INVESTMENT EFFICIENCY IN VIETNAM'S AGRICULTURAL SECTOR

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Abstract: ***Agriculture remains a cornerstone of Vietnam's economy, playing a vital role not only in securing the nation's food supply but also in sustaining the livelihoods of a large portion of the rural population. As the country becomes more deeply integrated into the global economy and faces mounting challenges from climate change, improving the efficiency of agricultural investment has emerged as a key priority for sustainable development. This paper takes a closer look at how effectively investment is being used in Vietnam's agricultural sector, with a particular focus on how total social investment capital contributes to agricultural value-added. By offering data-driven insights, the study aims to help shape better-informed investment policies that support the broader goals of agricultural restructuring and long-term rural development.***

• Keywords: *investment efficiency, agriculture, farmers, rural development.*

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1. Overview of investment efficiency in agriculture

Investment efficiency in the agricultural sector is reflected through its impact on economic growth, social development, and environmental protection. This concept highlights the relationship between capital investment costs and the outcomes achieved in terms of agricultural economic growth, improved social indicators, enhanced livelihoods for farmers, and positive environmental changes. In other words, investment efficiency in agriculture captures the relationship between the benefits gained and the costs incurred from investing in the sector.

To assess economic efficiency, the Incremental Capital-Output Ratio (ICOR) is commonly used. ICOR is a composite economic indicator that reflects the amount of additional investment capital required to generate an additional unit of total output. The ICOR varies depending on the socio-economic conditions of each period, as well as on the structure of investment and the effectiveness of capital utilization. A lower ICOR indicates higher investment efficiency, while a higher ICOR implies lower efficiency.

Formula:

$$ICOR = \frac{V_1}{G_1 - G_0}$$

ICOR: Incremental Capital Output Ratio (Efficiency of investment capital use);

V1: Realized investment capital in the study period;

G1: Gross Domestic Product (GDP) in the study period;

G0: Gross Domestic Product (GDP) in the period preceding the study period.

Typically, in the context of developing countries like Vietnam, an ICOR value of 3.0 or lower is considered efficient. In developed countries, this ratio tends to be higher due to the greater complexity of their economies; however, it generally does not exceed 5.0.

2. Status of Investment in Vietnam's Agricultural Sector

Investment in Vietnam's agricultural sector during the period 2009-2024 has shown a strong upward trend, reflecting the growing attention of the State and society to the role of this sector in economic development and social welfare.

Table 1: Total Social Investment Capital in Agriculture 2009-2024

Year	Value (billion VND)	Year	Value (billion VND)
2009	38.834	2017	109.907
2010	55.904	2018	115.601
2011	59.495	2019	121.219
2012	64.047	2020	128.415
2013	69.204	2021	126.142
2014	72.985	2022	138.895

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Year	Value (billion VND)	Year	Value (billion VND)
2015	82.734	2023	143.713
2016	92.483	2024*	241.754

Source: General Statistics Office

Between 2009 and 2015, investment in Vietnam's agricultural sector saw a remarkable rise from VND 38,834 billion in 2009 to VND 82,734 billion just six years later. From 2016 to 2020, the trend continued steadily, with capital increasing each year, reaching VND 128,415 billion by 2020. In 2021, however, investment dipped slightly to VND 126,142 billion, largely due to the financial strain and disruptions caused by the COVID-19 pandemic.

The momentum picked up again in 2022, with agricultural investment climbing to VND 138,895 billion, followed by a modest rise to VND 143,713 billion in 2023. What stands out most is the projected leap in 2024, with total investment expected to hit VND 241,754 billion almost double the previous year's figure. This surge likely reflects a stronger push from policymakers to channel more resources into agriculture as a response to pressing challenges like climate change, food security, and the ongoing restructuring of the sector.

Taken as a whole, these figures suggest that agriculture is gaining a more prominent place in Vietnam's broader economic strategy. Still, a crucial question remains: Is this growing investment translating into real efficiency and sustainable outcomes? That's what the following sections of this paper aim to uncover.

3. Status of Agricultural Development in Vietnam

Thanks to supportive government policies, Vietnam's agricultural sector has continued to grow in both scale and production capacity, maintaining a relatively high rate of growth. This progress has reinforced the sector's crucial role as a backbone of the national economy and a key pillar in ensuring long-term food security.

