free Trade Port progresses deeply, Hainan faces a significant shortage of land for major projects. Meanwhile, issues such as fragmented farmland, disordered land use, inefficient land utilization, and degraded ecological quality also urgently need to be addressed. Therefore, through the comprehensive land consolidation, connecting scattered farmland into contiguous areas, using agricultural and construction land intensively, improving land quality, and protecting the local environment can effectively solve problems of land shortages for projects, farmland protection, and ecological conservation.

1.2 Serve the Rural Revitalization Strategy

Compared to traditional land consolidation, comprehensive land consolidation aligns more closely with the demands of the new era and meets practical needs, playing a significant role in promoting rural revitalization and construction.

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In terms of promoting industrial reformation, idle homesteads, unused village and town land, abandoned mines, factories, and other insufficient used construction land should be managed in a coordinated way to optimize the layout of rural construction land. The conserved land space should be utilized for resettlement, integrated infrastructure, public welfare, etc. By adopting methods such as joint ventures, partnerships, and equity participation, relevant industrial projects can be made profitable, thereby enhancing the self-sustainable capacity of rural industries.

In terms of creating livable environments, efforts are focused on the protection and restoration of rural ecological environments, improving rural living conditions, and construct ecologically livable community. Agricultural ecological restoration projects are implemented to improve the quality of ecological water systems.

In terms of protect the inheriting traditional culture, emphasis is placed on the protection of local antique buildings to maintain the continuity of local culture.

1.3 Promote the Balanced Development of Cities and Counties in Hainan

As an island province, Hainan is currently in the stage of building a Free Trade Port and needs to attract a large amount of external capitals and talents. Cities such as Haikou and Sanya have received relatively greater development opportunities, and have attracted much more external capital and service providers than its at other regions. The increasing disparity in resources and attention received by various regions is bound to a consequence which uneven development occurred among cities and counties.

Refer to the economic data of China's rapidly developing Province such as Guangdong and Jiangsu, we can observe that there is an uneven regional industrial layout in Guangdong. The GDP of cities in Guangdong and Jiangsu in 2023 is as follows Table 1.

Table 1. GDP of cities in Guangdong and Jiangsu in 2023 (unit: 100 million yuan)

Rank	Cities in Guangdong	2023's GDP	Cities in Guangdong	2023's GDP
1	Shenzhen	34,606.4	Suzhou	24,653.4
2	Guangzhou	30,355.73	Nanjing	17,421.4
3	Foshan	13,276.14	Wuxi	15,486.2
4	Dongguan	11,438.13	Nantong	11,813
5	Huizhou	5,639.68	Changzhou	10,116
6	Zhuhai	4,233.22	Xuzhou	8,900
7	Jiangmen	4,022.25	Yangzhou	7,423
8	Zhanjiang	3,793.59	Yancheng	7,404

9	Zhongjiang	3,850.65	Taizhou	6,732
10	Maoming	3,987.22	Zhenjiang	5,264
11	Shantou	3,158.32	Huaian	5,015
12	Zhaoqing	2,792.51	Suqian	4,398
13	Jieyang	2,445.03	Lianyungang	4,364
14	Qingyuan	2,120.19		
15	Shaoguan	1,620.83		
16	Yangjiang	1,581.79		
17	Shanwei	1,430.84		
18	Meizhou	1,408.43		
19	Chaozhou	1,356.59		
20	Heyuan	1,348.22		
21	Yunfu	1,207.42		
	Total	135,673.18	Total	128,990

Data source: Official websites of Governments of Guangdong and Jiangsu

From Table 1: The total GDP of Guangdong Province amounts to CNY 13,567.318 billion yuan, with a gradient distribution among its cities. Shenzhen and Guangzhou, as developed cities, have both surpassed the three trillions mark in GDP. Foshan and Dongguan, as important cities in The Pearl River Delta region, have GDP totals exceeding one trillion. The GDP of cities such as Huizhou, Zhuhai, Jiangmen, Zhanjiang, Zhongshan, Maoming, and Shantou ranges between 300 billion and 600 billion CNY yuan, placing them in the second tier. In contrast, cities like Zhaoqing, Jieyang, Qingyuan, Shaoguan, Yangjiang, Shanwei, Meizhou, Chaozhou, Heyuan, and Yunfu have relatively lower GDP totals, resembling cities with developing economies. The total GDP of Jiangsu Province is close to that of Guangdong. Among them, Suzhou, Wuxi, Nanjing (the provincial capital), Nantong, and Changzhou have GDPs exceeding one trillion CNY (with Suzhou surpassing two trillion CNY). While other cities range from 400 billion to 900 billion yuan, indicating a more balanced development across the province.

