

Improving the Methodology for Attracting Investments to the Agrarian Sectors of Uzbekistan to Ensure Economic Growth

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Abstract: The agrarian sector remains a cornerstone of Uzbekistan's economy, contributing approximately 19-25% to GDP and employing around 26% of the workforce. Despite recent reforms, including the elimination of production quotas and liberalization policies, attracting sufficient domestic and foreign investment remains challenging due to land tenure insecurity, limited access to finance, water scarcity, and bureaucratic hurdles. This paper proposes an improved methodology for investment attraction, emphasizing strengthened land rights, targeted incentives, public-private partnerships, digital platforms for investor matchmaking, and climate-resilient practices. Drawing on the Agriculture Development Strategy 2020-2030, the proposed approach could increase FDI inflows to agriculture, enhance productivity by 20-30%, and support sustainable economic growth of at least 5% annually in the sector. The methodology integrates global best practices with Uzbekistan-specific reforms to foster inclusive, market-oriented investment.

Key words: Agriculture investment, FDI attraction, land tenure security, agricultural productivity, economic growth, climate-smart agriculture, public-private partnerships



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INTRODUCTION

The agrarian sector plays a pivotal role in economic growth, particularly in developing countries where agriculture often employs a significant portion of the population and contributes substantially to GDP. Investments in agriculture both domestic and foreign enhance productivity, reduce poverty, and drive broader economic development. However, attracting sufficient investments remains challenging due to risks, structural barriers, and policy inefficiencies.

Uzbekistan's agrarian sector is vital for food security, employment, and export revenues, yet it faces structural constraints that limit its contribution to overall economic growth. The sector accounts for 19-25% of GDP and employs about 26% of the labor force, but productivity remains low compared to regional peers due to outdated practices, water inefficiencies, and historical state dominance. Since 2017, reforms such as abolishing cotton and wheat quotas, liberalizing prices, and introducing market mechanisms have created opportunities for private investment. The Agriculture Development Strategy 2020-2030 aims to achieve 5% annual growth, double farmers' incomes, and boost agro-food exports to \$20 billion by 2030. However,

investment inflows remain insufficient, with FDI in agriculture lagging behind energy and manufacturing sectors. This paper examines current challenges and proposes an enhanced methodology to attract investments, ensuring sustainable economic growth through increased productivity, job creation, and diversification.

Literature Review

This literature review examines existing methodologies for attracting investments to the agrarian sector, their impacts on economic growth, associated challenges, and strategies for improvement, drawing from empirical studies, policy analyses, and global reports. Numerous studies establish a strong positive relationship between investments in agriculture and economic growth. Growth in the agricultural sector is 2-3 times more effective at reducing poverty than growth in other sectors, with the largest benefits accruing to the poorest populations (World Bank, 2023). Public and private investments in research and development (R&D), infrastructure, and technology yield high returns, often 20-60% annually (USDA Economic Research Service).

Foreign Direct Investment (FDI) in agriculture facilitates technology transfer, job creation, and export growth, contributing to GDP in developing economies. For instance, in Ghana, agricultural FDI has been linked to enhanced productivity and economic expansion through spillovers (Awunyo-Vitor & Sackey, 2018; Sofyanty et al., 2025). Similarly, in Sub-Saharan Africa and Asia, FDI drives total factor productivity, though impacts on land and labor productivity vary (various studies using GMM models). In India, agricultural value-added positively influences FDI inflows, trade openness, and long-term growth via ARDL models.

However, the sectoral composition of FDI matters: investments in primary agriculture often yield higher growth effects in developing contexts compared to other sectors (Ezo Emako, 2022). Johnston and Mellor (1961) highlighted that productivity gains in agriculture generate linkages to industry, amplifying overall growth (Johnston & Mellor, 1961; Yin et al., 2024; Singagerda et al., 2025).

Current Methodologies for Attracting Investments

Methodologies for attracting investments include policy incentives, infrastructure development, and institutional reforms. Common approaches involve tax holidays, subsidies, land access facilitation, and public-private partnerships (PPPs). The World Bank and FAO emphasize blending public funding with private capital to de-risk investments.

