

EVALUATING THE POLICY FRAMEWORK FOR SUPPORTING AGRICULTURAL START-UPS IN VIETNAM

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ABSTRACT

Agriculture constitutes a fundamental pillar of national development, serving as a sustainable foundation for socio-economic stability. In the context of rapid scientific and technological advancement, high-tech agriculture has increasingly been recognized as a strategic solution to modernize the agricultural sector. Within this trajectory, agricultural entrepreneurship, particularly innovative start-ups, has emerged as a significant component of Vietnam's broader national entrepreneurship movement. Notwithstanding its potential, the agricultural sector poses substantial challenges for start-up enterprises. Agricultural start-ups typically require high initial capital investment, while the capital recovery period is prolonged and the rate of return often remains lower than that of other sectors. Furthermore, agricultural investment is exposed to considerable risks arising from unpredictable natural disasters, climate variability, and market fluctuations. Various policies to foster agricultural start-ups has promulgated in Vietnam. Based on a systematic assessment of policies supporting agricultural start-ups in Vietnam during the period 2015-2025, this article examines the existing limitations of the current legal and policy framework and proposes recommendations to enhance its effectiveness in the forthcoming period.

Keywords: Agriculture, start-ups, policy, Vietnam.

1. INTRODUCTION

Agriculture plays a fundamental role in the economies of many countries [1]. It not only meets domestic and export demand for food and agricultural products but also supplies raw materials for the processing industry and inputs for various industrial sectors. In Vietnam, agriculture accounts for approximately 11.64% of GDP and provides the primary livelihood for more than 60% of the rural population, thereby contributing to income stability and rural welfare. Moreover, the agricultural sector often acts as a pillar of the economy during periods of crisis, supporting overall economic growth and maintaining macroeconomic stability. In 2025, Vietnam's economy grew by 8.02%. Within this growth, the agriculture, forestry, and fisheries sectors expanded by 3.78%, which is the highest rate recorded in the past decade, contributing 5.30% to the overall increase in the economy's total value added [2]. Recognizing agriculture as both a national comparative advantage and a key pillar of the economy, Vietnam has consistently prioritized agricultural development [3]. The country aims to build a modern and comprehensive agricultural sector characterized by high efficiency and greater value added. This orientation emphasizes the development of smart agriculture, deeper international integration, stronger resilience to climate change, and sustainable value creation. Within this context, enterprises play a crucial role in applying science and technology and transforming production and business models toward commodity-based production and sustainable value creation.

In the context of geopolitical volatility and intensifying global competition, entrepreneurship has emerged as a key driver of economic growth, job creation, and improvements in quality of life. In developing countries, entrepreneurship is not only a new development pathway but also an inevitable trend for enhancing self-reliance and achieving sustainable development [4]. A large body of research shows that higher levels of entrepreneurial activity contribute to greater social welfare and poverty reduction [5]. In Vietnam, innovative entrepreneurship has been identified as a major policy orientation, and entrepreneurial activities in the agricultural sector is increasingly recognized as a promising development trend.

In the context of the Fourth Industrial Revolution, technological applications in agriculture are creating new opportunities for innovative start-ups by enabling the development of novel products, improving productivity, reducing production costs, and mitigating dependence on weather conditions. At the same time, global demand for food continues to rise as the world population grows. It is estimated that by 2050, global food demand will increase by 30-62% as the world population reaches 9.8 billion people [6]. Meanwhile, the growing impacts of climate change present significant challenges for sustainable agricultural development. Rising consumer awareness of health and environmental issues has also accelerated the expansion of organic and circular agriculture. In response, many firms have increasingly shifted their investment toward the agricultural sector, particularly in high-tech agriculture, green agriculture, and agricultural services.