Guangzhou, Shenzhen, Foshan, and Dongguan in Guangdong Province concentrate the majority of the province's financial, IT, technology, trade, and manufacturing enterprises. Other cities' industries are homogeneous, with the real estate industry accounting for a significant proportion of their local GDP. In contrast, Jiangsu has a relatively balanced industrial distribution, with a more reasonable allocation of "resources," "commerce," and "residential" corresponding to land use. From the economic development situations of various cities in Guangdong and Jiangsu provinces, it can be seen that the distribution of population is often determined by the distribution of industries. An imbalanced industrial distribution will directly lead to significant differentiation in both economy and population.

As a national Free Trade Port construction base, Hainan Province achieved GDP of 755.118 billion yuan in 2023, according to data from the National Bureau of Statistics. On a base period comparison, representing a 9.2% increase from the previous year. Among them, the GDPs of Haikou, Danzhou, and Sanya were 235.844 billion yuan, 100.284 billion yuan, and 97.134 billion yuan, respectively. The total GDP of these three cities accounted for 57.37% of it at province. In terms of population, Hainan Province had a permanent resident population of approximately 10.4321 million people at the end of 2023. Among them, Haikou City had around 3.0016 million, accounting for approximately 28.78% of the province's total; Danzhou City had 1.0156 million, accounting for about 9.73%; and Sanya City had 1.0659 million, accounting for about 10.22%. From the data, it can be observed that there is an oligarchic trend in both the economy and population among the cities in Hainan province. The uneven development among cities and counties is not conducive to the construction of Hainan Free Trade Port. Integrating the construction of Hainan Free Trade Port into comprehensive land consolidation throughout the region will help ensure reasonable resource allocation, scientific industrial distribution, narrowed urban-rural development gaps, and balanced regional development.

2. Model and Characteristics of Social Capital Participation in Comprehensive Land Consolidation in Hainan Free Trade Port

2.1 Summary of Current Pilot Projects of Comprehensive Land Consolidation in Hainan

According to public information sourced from the website of the Hainan Provincial Natural Resources and Planning Department, two departments have conscientiously implemented the spirit of the document 《Opinions of the General Office of the Hainan Provincial People's Government on Carrying Out Pilot Projects for

Comprehensive Land Consolidation Throughout the Region》, issued the document 《Announcement on the Application for Pilot Projects of Comprehensive Land Consolidation Throughout Hainan Province in 2020》, initiating the consolidation campaign across Hainan from 2020 to 2023, encompassing a total of 41 pilot projects. Among these, there were 25 items in 2020, 10 in 2021, and an additional 6 projects approved successively from 2022 to 2023. The primary objectives of these pilot projects are “land intensification”, “basic land consolidation”, and “urban-rural integrated development”, followed by “village relocation and merging”, as well as “special ecological protection”. The responsible entities are primarily local governments and Hainan Farming & Land Reclamation Investment Holding Group Co., Ltd. The eligible comprehensive land consolidation projects in Hainan are as follows Table 2.

Table 2. List of pilot projects for comprehensive land consolidation in Hainan Province