Table 2: Total Agricultural Gross Output 2009-2024

Year	Gross Output (billion VND)	Year	Gross Output (billion VND)
2009	219.887,18	2017	898.214,12
2010	232.700,00	2018	931.986,97
2011	245.900,00	2019	952.490,68
2012	254.260,60	2020	983.732,38
2013	801.200,00	2021	1.012.260,62
2014	830.000,00	2022	1.046.272,57
2015	858.400,00	2023	1.086.344,81
2016	870.700,00	2024	1.122.194,19

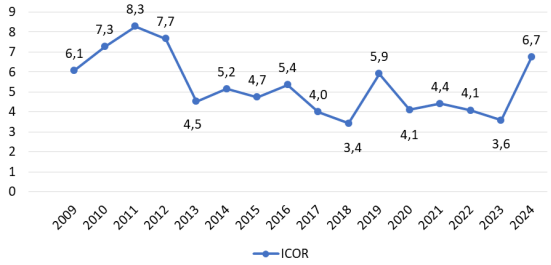
Source: Report by the Ministry of Agriculture and Rural Development (MARD)

The data presents a positive picture of the development of Vietnam's agricultural sector over the past 15 years. In 2009, the total agricultural production value stood at just over VND 219 trillion, but this figure has steadily increased year after year. Since 2013, the sector has maintained a stable growth trajectory. Notably, during the 2020-2024 period, despite challenges such as pandemics and climate change, agricultural production value continued to rise, reaching over VND 1.1 quadrillion in 2024. This steady growth highlights not only the strong inherent potential of Vietnam's agriculture but also the sector's ongoing efforts to modernize and move toward greater sustainability.

4. Investment Efficiency in Vietnam's Agricultural Sector

In Vietnam, the ICOR is calculated by the national statistical agency for the entire economy, encompassing public investment, investment by state-owned enterprises, the non-state sector, and foreign-invested enterprises. The ICOR is not disaggregated by economic sectors, largely because public investment is primarily directed toward infrastructure, which tends to generate indirect rather than immediate economic returns.

Figure 1: ICOR of the Agricultural Sector 2009-2024



Source: Reports by the Ministry of Agriculture and Rural Development (MARD) and the General Statistics Office (GSO)

In practice, the ICOR in the agricultural sector has consistently been lower than the national average. Over the observed period, the economy-wide ICOR averaged around 7.5, while the

agricultural sector's ICOR stood at a lower and more favorable 5.1. This suggests that investment in agriculture has been more stable and efficient compared to the broader economy, highlighting the sector's critical role in maintaining investment efficiency overall.

The ICOR of Vietnam's agricultural sector during the 2009-2024 period shows a gradually declining trend and remains relatively low compared to the national average, fluctuating between 3.42 and 5.50 across the years. Notably, between 2011 and 2022, agricultural investment accounted for only about 4.3% to 6.2% of total realized social investment, yet the sector contributed approximately 12% to 16% of the country's GDP. This highlights that although agriculture received a smaller share of investment, it delivered the highest returns, whereas sectors such as industry, construction, and services despite their significant contributions to economic growth required much higher levels of investment.

Specifically, during the 2009-2010 period, the ICOR of the agricultural sector ranged from 4.6 to 6.1, which was lower than the national ICOR of 6.6 to 9.2. This indicates that even with limited capital input, the agricultural sector achieved relatively efficient growth. From 2011 to 2015, the sector's ICOR continued to decline and stabilized around 4.5 to 5.0.

The 2016-2020 period marked a significant improvement in investment efficiency, with the ICOR dropping below 4.0 and reaching its lowest point of 3.42 in 2019. This decline reflects more effective capital utilization, possibly resulting from technological innovation, structural reforms, or gains in productivity.

Between 2021 and 2023, the ICOR of the agricultural sector remained relatively stable, fluctuating slightly between 3.6 and 4.1, indicating continued high efficiency. Compared to the national ICOR, agriculture has maintained greater stability, underscoring its resilience and sustainable growth potential in the face of broader economic fluctuations.

5. General assessment

In recent years, total social investment in Vietnam's agricultural sector has witnessed many positive changes, contributing to increased production, improved productivity, and higher incomes for rural populations. The ICOR of the agricultural sector has remained more stable and efficient than that of the overall economy, underscoring the sector's role in maintaining investment efficiency. However, from a broader perspective, the effectiveness of agricultural investment still falls short of fully reflecting the sector's potential and importance within the national economy.

On the one hand, investment in agriculture has helped improve production infrastructure, advance mechanization, and promote the application of science and technology in farming. Specialized farming areas and agricultural value chains have emerged, contributing to higher productivity and added value within supply chains. Nevertheless, much of the investment remains fragmented, lacking focus, and has not yet created a strong, sustainable driving force for development.

Total social investment in agriculture remains low compared to actual needs and is disproportionate to the sector's contribution. Estimates suggest that current investment levels meet only about 60% of demand, indicating a significant resource gap. This shortfall is especially concerning in the context of Vietnam's agriculture facing challenges such as climate change, market volatility, and the pressing need for structural transformation. Under such circumstances, existing investment levels are insufficient to generate meaningful improvements in quality and resilience.

