



Analysis on the Mechanism of "Government-Farmer-Bank-Enterprise" Collaborating to Promote Farmers' Income

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Abstract. Against the backdrop of rural revitalization and agricultural modernization, promoting sustained and stable farmer income growth requires overcoming the institutional limits of single-actor support. From a governance perspective, this study examines Yúnfú's GFBE (government-farmer-bank-enterprise) collaborative income-enhancement model and systematically analyzes the coordination mechanisms among government, financial institutions, leading enterprises, and farmers. The results indicate that by establishing a collaborative governance framework of policy guidance, financial empowerment, industrial drive, and farmer participation, and supported by benefit sharing and risk sharing mechanisms, the model diversifies income sources and disperses risks, thereby enhancing the stability and resilience of agricultural operations. This study reveals the practical logic through which multi-actor collaboration promotes farmer income growth and provides experience for improving long-term income mechanisms and advancing rural revitalization.

Keywords: Government-Farmer-Bank-Enterprise (GFBE); Farmer Income Growth; Risk Sharing; Collaborative Mechanism

1 Introduction

A strong nation rests on strong agriculture. The year 2025 is pivotal for rural revitalization and a critical stage of agricultural modernization. Guided by the No. 1 Central Document, the central government prioritizes sustained farmers' income growth by strengthening policy support and factor allocation. However, income growth is constrained by rising costs, increasing risks, industrial-chain weaknesses and financing limits. Traditional models offer limited relief due to weak coordination, poor integration and narrow risk sharing, leaving them ineffective against disasters and market volatility. The government-farmer-bank-enterprise (GFBE) model integrates policy guidance, farmer participation, financial empowerment and enterprise support to build long-term mechanisms for risk and benefit sharing and information exchange, addressing farmers' challenges of planting reluctance, low productivity and poor market

access and providing an institutional pathway for sustained income growth and rural revitalization.

2 Literature Review

Sustaining farmer income growth hinges on expanding income channels, strengthening endogenous development capacity and anchoring the goal of common prosperity. Existing studies mainly examine pathways such as agricultural insurance, agricultural credit, contract farming and multi-actor collaboration. As an institutional arrangement with public-good attributes and positive externalities, policy-based agricultural insurance is widely used to address market failure^[1]. Most studies find that fiscal subsidies raise participation and enhance risk protection^[2], thereby stabilizing and increasing farmer income and smoothing volatility^[3]. However, income effects are non-linear, constrained by income levels and marked by thresholds and heterogeneity^[4,5], with potential welfare losses among low-income farmers due to “higher output without higher income.” Agricultural credit, a key rural financial instrument, can theoretically increase output and income by expanding factor inputs^[6], yet in practice is constrained by insufficient collateral, limited access and elite capture^[7]. Its income effects exhibit lags, thresholds and regional disparities^[8], and depend on the level of rural industrial integration. Cooperative and contract farming embed smallholders into modern value chains via contracts, reducing market risk, raising returns to capital and promoting technology adoption^[9]. However, information asymmetry and weak farmer bargaining power expose them to firm opportunism, limiting stable income gains. After the eradication of absolute poverty, rural areas still face weak income growth and widening gaps. Tensions between capital’s risk aversion and agriculture’s high-risk, low-return nature render single financial instruments insufficient, necessitating multi-actor coordination to ease structural mismatches between finance and agriculture^[10]. As traditional “transfusion-style” support lacks durability, the GFBE model has evolved in practice, combining government guidance, financial support and enterprise participation to jointly raise wage and property income, offering a sustainable path for income growth and rural development.

In sum, under rural revitalization, farmer income growth requires GFBE collaboration. Single-actor approaches face effectiveness bottlenecks or negative effects. Yet the literature largely focuses on single actors or limited combinations, with few studies integrating all actors to assess income effects. Accordingly, this paper analyzes the Yúnfú GFBE model to unpack its internal mechanisms and to develop a benefit-sharing framework under effective multi-actor linkage, providing insights for modernizing smallholder agriculture and advancing high-quality rural development.

3 Case Analysis of the GFBE Collaborative Income-Enhancement Model

3.1 Case Background

Before 2022, Yúnfú City's rural collective economy suffered from insufficient endogenous growth capacity. At the beginning of the year, 592 administrative villages reported annual revenues below RMB 100,000, while another 84 villages exceeded this level but with highly unstable income sources. To develop a new-type rural collective economy and meet Guangdong's village-level collective economy targets, enterprises, under government leadership, pioneered the "Yúnfú Government-Farmer-Bank-Enterprise Co-built Livestock Industrial Park" project. This initiative established a collaborative income-enhancement framework involving government, financial institutions, leading enterprises, village collectives and farmers, operating through a model of local platform credit enhancement, bank financing, enterprise-led operations and cooperative farming by farmers. Government-led village collectives or co-operatives formed investment platforms to coordinate capital and profit distribution, leveraging platform capital strength and government credit to attract bank lending, while leading enterprises managed operations and drove farmers' income growth.