Rank	City/County (Agricultural Reclamation)	Pilot Location for Land Consolidation	Type of Consolidation
1	Haikou City	Jiazi Town, Qiongzhan District, Haikou City, Hainan Province	Land Intensification, Special Ecological Protection
2		Dongshan Town, Xiuying District, Haikou City	/
3		Dazhipo Town, Meilan District, Haikou City	/
4	Sanya City	Yazhou District, Sanya City, Hainan Province	Land Intensification, Basic Land Consolidation
5		Tianya District, Sanya City, Hainan Province	Land Intensification, Basic Land Consolidation, Urban-Rural Integration
6		Yucai Ecological Zone, Sanya City, Hainan Province	Same as above
7		Jiyang District, Sanya City, Hainan Province	Land Intensification, Urban-Rural Integration, Basic Land Consolidation, Relocation and Merging
8		Haitang District, Sanya City, Hainan Province	Land Intensification, Basic Land Consolidation, Urban-Rural Integration
9	Danzhou City	Zhonghe Town, Danzhou City, Hainan Province	Basic Land Consolidation, Special Ecological Protection
10		Heqing Town, Danzhou City	/
11	Qiongzhan County	Yinggen Town, Qiongzhan County, Hainan Province	Land Intensification, Relocation and Merging, Urban-Rural Integration
12		Hongmao Town, Qiongzhan Li and Miao Autonomous County	/
13		Limushan Town, Qiongzhan Li and Miao Autonomous County	/
14		Wanling Town, Qiongzhan Li and Miao Autonomous County	/
15	Qionghai City	Huishan Town, Qionghai City, Hainan Province	Land Intensification, Urban-Rural Integration, Special Ecological Protection, Relocation and Merging
16	Chengmai County	Yongfa Town, Chengmai County, Hainan Province	Land Intensification, Special Ecological Protection

17	Hainan Farming & Land Reclamation Investment Holding Group	Hainan Nanping Farm	Land Intensification, Relocation and Merging, Basic Land Consolidation
18		Hainan Rongguang Farm	Same as above
19		Hainan Guangba Farm	Land Intensification, Basic Land Consolidation
20		Hainan Xilian Farm	Land Intensification, Relocation and Merging, Basic Land Consolidation
21		Hainan Grass and Livestock Group	Land Intensification, Basic Land Consolidation
22		Hainan Nanjin Farm	Same as above
23		Hainan Honghua Farm	Same as above
24		Hainan Donglu Farm	Same as above
25	Lingao County	Xinying Town, Lingao County, Hainan Province	Land Intensification, Basic Land Consolidation, Special Ecological Protection
26		Huangtong Town, Lingao County	/
27		Nanbao Town, Lingao County	/
28		Dongying Town, Lingao County	/
29	Ledong County	Jianfeng Town, Ledong County, Hainan Province	Basic Land Consolidation
30	Baoting County	Liugong Township, Baoting County, Hainan Province	Land Intensification
31	Ding'an County	Longmen Town, Ding'an County, Hainan Province	Urban-Rural Integration, Basic Land Consolidation, Special Ecological Protection
32	Lingshui County	Longguang Town, Lingshui Li Autonomous County, Hainan Province	Land Intensification
33	Wanning City	Liji Town, Wanning City, Hainan Province	Same as above
34	Changjiang County	Changhua Town, Changjiang Li Autonomous County, Hainan Province	Land Intensification, Urban-Rural Integration
35		Wangxia Township, Changjiang Li Autonomous County	/
36		Haigang Mining Area, Changjiang Li Autonomous County	/
37	Wenchang City	Fengpo Town, Wenchang City	/
38		Dongge Town, Wenchang City (Entire Area)	/
39	Ding'an County	Longhu Town, Ding'an County (Entire Area)	Land Intensification, Basic Land Consolidation, Special Ecological Protection
40	Dongfang City	Luodai River Basin, Jiangbian Township, Xinming Village, Dongfang City	/
41	Tunchang County	Tuncheng Town, Tunchang County	

Data source: Hainan Provincial Government network

2.2 Characteristics of Social Capital's Participation in the Comprehensive Land Consolidation of Hainan Free Trade Port

Reference from literature, Chen Huimei (2023) identifies four modes of social capital participation in comprehensive land consolidation projects at the current stage of China. These are: 1) the market-oriented operation mode of government investment companies; 2) independent development by enterprises or individuals; 3) the public-private partnership (PPP) mode; and 4) the entrusted enterprise construction mode. According to land consolidation announcements published by governments at various levels in Hainan and the List of Pilot Projects for Comprehensive Land Consolidation across Hainan region (Table 2), the current modes of social capital participation in comprehensive land consolidation projects in Hainan are the market-oriented operation mode of government investment companies and the PPP mode.

