10.70711/frim.v3i12.7871

Agricultural Modernization in China--The Adaptive Evolution of Collective Ownership and the Two-Tier Management System

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Abstract: In China's agricultural modernization, the collective ownership system and two-tier management system have formed a unique path through adaptive evolution. Theoretically, based on public ownership of land, it balances efficiency and coordination via the "combination of unified management and decentralized operation, " with its adaptability stemming from three factors including institutional flexibility. Historically, it has gone through three stages: the household contract responsibility system broke the planned economy (1978-1992); land transfer and cooperatives improved the system (1992-2012); and the "separation of ownership, contract right, and management right" drove transformation (since 2012), giving rise to models like Beidahuang and Shouguang. Empirically, it improves economic efficiency, ensures social income growth, reduces chemical fertilizer use ecologically, and breaks Western path dependence. To address issues like "non-grain conversion of farmland, " measures such as policy adjustment, institutional farmland protection, and collective transformation are adopted to achieve win-win for collectives and farmers and consolidate the institutional foundation.

Keywords: Agricultural Modernization; Collective Ownership System; Two - tier Management System; Adaptive Evolution

1. Institutional and Theoretical Logic of China's Agricultural Modernization

1.1 Core Theoretical Support

In China's agricultural modernization, the collective ownership system and two-tier management system are rooted in Marxism and have formed a unique system integrating practical experience. The Marxist theory of land property rights guides the public ownership of land to avoid the gap between the rich and the poor, while Lenin's theory of cooperatives provides a basis for "unified collective management". Sinicized theories deepen the "combination of unified management and decentralized operation", and the reform of "separation of ownership, contract right, and management right" meets its large-scale operation needs, improving the closed loop of "stable property rights - improved efficiency - shared interests".

1.2 Drivers of Institutional Adaptability

Institutional adaptability stems from the synergy of three factors: first, institutional flexibility, where the core of collective ownership and farmers' contract right remains stable, while rights such as management right are adjusted in line with practice; second, historical path dependence, which continues the tradition of public ownership of land and relies on collective experience and farmers' recognition to reduce reform costs; third, interest coordination, which balances interests through rules – farmers stabilize their income by virtue of contract right, collectives support services through ownership, and new types of entities reduce risks via right confirmation – forming a cohesive force for win-win outcomes.

2. Historical Evolution of Collective Ownership and Two-Tier Management

2.1 1978-1992: Breakthrough of Household Contract Responsibility System

After 1978, the household contract responsibility system replaced the people's commune system, upholding collective land ownership, delegating contracted management rights to farmers, and forming a preliminary "combination of unified and decentralized operation". The 1982 No.1 Central Document confirmed its socialist nature, and it became a basic rural system in 1991. It realized "separation of two rights" (collectives retained ownership, farmers got management rights), adopted the distribution principle of "fulfill state obligations, keep enough for collectives, retain the rest", and initially achieved the "combination" with collectives providing services and farmers producing independently.

2.2 1992-2012: Improvement via Land Transfer and Cooperatives

Under the market economy, the system upgraded toward scale and market orientation. The 1993 Agricultural Law and 2002 Rural Land Contract Law guaranteed land transfer; the 2007 Farmers' Professional Cooperatives Law promoted cooperatives. Collectives led cooperatives to form the "collective + cooperative + farmer" model, cut costs via bulk agricultural material purchase and unified product sales, expanded scale through land transfer, and new business entities emerged to fit the market economy.

2.3 2012-Present: Transformation via "Separation of Three Rights" and Property Reform

After the 18th CPC National Congress, the 2016 "Separation of Three Rights" policy liberalized management rights, supporting large-scale and capitalized land use. Meanwhile, collective property reform advanced, with asset verification, member confirmation and asset quantification. These two reforms jointly drove the system to transform into a modern property system with "clear rights and smooth transfer", supporting agricultural modernization.