3.2 Operating Mechanism

The Yúnfú GFBE collaborative model is not a mechanical aggregation of actors but an organically integrated "four-in-one" system built through deep resource integration and collaborative innovation. Government provides policy coordination, financial institutions supply credit, leading enterprises drive industry and village collectives and farmers mobilize resources. By breaking institutional barriers and enabling information sharing, joint benefits and shared risks, the model forms a closed-loop ecosystem that delivers mutual gains and injects momentum into rural revitalization.

Government plays a central policy-support role in farmers' income growth. The Yúnfú municipal government focuses on policy guidance, resource integration, and risk control to build a full-chain support system. Policy measures include the Measures for Supporting Modern Agricultural Industrial Parks, offering tax incentives and land-use preferences to attract firms such as Wens Group and interdepartmental low-interest inclusive loans to ease financing constraints. Risk mitigation is achieved through compensation funds and subsidized policy and portfolio insurance covering natural disasters and price fluctuations, with guaranteed income advances to stabilize expectations. Resource integration involves a rural property rights trading platform to promote land scale operation and enterprise matching, alongside regular training to supply skilled labor. Risk control relies on the "Yue Sheng Shi" platform to dynamically monitor farmers' income, strengthen fund supervision and issue early warnings. Together, the "policy guidance-resource integration-risk backstop" mechanism connects all stakeholders.

Banks provide essential financial support. Financial institutions, led by the Agricultural Bank of China Yúnfú Branch, jointly developed targeted products (e.g., Hui-

nong E-loan), using big data and combined government and enterprise credit enhancement with farmers' credit or collateral to rapidly approve limits at preferential rates. Village-wide credit granting lowers financing costs. Farmer income e-accounts on government platforms enable real-time fund tracking and risk alerts, while tripartite credit endorsement (government-enterprise-village-collective) shares risk and alleviates costly financing, sustaining income growth.

Enterprises play a pivotal role. Wens Group leverages R&D platforms and professional teams to deliver training and on-site guidance, standardizing breeding, disease control and operations to raise efficiency. Through full-chain contracts and “five-unification” services, contract purchase prices secure returns and transfer market risk. Land operations offer guaranteed rents and innovative equity participation (land-use rights as shares plus loan equity), increasing property income. Upstream local sourcing and downstream channel expansion upgrade processing and logistics, while priority hiring broadens income channels, achieving firm-farmer win-win outcomes.

Farmers are the foundation. Under government guidance, farmers consolidate land via cooperatives, use land and homesteads as collateral to finance farms, receive full-process technical support through enterprise contracts, and sell products under buy-back arrangements, reducing risk and stabilizing operating and rental income. Beyond asset income, farmers gain wage income through employment, while capable farmers can become farm operators using own funds and subsidies. Yúnfú's model of “asset returns+stable employment+entrepreneurial income” ensures income growth that is real, effective, and sustainable.

3.3 Profit Distribution Mechanism

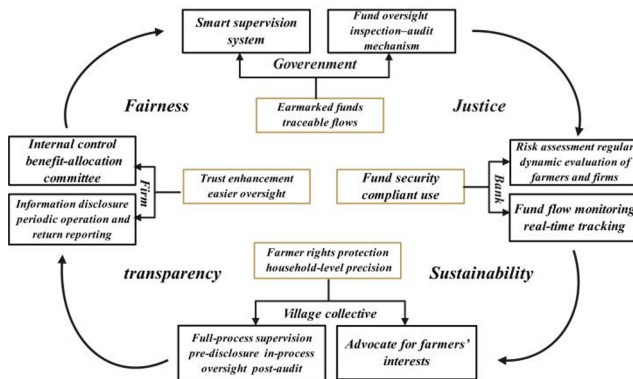


Fig. 1. The Benefit Allocation Mechanism

The Yúnfú GFBE collaborative model strictly follows benefit-allocation principles and establishes a comprehensive, multi-tiered benefit protection system as shown in Figure 1, enabling benefit sharing and coordinated advancement among multiple stakeholders.

3.3.1 Principles of Benefit Allocation.

Within the four-in-one income-enhancement mechanism, stakeholders exhibit heterogeneous interests. Thus, a fair, just and transparent allocation system is essential for sustained collaboration. Fairness requires allocating returns proportionally to factor contributions by government, financial institutions, enterprises, village collectives and farmers, with equity dividends determined through factor valuation. Justice mandates strict adherence to contracts and institutional rules throughout pricing, principal and interest recovery and risk compensation. Transparency requires enterprises to disclose operational data, with net income distributed openly according to equity shares in land, labor and capital; dividend guarantees protect vulnerable groups, supported by government oversight and social supervision to ensure traceable and verifiable allocation.