The market-oriented operation mode of government investment companies involves government-controlled companies or groups operating relevant industries or implementing construction projects through market-oriented operational methods. This mode can effectively address issues such as land transfer registration, integrate internal and external resources of state-owned enterprises, and ensure the standardized implementation of projects. For example, Hainan Provincial Nongken Investment Holding Group Company (AS known as "Hainan Nongken Group")'s Comprehensive cross region Land consolidation Project in Honghua Farm involves the group company coordinating with relevant government agencies on land transfer matters to resolve challenges like the boundaries of development, insufficient construction land quotas, and insufficient farmland quotas. Hainan Nongken Group takes responsibility for project planning and design, bidding and tendering as well as project management to ensure the standardized implementation of the project. By integrating resources both within and outside the group company, enhancing the speed of advancement. Meanwhile, guided by the 《Opinions on Further Promoting the Reform and Development of State Farms 》 which issued by the State Council, Hainan Nongken Group introduces social capital as a supplementary funding source for comprehensive land consolidation projects by capitalizing and assetizing agricultural land, thereby activating the vitality of land resources.

The public-private partnership (PPP) model involves the government approval on construction projects and authorizing bidding entity to select suitable social entities through the public bidding activity to serve as the investor and contractor. Through contract signing, the rights and obligations, revenue sources, and distribution methods of both the government and the social capital parties are determined. The project is implemented and completed using a social capital operation model of "full investment, full-process operation, and full risk bearing" to advance the implementation and final acceptance of comprehensive land consolidation projects. This model reduces the overall project costs and addresses issues such as government funding shortages. For example, Guangzhou S.P.I Design Co., Ltd. (As known as "S.P.I") has actively participated in rural revitalization initiatives in the early stages, successfully creating exemplary rural revitalization projects such as the "Guangzhou Conghua Nanping Meditation Town", "Hunan huaihua xupu Beidouxi", and "jiangxi wuyuan Shuimo Shanghe Artistic Town". As the social investor and contractor for the pilot project of comprehensive land consolidation in Longhu Town, Ding'an County, Hainan Province, S.P.I has effectively addressed the funding shortage faced by the Ding'an County's Government. By leveraging market-oriented operations, it also has effectively integrated all Influencing factor across Longhu, Ding'an County, reducing project implementation and operational costs while enhancing the efficiency of project's construction and management. The mode of social capital's participation in the comprehensive land consolidation project of Hainan Free Trade Port is shown in Table 3.

Table 3. List of comprehensive land consolidation projects involving social capital's participation in Hainan Free Trade Port

Serial Number	Pilot Location	Social Capital Participation Mode	Mode Characteristics
1	Jiazi Town, Qionghua District, Haikou City	Government-Social Capital Cooperation	Reduced overall project costs and addressed government funding shortages
2	Dongshan Town, Xiuying District, Haikou City	Government-Social Capital Cooperation	Same as above
3	Dazhipo Town, Meilan District, Haikou City	Government-Social Capital Cooperation	Same as above
4	Yazhou District, Sanya City	Government Investment	Effectively addressed land transfer registration issues and insufficient farmland,

		Company Market Operation	integrated internal and external resources of state-owned enterprises, and ensured project standardization
5	Tianya District, Sanya City	Government Investment Company Market Operation	Same as above
6	Yucai Ecological Zone, Sanya City	Same as above	Same as above
7	Jiyang District, Sanya City	Same as above	Same as above
8	Haitang District, Sanya City	Same as above	Same as above
9	Zhonghe Town, Danzhou City	Same as above	Same as above
10	Heqing Town, Danzhou City	Government-Social Capital Cooperation	Reduced overall project costs and addressed government funding shortages
11	Hongmao Town, Qiongzong Li and Miao Autonomous County	Same as above	Same as above
12	Yongfa Town, Chengmai County	Government Investment Company Market Operation	Effectively addressed land transfer registration issues and insufficient farmland, integrated internal and external resources of state-owned enterprises, and ensured project standardization
13	Nanping Farm of Hainan nonken group, Hainan Province	Same as above	Same as above
14	Rongguang Farm of Hainan nonken group, Hainan Province	Same as above	Same as above
15	Guangba Farm of Hainan nonken group, Hainan Province	Same as above	Same as above
16	Xilian Farm of Hainan nonken group, Hainan Province	Same as above	Same as above
17	Grass and Livestock Group of Hainan nonken group, Hainan Province (Full Region)	Same as above	Same as above
18	Nanjin Farm of Hainan nonken group, Hainan Province	Same as above	Same as above
19	Honghua Farm of Hainan nonken group, Hainan Province	Same as above	Same as above
20	Donglu Farm of Hainan nonken group, Hainan Province	Same as above	Same as above
21	Xinying Town, Lingao County, Hainan Province	Government-Social Capital Cooperation	Reduced overall project costs and addressed government funding shortages
22	Huangtong Town, Lingao County, Hainan Province	Same as above	Same as above