In Ukraine, strategies incorporate SWOT and PEST analyses to identify priority investors and create investment platforms for rural development (Vdovenko et al., 2023; Khoshimov et al., 2024). Perpetual Inventory Method (PIM) models estimate capital stock needs for productivity targets. In Africa, export-oriented FDI policies and human capital development maximize spillovers (SADC studies). McKinsey's framework for agricultural transformations stresses farmer income-focused plans, flexible models, and stakeholder alignment to attract champions and scaling investments. Blended finance and guarantees (e.g., World Bank projects) catalyze private credit for smallholders.

Existing literature highlights Uzbekistan's transition from a state-led agrarian model to a market-oriented one. World Bank reports (2020-2022) emphasize that reforms since 2017, including quota abolition and land allocation to horticulture, have boosted productivity in fruits and vegetables. The EU-supported Agriculture Development Strategy 2020-2030 prioritizes nine pillars: food security, favorable agribusiness climate, reduced state role, rational resource use, and extension services. Studies on FDI in developing countries (e.g., FAO and OECD) show that secure land tenure, transparent incentives, and infrastructure investments significantly enhance agricultural productivity (Farooq et al., 2025). Challenges in Uzbekistan include water scarcity, informal land use, and limited access to credit. Global best practices from countries like Vietnam

and Ethiopia demonstrate that targeted incentives, digital platforms, and climate-smart practices attract private capital. This review identifies gaps in Uzbekistan's current methodology, such as inconsistent incentives and weak investor protections, which the proposed improvements address.

Methodology

This study employs a mixed-methods approach, combining secondary data analysis from official sources (State Statistics Committee of Uzbekistan, World Bank, FAO), policy documents (Agriculture Development Strategy 2020-2030), and case studies of successful reforms. Quantitative data on investment inflows, productivity trends, and GDP contributions (2017-2025) are analyzed to assess impact. Qualitative insights draw from expert reports on challenges and best practices. The proposed methodology is developed through comparative analysis with developing countries that successfully attracted agricultural investment (e.g., via land reforms and incentives). Recommendations are validated against Uzbekistan's context, focusing on feasibility and alignment with national strategy.

Results and Discussion

Challenges in Attracting Investments to the Agrarian Sector

Despite potential benefits, several barriers hinder investment attraction:

Risk and Uncertainty: Climate variability, price volatility, and political instability deter investors (FAO reports).

Structural Issues: Land fragmentation, weak tenure rights, and poor infrastructure limit scalability (Polish and Ukrainian studies).

Regulatory and Institutional Barriers: Complex laws, bureaucracy, and corruption reduce attractiveness (various developing country analyses).

Absorptive Capacity: Limited human capital and technology adoption constrain FDI benefits (meta-regression on food security).

Environmental and Social Risks: Unsustainable practices lead to land grabbing, deforestation, and reputational damage.

Low Returns Perception: Agriculture is often seen as high-risk/low-return compared to other sectors.

These challenges result in underinvestment, with only 4% of development assistance historically allocated to agriculture in developing countries (World Bank, 2007).

Strategies and Improvements to Methodologies

To improve methodologies, literature suggests targeted, evidence-based reforms:

Policy Enhancements: Prioritize incentives for sustainable practices (e.g., carbon credits, certifications) and human capital investment to boost absorptive capacity.

Technology Integration: Leverage AI, IoT, and precision agriculture to demonstrate scalability and efficiency, attracting agritech investors.

Risk Mitigation: Use blended finance, guarantees, and insurance; diversify portfolios across value chains.

Stakeholder Engagement: Build PPPs, investment platforms, and interactive marketing to align interests (Koval et al.).

Sustainability Focus: Adopt regenerative agriculture and ESG criteria to access impact investors and emerging markets like carbon trading.

Data-Driven Approaches: Employ advanced analytics (e.g., semantic modeling) and monitoring for transparent impact measurement. Successful cases, such as Morocco's high-value crop shifts and Ethiopia's transformation agency, show that income-focused, flexible plans accelerate investment and growth.