3.3.2 Benefit Protection Mechanisms.

The Yúnfú GFBE model builds a comprehensive, multi-level protection framework to safeguard stakeholder rights and sustainability. Government adopts a hybrid supervision model combining inspections and audits, focusing on fund use and policy implementation and applies big-data-enabled end-to-end traceability to ensure funds are traceable, accountable and auditable. Enterprises establish dedicated compliance units and standardized allocation procedures, regularly disclosing operational, financial and distribution data to enhance trust and prevent opacity. Financial institutions manage credit through dedicated accounts at rural property rights exchanges, using data-driven, penetrative monitoring to track fund use, assess credit and issue risk alerts. As the central hub, village collective cooperatives establish a full-process oversight framework of pre-disclosure, in-process supervision, and post-audit, ensuring fairness in benefit distribution through a household-level precision allocation mechanism. This coordinated oversight network characterized by digitalized government supervision, transparent enterprise management, dynamic financial monitoring and standardized village-level distribution forms a robust safeguard for benefit allocation. It effectively mitigates information asymmetry and conflicts of interest among multiple stakeholders, providing both institutional and technological guarantees for the stable operation of the co-building model.

3.3.3 Risk Diversification Mechanism.

The Yúnfú GFBE collaborative model establishes a full-chain risk diversification and control framework by integrating financial, production, and market dimensions, providing institutional support for stable farmer income growth and project sustainability. Financial risks are mitigated through a diversified guarantee structure in which the government integrates state-owned platforms, leading enterprises and village collectives to form joint guarantees, while fixed assets of breeding facilities and land contractual management rights are accepted as collateral, effectively reducing bank credit risk. Fiscal funds, bank credit and enterprise investment are managed through dedicated accounts and jointly monitored by government and banks, with staged disbursement aligned to project progress and operational needs to ensure standardized

and efficient fund use. Production risks are addressed through end-to-end standardized operations led by enterprises, supported by technical training and smart equipment to lower operational uncertainty and enhance farmers' skills. A three-tier disease-prevention system linking enterprises, government and farmers, combined with policy-based and specialty agricultural insurance, transfers risks from epidemics and natural disasters and stabilizes production expectations. Market risks are reduced through contract farming that fixes purchase volumes, prices and quality standards, shifting price volatility from individual farmers to industrial entities. With government support for regional branding and market-channel expansion, farmers are embedded into the value chain, diversify sales channels, capture price premiums and reduce unsold risk, thereby improving income stability.

3.4 Model Advantages and Innovative Practices

3.4.1 Collaborative Governance Replacing Unilateral Support.

Traditional agricultural support is often government- or enterprise-led, with misaligned policy goals and market incentives that reduce allocative efficiency. Yúnfú adopts multi-actor collaborative governance based on a “co-build, co-manage and share” logic. Government shifts from direct subsidies to institutional provision through policy guidance, credit endorsement and coordinated supervision; financial institutions enhance risk identification and lending willingness via government credit; enterprises achieve risk sharing and benefit alignment through contracts and value-chain integration. This collaborative mechanism optimizes information transmission, reduces transaction costs among multiple actors and enhances both policy implementation effectiveness and the efficiency of financial resource allocation.

3.4.2 Financial Empowerment Improving Capital Accessibility.

The “government credit enhancement+village-wide credit granting” mechanism shifts bank lending from individual approval to group-based assessment, significantly expanding rural financial coverage and access. By integrating farmer credit records, land-use rights and order-insurance data, banks build data-driven risk-control models for dynamic credit and risk monitoring. Risk compensation funds and interest subsidies further lower lending thresholds, transforming support from short-term subsidies to endogenous financial empowerment and fostering a sustainable rural finance system.

3.4.3 Institutionalized Benefit Linkage Stabilizing Firm–farmer Relations.

Through equity dividends, guaranteed rents, and contract buybacks, Yúnfú establishes a multi-layered and durable benefit-linkage system. Enterprises provide technical guidance and standardized production via contracts, while farmers share industrial returns through land transfer, equity participation and production–marketing linkage. This arrangement reduces price risk and transaction uncertainty, shifting farmers from hired labor to partners and strengthening long-term cooperation through predictable returns.

3.4.4 Risk-sharing Mechanisms Strengthening Industrial Resilience.

Policy-based agricultural insurance, risk compensation funds and digital supervision jointly form a risk-sharing safeguard. The integrated “insurance–compensation–monitoring” framework disperses risk among government, enterprises and farmers. Digital platforms track production, weather and financial data in real time, enhancing risk identification and emergency response, improving shock resistance and recovery capacity and safeguarding farmers’ incomes.