Moreover, the effectiveness of capital use is hindered by several factors. In the public investment sector, inefficiencies in resource allocation, planning, and management mechanisms have resulted in fragmented, overlapping, and low-impact investments. Meanwhile, private investment is constrained by difficulties in accessing land and credit, along with a lack of long-term policy support. The absence of attractive incentive mechanisms has also discouraged private sector participation in agricultural and rural infrastructure projects, which typically involve long payback periods and high risk.

These limitations have reduced the overall efficiency of agricultural investment, hindered the sector's sustainable development, and weakened the

competitiveness of Vietnamese agricultural products in an increasingly integrated global market.

In conclusion, while total social investment in agriculture in Vietnam has achieved some positive outcomes, there remains significant room for improvement. Enhancing investment efficiency requires not only increasing the scale of capital but also improving allocation quality, strengthening institutional frameworks, and promoting public-private partnerships to mobilize diverse resources for sustainable agricultural development.

6. Recommendations and Solutions

Firstly, *strengthening institutional frameworks and investment governance:* Review and revise regulations related to public investment in agriculture to ensure greater transparency, efficiency, and alignment with actual needs. Enhance institutional capacity at the local level to enable more evidence-based planning, allocation, and monitoring of investment, thereby avoiding fragmented and overlapping projects. Develop mechanisms for inter-sectoral and inter-regional coordination, particularly in the implementation of public investment projects related to agricultural and rural infrastructure.

Secondly, *mobilizing and Diversifying Investment Resources:* Establish stronger incentive mechanisms to attract private investment, including tax incentives, credit support, risk guarantees, and streamlined administrative procedures. Promote public-private partnership (PPP) models in the development of agricultural infrastructure, logistics systems, agro-processing industries, and post-harvest technologies. Public investment should prioritize essential areas that can act as catalysts for private capital, such as irrigation systems, rural transportation networks, and digital transformation in agriculture.

Thirdly, *improving Investment Quality and Efficiency:* Enhance the use of impact assessment and post-investment evaluation tools, with a focus on result-based monitoring. Prioritize projects with strong spillover effects that are closely linked to raw material zones, value chains, and cooperatives. Expand the use of information technology and digital tools in investment planning, management, and monitoring to improve transparency and responsiveness.

Fourthly, *developing Markets and Enhancing Capital Absorption Capacity:* Support the development of farmer organizations, cooperatives, and small agricultural enterprises to improve their capacity to access and utilize investment capital effectively. Strengthen the connection between investment and domestic as well as international markets through trade promotion, traceability systems, and agricultural product quality standards. Prioritize investment in human resource development in rural areas, especially in skills related to value chain management, production planning, and market access.

Conclusion

Vietnam's agricultural sector has demonstrated steady growth and increasing investment over the past 15 years, affirming its essential role in national food security, rural livelihoods, and economic stability. Despite limited capital allocation compared to other sectors, agriculture has consistently shown higher investment efficiency, as reflected in its relatively low ICOR. However, challenges remain in fully unlocking the sector's potential, including fragmented public investment, limited private sector engagement, and institutional bottlenecks. To achieve more sustainable and impactful outcomes, it is crucial to improve the quality of investment through better planning, monitoring, and governance, while also promoting public-private partnerships and strengthening market linkages. As Vietnam faces mounting pressures from climate change, food insecurity, and global economic volatility, a more strategic and coordinated investment approach will be essential to ensuring the long-term resilience and modernization of its agricultural sector.

References:

Khiên, T. V., & Trãi, N. V. (2010). Methods for Calculating Investment Efficiency. Statistical Science Information Journal, (2).

Nga, N. T. N. (2019). Doctoral Dissertation in Economics: Public Investment Efficiency in the Agricultural Sector in Vietnam.

Nguyệt, N. B., & Phương, T. Q. (2007). Investment Economics Textbook. National Economics University Publishing House, Hanoi.

Mani, H., & Bhalachandran, G. (2011). Public Investment in Agriculture and GDP Growth: Another Look at the Inter-sectoral Linkages and Policy Implications.

Ministry of Agriculture and Rural Development (MARD). (2008-2024). Annual Reports on the Implementation Results of the Agricultural and Rural Development Sector Plans.

https://www.gso.gov.vn/dau-tu-va-xay-dung/

https://www.gso.gov.vn/nong-lam-nghiep-va-thuy-san/

https://www.gso.gov.vn/px-web-2/?pxid=V0402&theme=%C4%90%E1%BA%A7u%20t%C6%B0