23	Nanbao Town, Lingao County, Hainan Province	Same as above	Same as above
24	Dongying Town, Lingao County, Hainan Province	Same as above	Same as above
25	Liugong Township, Baoting County, Hainan Province	Same as above	Same as above
26	Longmen Town, Ding'an County, Hainan Province	Same as above	Same as above
27	Longguang Town, Lingshui County, Hainan Province	Same as above	Same as above
28	Haigang Mining Area, Changjiang Li Autonomous County, Hainan Province	Same as above	Same as above
29	Dongge Town, Wenchang City	Government Investment Company Market Operation	Effectively addressed land transfer registration issues and insufficient farmland, integrated internal and external resources of state-owned enterprises, and ensured project standardization
30	Full Region of Longhu Town, Ding'an County	Government-Social Capital Cooperation	Reduced overall project costs and addressed government funding shortages
31	Luodai River Basin and Xinming Village, Jiangbian Township, Dongfang City	Same as above	Same as above
32	Tuncheng Town, Tunchang County	Same as above	Same as above

Data source: Hainan Provincial Government network

3. Present situation and analysis of Hainan comprehensive land consolidation

3.1 Status of Social Capital's Participation in Hainan Comprehensive Land Consolidation

3.1.1 Policy Support for Social Capital Investment in Comprehensive Land Consolidation projects

The Hainan Provincial Government has issued documents like the 《Opinions of the General Office of the Hainan Provincial Government on Carrying Out Pilot Projects for Comprehensive Land Consolidation across the Entire Region》 (Qiongfufu letter [2020] No. 321), encouraging other cities and counties' government in Hainan to innovate investment and financing mechanisms, leverage the guiding role of fiscal funds and the leading role of financial institutions in guiding social capital, and update the enthusiasm of social capital to participate in comprehensive land consolidation. The Hainan Provincial Department of Finance, the Provincial Department of Natural Resources and Planning have jointly issued the 《Measures for the Administration of Special Funds for Ecological Restoration of Land Space in Hainan Province》, providing financial support through special funds to encourage social entities to undertake comprehensive land consolidation projects. This initiative aims to further deepen the reform of state farms, facilitate closer integration between state farms and local entities, and promote high-quality development of Hainan Free Trade Port. Meanwhile, The Hainan Provincial Government also has issued the 《Notice on Several Measures to Further Promote the Integrated Development of State Farms and Local entities》 (Qiongfufu Letter [2022] No. 14), supporting the comprehensive consolidation of land within state farms, encouraging innovative financial models, and attracting diversified social capital investments through the listing of subsidiaries, bond issuance, and ABS products.

3.1.2 Social Entities Participate in the Whole Process of the Comprehensive Land Consolidation Project

Given the complexity, multidisciplinary nature, and significant capital requirements of all regions comprehensive land consolidation projects, in order to better accomplish the various tasks of projects, social entities are introduced as service providers throughout the entire process, from project approval to project construction, supervision, as

well as final audit, to attract social investments and participation. For example, the Dongfang city's Government and Danzhou city's Government publicly selected entities to serve as the main implementers for the comprehensive land consolidation project in Luodai River, and Heqing Town, responsible for the full-process investment and construction of projects.

3.1.3 Industrial Integration Attract Social Capital Investment

Apart from aiming at ecological restoration and protection, land intensification, and supplementary farmland indicators, the all regions comprehensive land consolidation in Hainan also ultimately seeks to build distinctive towns and villages characterized by the "Trinity" of agriculture, culture, and tourism, synchronous improvement in production, living, and ecology, and deep integration of the primary, secondary, and tertiary industries. Therefore, in terms of the integration, there is a great need to combine policy documents with local conditions and introduce industries suitable for local development through market-oriented operations. For example, as the investment and construction entity for the land consolidation project in Longhu Town, Ding'an County, Hainan Province, S.P.I uses a three-step approach: from "agricultural land consolidation" to "production linkage" and then to "cultural tourism integration" to optimize the local agricultural industrial structure in Longhu Town. This has transformed Longhu Town into a rural leisure tourism resort and the Longhu Future Rural Community, have promoting the integrated development of agriculture, culture, and tourism industries.