Current Challenges and Investment Trends

The Key Trends Table provides a snapshot of Uzbekistan's economic indicators related to the agrarian sector, highlighting growth in foreign direct investment (FDI), stable agricultural contributions to GDP, employment figures, surging fruit and vegetable exports, and advancements in water-saving irrigation technologies.

Table 1

Key Trends Table (2024-2025)

Indicator	2024 Value	2025 Progress	Source
Total FDI	\$12 billion	Q1: \$8.7B (+20% YoY)	State Dept, Times CA
Agri GDP Contribution	~25%	Stable ~23-25%	World Bank, Trade.gov
Employment in Agri	~26%	~3.6M workers	Ministry of Agriculture
Fruit/Veg Exports	~\$2B	+30-40%, >\$3B projected	Statistics Agency
Irrigated Area with Water-Saving Tech	Growing	2.6M ha (60%)	Ministry of Water

Source: Compiled by the author.

The table underscores Uzbekistan's agrarian progress under the 2020-2030 Strategy: FDI surges support infrastructure, exports drive revenues, and tech adoption enhances sustainability. Challenges include data inconsistencies (e.g., FDI vs. total investment) and slower irrigation rollout. Positive trajectory: 20-40% growth in key areas, aligning with 5-7% GDP targets.

Investment in Uzbekistan's agrarian sector has grown but remains inadequate. FDI inflows to agriculture are low compared to total FDI (\$2.5-11.9 billion annually, mostly in energy). Key challenges include:

- Land tenure insecurity (state-owned agricultural land limits long-term investment).

- Water scarcity and inefficient irrigation.

- Limited access to finance for smallholders.

- Bureaucratic barriers and weak enforcement of incentives.

Recent reforms (e.g., 10-year horticulture leases, \$100 million in loans) have increased productivity in fruits/vegetables, with exports rising and private investment leveraged (e.g., USAID projects yielded \$23 million in co-financing).

Proposed Improved Methodology

The enhanced methodology comprises five pillars:

Table 2

The enhanced methodology five pillars

Pillar	Key Components	Expected Impact
1. Strengthen Land Tenure Security	Grant long-term transferable rights; digitize land registries; reduce expropriation risks.	Increase investment in machinery and soil improvements by 20-30%.
2. Targeted Fiscal and Financial Incentives	0% corporate tax for crop producers; subsidies for climate-smart tech; green bonds for sustainable projects.	Attract \$500-800 million in annual FDI to agriculture.
3. Public-Private Partnerships and	PPPs for irrigation modernization; agricultural free zones (Bukhara,	Improve water efficiency and productivity by 15-25%.

Infrastructure	Karakalpakstan).	
4. Digital Investor Platforms	Online matchmaking portals; one-stop shops for permits and incentives.	Reduce transaction costs and speed up project approvals.
5. Capacity Building and Extension Services	Modernize research/extension; train farmers in sustainable practices.	Boost yields in horticulture and livestock by 20%.

Source: Compiled by the author.

Projected Outcomes

Implementation could raise agricultural productivity by 20-30%, contributing to 5% sector growth and higher GDP impact. FDI could double in agriculture, creating jobs and enhancing exports.

Conclusion

Uzbekistan's agrarian sector holds immense potential for economic growth through targeted investment attraction. The proposed methodology building on the 2020-2030 Strategy addresses key barriers via secure tenure, incentives, partnerships, digital tools, and capacity building. Successful adoption will enhance productivity, ensure food security, and drive inclusive growth. Policymakers should prioritize implementation with international support to realize these benefits.

The literature underscores that improved methodologies for attracting investments emphasizing sustainability, technology, risk-sharing, and inclusive policies can significantly enhance economic growth through the agrarian sector. While FDI and public investments yield substantial benefits, outcomes depend on host country conditions like institutions and human capital. Future research should focus on context-specific, longitudinal evaluations to refine these methodologies, ensuring investments contribute to resilient, equitable growth amid climate and population pressures.

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