3. Typical Models of Collective Ownership and Two-Tier Management

3.1 Shouguang's "Collective Empowerment" Model

Shouguang develops the vegetable industry with a two-tier structure of "collectives set the stage, cooperatives as links, farmers as main players", core being collective "service empowerment + organizational coordination". Collectives conduct unified planning of greenhouses, water-fertilizer and PV systems, jointly formulate vegetable production standards with testing equipment, and build origin wholesale markets and cold chain logistics. 80% of cooperatives are led by collectives, providing pre-production, in-production and post-production services, and building regional brands to boost premium. It also innovates the "collective + R&D + enterprise" mechanism, jointly building research institutes and introducing enterprises to set up smart demonstration parks, helping small farmers integrate into modern industries.

3.2 Beidahuang's "Unified-Decentralized Coordination" Model

Beidahuang ensures food security with a two-tier structure of "state-controlled + group coordination + family farm operation", core being integration of "unified management and decentralized operation". The group adopts five-in-one management: demarcating permanent basic farmland, promoting high-standard farmland renovation, developing and promoting quality seeds and green technologies, coordinating agricultural machinery for full mechanization, and establishing quality traceability and brand systems. Family farms are main entities, operating independently with "fixed-quota contracting + profit sharing"; the group provides risk mechanisms like disaster claims and agricultural machinery subsidies. Recent reforms strip social functions and advance the "three-system reform", making it a benchmark for large-scale agriculture.

Though the two models focus on different fields, both verify the system's adaptability: Beidahuang ensures food security via collective unified management scale, while Shouguang activates the market through precise collective services. Both achieve win-win for collectives and farmers, offering replicable experience for agricultural modernization.

4. Multi-Dimensional Effects of the Collective Ownership System and Two-Tier Management System

4.1 Economic Efficiency Dimension

This system uses "collective coordinated services + decentralized farmer operation", with scaled services addressing smallholder fragmentation, in line with transaction cost and scale economy theories. Collectives cut costs and boost efficiency via four scaled services: coordinated agricultural machinery to reduce individual purchase waste, centralized agricultural material procurement to lower circulation costs, production-marketing platforms to resolve information asymmetry, and unified technical guidance to make up for farmers' capability gaps. These measures reduce production costs, raise per-unit yield returns, and help collectives extend industrial chains into a "production-processing-sales" loop, balancing farmers' income and collective economic growth.

4.2 Social Equity Dimension

Centered on "long-term stable land contract rights", the system avoids Western "land loss risk" and aligns with common prosperity. Policy extends contract terms and law confirms rights, ensuring farmers' security. Based on this, contract rights generate three property incomes: collectives build platforms for land transfer rent, lead cooperatives for land share dividends, and activate idle resources for collective asset profit distribution. Land-related income becomes a key source for farmers, narrowing urban-rural and rural internal gaps, reflecting equity.

4.3 Ecological Benefit Dimension

The system solves smallholders' insufficient ecological input via collective coordination, conforming to green development and ecological economics. Collectives implement ecological measures through "unified planning, investment and supervision": chemical fertilizer reduc-

tion via soil testing, organic fertilizer substitution and integrated water-fertilizer; pesticide reduction via professional teams and modern equipment; comprehensive straw use to avoid burning pollution; and crop rotation/fallow to improve farmland quality. Macroscopically, fertilizers and pesticides shift from zero to negative growth, with higher soil fertility and lower non-point source pollution, forming an "eco-economic-social" virtuous cycle, showing institutional ecological adaptability.

5. Research Conclusions and Optimization Suggestions

In China's agricultural modernization, the collective ownership system and two-tier management system have developed the path of "combination of unified management and decentralized operation", while the "separation of ownership, contract right, and management right" optimizes property rights functions. This system breaks the limitations of Western models and achieves the integration of multi-dimensional effects in economy, society and ecology. To address challenges such as "non-grain conversion of farmland", high pressure on farmland protection and insufficient market-oriented capacity of the collective economy, suggestions are as follows: delimit production protection zones via policy guidance and boost grain-growing benefits through interest adjustment; implement the protection responsibility system with institutional constraints and conduct dynamic monitoring supported by technology; promote collective transformation to establish market entities, activate resources to attract social capital, realize a win-win for collectives and farmers, and consolidate the institutional foundation.

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