3.5 Existing Problems and Operational Bottlenecks

3.5.1 Strong Administrative Dependence.

The current model relies heavily on government credit endorsement and fiscal support. Fiscal subsidies play a central role in risk sharing. However, rising fiscal pressure or shifts in political cycles may reduce financial institutions’ risk appetite, weakening the sustainability of the collaborative mechanism. Excessive reliance on administrative intervention may also weaken market self-regulation and impede the formation of stable market-based incentives.

3.5.2 Insufficient finance–industry Integration.

Bank lending still relies primarily on policy-based credit enhancement, lacking endogenous mechanisms grounded in value-chain cash flows, farmers’ credit accumulation, and market pricing. Integration among agricultural insurance, credit and order data remains at an early stage, with incomplete data interoperability. Financial product innovation is limited and value-chain finance has yet to form a self-sustaining system centered on market risk identification, resulting in superficial collaboration and shallow embedding.

3.5.3 Limited Farmer Agency.

Within standardized and contract-based production systems, farmers largely act as passive executors with limited bargaining power and decision rights. While benefit-linkage mechanisms protect distribution outcomes, farmers’ organizational capacity, digital literacy and risk management skills remain weak. Strengthening cooperatives and family farms is needed to enhance farmers’ voice and innovation capacity along the industry chain.

3.5.4 Incomplete Transparency and Oversight.

Despite digital supervision platforms, data collection and updates lag, and information silos persist. Inconsistent data standards and incompatible interfaces hinder full-chain traceable oversight. Moreover, information sharing between government and financial institutions still relies on administrative coordination rather than institutionalized channels, reducing responsiveness and transparency in collaborative governance.

4 Conclusion and Implications

From a governance perspective, this study systematically examines the operating mechanism of Yúnfú's GFBE collaborative income-enhancement model. The findings show that, through government institutional provision and credit endorsement, financial factor support, leading enterprise organization and farmer resource participation, the model establishes a multi-actor collaborative governance system for income growth. Under the benefit-linkage mechanism, farmers embed land, labor and capital into the value chain, achieving coordinated growth in wage, operating and property income. Supported by risk diversification mechanisms, financial, production and market risks are effectively shared among multiple actors, significantly enhancing the stability and resilience of agricultural operations. By replacing administrative subsidies with collaborative governance, the model breaks from single-actor support and provides an institutionalized solution for sustained farmer income growth. The key implication is that income policies should shift from "policy transfusion" to "institutional hematopoiesis" by strengthening multi-actor collaboration, deepening finance–industry integration and improving benefit sharing and risk sharing to build a sustainable long-term income growth system that underpins rural revitalization and agricultural modernization.

References

1. Hazell P, Varangis P. Best practices for subsidizing agricultural insurance[J]. *Global Food Security*, 2020, 25: 100326.
2. Cai J, De Janvry A, Sadoulet E. Subsidy policies and insurance demand[J]. *American Economic Review*, 2020, 110(8): 2422-2453.
3. Gu L, Liu Y, Liu F, et al. Impacts of policy-related agricultural insurance on farmers' earnings in China's major grain-producing regions[J]. *Finance Research Letters*, 2024, 69: 106189.
4. Zheng L, Zhang Z. Inclusive agricultural insurance and rural consumption in China: The role of income stabilization and threshold effects[J]. *Economic Modelling*, 2025: 107335.
5. Lusk J L. Distributional effects of crop insurance subsidies[J]. *Applied Economic Perspectives and Policy*, 2017, 39(1): 1-15.
6. Yu G, Lu Z. Rural credit input, labor transfer and urban–rural income gap: evidence from China[J]. *China Agricultural Economic Review*, 2021, 13(4): 872-893.
7. Li Y, Wang M, Liao G, et al. Spatial spillover effect and threshold effect of digital financial inclusion on farmers' income growth—based on provincial data of China[J]. *Sustainability*, 2022, 14(3): 1838.
8. Si C, ALITA L, Xiao H A N. Impacts of formal credit on rural household income: Evidence from deprived areas in western China[J]. *Journal of Integrative Agriculture*, 2021, 20(4): 927-942.
9. Zhang W, Gao L, Zolghadr M, et al. Dynamic incentives for sustainable contract farming[J]. *Production and Operations Management*, 2023, 32(7): 2049-2067.
10. Ai T, Zhang J, Shao J. Study on the coordinated poverty reduction effect of agricultural insurance and agricultural credit and its regional differences in China[J]. *Economic Analysis and Policy*, 2023, 78: 835-84.

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