3.2 Difficulties in the Participation of Social Capital in the Projects

3.2.1 Few Clear Source of Income

Currently, the definitive income for Hainan land consolidation projects mainly comes from the trading of construction land quota and newly-added farmland quota. The revenue from these sources is influenced by fluctuations in market prices. Other potential revenue streams include earnings generated by the industries introduced after the completion of the projects, although the future operational income remains uncertain. Given the fewer of clear revenue sources, it may be challenging to attract social capital invest in the projects.

3.3.2 Policy and Regulatory Limitations

(1) It is difficult to advance policy coordination. All regions comprehensive land consolidation involves multiple departments and policies, requiring coordination and cooperation among all departments. However, in reality, there often exists the issue of difficulty in advancing policy coordination, leading to obstacles in the work.

(2) Regulatory constraints. Current laws, regulations, and policies impose certain restrictions on land consolidation projects, such as strict conditions for modifying planning of land use and cumbersome approval procedures. These constraints may increase the difficulty and time cost of the work, affecting the progress and effectiveness of the consolidation efforts. This will prolong the time it takes for social capital investments to generate returns, as well as impacting the enthusiasm for such capital's investments.

(3) Lack of policy continuity. The Hainan Provincial Department of Finance and the Department of Natural Resources and Planning jointly issued the 《Administrative method for Special Funds for Ecological Restoration of Land and Space in Hainan Province》, providing special funds to support all regions comprehensive land consolidation projects. However, this document expired in 2022, and no subsequent documents have been issued to clearly stipulate continued fiscal fund support for the projects. Since land consolidation projects possess characteristics of publicity, if fiscal funds do not continuously support these projects, the enthusiasm for social capital investment will be suppressed.

(4) There is a lack of issued policy documents that stimulate social capital investment. According to publicly available sources, Hainan Provincial Government has issued the 《Opinions on Carrying Out all regions Comprehensive Land Consolidation Pilots》 to guide departments in attracting social capital investment. It includes tax reductions and exemptions for the projects related to farmers' housing and infrastructure construction base on relevant regulations. However, no further guidance documents have been issued subsequently to stimulate social capital investment as well, given the example of those policies, 《tax exemption or reduction policies for social entities participating in or investing in land consolidation projects》 and 《reward policies for social entities promoting full employment in rural areas》.

3.3 Land Ownership

All regions Comprehensive land consolidation necessitates adjustments to land ownership. In reality, difficulties often occurred, which may hinder the smooth progress of remediation work and prolong the project duration. Since social capital investors tend to prefer shorter periods for obtaining returns on their investments, they may have concerns about duration risk of projects

3.4 Channels Lack for Social Capitals Directly Participate in Hainan Comprehensive Land Consolidation

Currently, there are two primary ways for social capital to directly participate in Hainan Free Trade Port comprehensive land consolidation projects: directly participating in the open selection of social entities for projects, and trading related index assets in the specific market. However, there are limited channels for social capital participation.

From a practical perspective, all regions comprehensive land consolidation involves multiple systematic projects and requires substantial capital investment. Therefore, government-controlled companies or group corporations tend to cooperate with banks and other financial institutions, where banks provide long-term and large-scale credit funding to support the implementation of project engineering. Additionally, under the current capital cooperation model, social entities that win the projects face difficulties in obtaining valid certification documents for land index circulation as financing application materials. Consequently, other social entities also find it challenging to specifically invest in land comprehensive consolidation projects

4. Suggestion and Countermeasures for Social Capital to Participate in Hainan Land Comprehensive Consolidation Projects

4.1 Complete Relevant Policies

4.1.1 Issued Continuous Fiscal Policy Documents to Support the Projects

Land consolidation projects possess certain public characteristics and require financial support. However, the government administrative measures document that provided special financial fund support for all regions comprehensive land consolidation projects has been expired in 2022, and no similar document issued subsequently. Therefore, Departments should coordinate the work of projects in a unified manner, the follow-up policies on special fund ought to issue as well, enhance the support for both economics and approval, and send a positive signals to attract investment.

4.1.2 Simplifying Approval Procedures for Social Entities Investing in Projects

Given the systematic, diverse, and complex nature of land consolidation projects, their construction and advancement involve multiple administrative approvals. To enhance the enthusiasm of social entities' participation, relevant approval procedures for projects should be pre-approved or use minimalist approval model with regard to related materials. Strengthening in-process supervision and management as well as post-supervision can accelerate construction progress while safeguarding the legitimate rights and interests of farmers and social capital.

4.1.3 Issuing Policies to Stimulate Social Capital Investment

The government should issue policy documents offering tax exemptions or reductions for financing products related to social entities investing in land consolidation projects. Additionally,

policy documents providing incentive rewards should be issued for introducing suitable industries by relevant social entities to promote employment of the local rural population. By drawing lessons from South Korea's "Saemaul Undong (New Village Movement)", policy documents offering financial subsidies or patent incentives should also be issued for engaging in rural industry-academia-research integration projects, thereby stimulating social capital investment in projects.

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4.2 Expand the Channels for Social Capital to Participate in the Comprehensive Land Consolidation of Hainan Free Trade Port

4.2.1 Carbon Trading as a Means for Expanding Channels to Social Capital Involvement

Given the current situation where social capital's participation in the integrated land consolidation of Hainan Free Trade Port is limited, with social capital holding a small share and facing a lack of clear revenue sources for such projects, there is a risk that social capital, driven by profit, may resort to marginal practices. This includes misuse the linkage policy between land use increments and decrements to increase construction land quotas and newly-added farmland indicators for market transactions, leading to a waste of land resources where newly-added farmland remains uncultivated. Wu Jialong and Su Mengyuan (2021) argue that the integrated all regions land remediation aligns well with the connotation of the "dual-carbon" (carbon peaking and carbon neutrality) goals in terms of development direction and overall objectives. Integrated land consolidation projects can promote the achievement of these "dual-carbon" goals. Therefore, by establishing a local carbon emission quota market or connecting to regional and national trading markets, the newly-generated carbon emission quotas from land

consolidation projects can be traded in the market, providing sustainable revenue for projects and avoiding inefficient use or waste of land resources and other natural elements.

4.2.2 Expanding Channels for Social Capital Involvement by Drawing on the Experiences of Guangzhou and Chongqing

In guiding social capital to participate in fund-raising for land remediation projects, we can draw on the "Huangpu Experience" from Guangzhou. On August 8, 2024, the Guangzhou government issued the first Rural Property Rights Transfer and Transaction Certificate in Huangma Community, Huangpu District, witnessing the acquisition of rural forestland management rights through public transactions by the project winner. The issuance of the Rural Property Rights Transfer and Transaction Certificate provides evidentiary support for the project winner in applying for agricultural industrialization projects, subsidies, and mortgage financing, thereby addressing the financing difficulties faced by social entities participating in rural industrialization projects. Additionally, we can also draw on the experiences of Chongqing's "land quotas" and Guangzhou's "land vouchers". By using land vouchers or land quotas, which only specify the area of rights and exchange value without clarifying the specific location, the "land quotas" and "land vouchers" can be openly traded and transferred on government platforms. This approach broadens the channels for social capital to participate in comprehensive land consolidation projects, while simultaneously establishing an operational system that encourages "voluntary reclamation, public transactions, returns to farmers, direct transfer of funds, and regulated use", thereby safeguarding the legitimate land-related income of farmers or village (residential) collective economic organizations.

5. Conclusion

This article summarizes the meaning of why social capital participates in Hainan comprehensive consolidation projects at first. Then it summarizes models and characteristics of social capital participation in comprehensive land consolidation in Hainan, and there are six characteristics of mode and two modes of capitals' involvement. According to policy and announcements about bidding, this article finds the situation of social capital participation in comprehensive land consolidation in Hainan so that it digs out some problems of modes of capital's involvement in comprehensive land consolidation in Hainan through practical experience. The end of this article gives suggestions and countermeasures for social capital to participate in comprehensive land consolidation in Hainan when digging out some problems of practical experience, which are simplifying approval procedures, completing relevant policies, expanding the channels for social capital using other good practical experiences in comprehensive land consolidation.

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