Despite these opportunities, agriculture remains less attractive to investment than other sectors. In 2024, 1,622 enterprises were newly established in the agriculture, forestry, and fisheries sector; in 2025, this number increased to 1,871 enterprises, representing a growth of 15.4% compared with 2024. However, these enterprises accounted for only 0.96% of the total number of newly established firms nationwide. In the same year, 269 enterprises exited the sector [2], [7]. These figures suggest that although entrepreneurial activity in agriculture shows signs of growth, its overall scale remains limited and many firms face difficulties sustaining operations after establishment. Start-up failure often occurs during the early years, a critical stage that largely determines long-term survival [8]. Once firms successfully overcome this stage, their profitability and growth potential tend to increase substantially. Therefore, strengthening the policy framework supporting agricultural entrepreneurship is essential to help start-ups overcome early-stage barriers and foster entrepreneurial development in the agricultural sector.

Despite the growing body of literature on entrepreneurship and agricultural development, existing studies in Vietnam have primarily focused on individual policy instruments or specific aspects of the entrepreneurial ecosystem, such as access to finance or technology adoption. There remains a lack of a comprehensive and systematic assessment of the overall policy framework supporting agricultural start-ups, particularly in terms of how different policy domains interact and whether they collectively address the structural constraints faced by start-ups in the agricultural sector.

To address this gap, this study is guided by the following research questions: (1) How has the policy framework supporting agricultural start-ups in Vietnam evolved during the period 2015-2025 across key policy domains? (2) To what extent does the current policy framework adequately address the structural barriers faced by agricultural start-ups, and what are its main limitations? Accordingly, this study adopts a systematic policy assessment approach to analyze major policy instruments across key domains including land access, credit, investment incentives, science and technology, and agricultural insurance in order to evaluating their effectiveness in supporting the development of agricultural start-ups in Vietnam.

2. THEORETICAL BACKGROUND

2.1. The concept of start-up enterprises

Entrepreneurship has attracted significant attention from scholars worldwide; however, there is currently no universally accepted definition of the concept. Since the late twentieth century, the rapid advancement of information technology and the emergence of new business solutions have increasingly linked entrepreneurship with creativity, innovation, and the pursuit of high-value opportunities [9], [10]. This evolution has led to the concept of innovative entrepreneurship, which emphasizes entrepreneurial activities grounded in creative ideas, technological applications, and a high tolerance for risk. Compared with traditional entrepreneurship, innovative entrepreneurship is therefore closely associated with technological innovation, knowledge-based resources, and strong scalability potential [11].

From this perspective, the concept of innovative start-ups has also been interpreted in various ways, although the differences among definitions are relatively minor. The OECD defines start-ups as innovative enterprises that address emerging problems or create new market demand through the development of novel business models [12]. Start-ups are also commonly understood as organizations that develop new products or services under conditions of high uncertainty while searching for scalable and sustainable business models [13]. Similarly, Skawińska and Zalewski described start-ups as young, small, and independent enterprises characterized by innovation and creativity, conducting research and development activities to solve real-world problems and generate future-oriented solutions, supported by attractive business models and capable entrepreneurial teams [14].

In Vietnam, innovative start-up enterprises within the category of small and medium-sized enterprises (SME) are defined as SMEs established to implement business ideas based on the exploitation of intellectual property, technology, and new business models with high growth potential [15]. Accordingly, an innovative start-up enterprise can be understood as a business entity that initiates its operations by leveraging intellectual property, technology, and innovative business models to create high economic value and achieve rapid growth.

2.2. Characteristics of entrepreneurship in the agricultural sector

Agriculture is the fundamental sector of material production in society, utilizing crops and livestock as primary inputs to produce food, agricultural commodities, and raw materials for industrial production [16]. Entrepreneurship in the agricultural sector involves a high level of risk due to natural disasters and unpredictable weather conditions. These risks become even more pronounced in the context of climate change, which increasingly threatens the stability and sustainability of agricultural production [17].

In addition, agricultural production is strongly influenced by biological growth cycles and seasonal factors, which extend investment periods and increase uncertainty. Longer production cycles heighten the exposure of agricultural activities to fluctuations in natural conditions and the broader macroeconomic environment, while also delaying capital recovery for investors. Seasonality may also lead to labor shortages during peak production periods and underemployment during off-seasons, thereby reducing production efficiency. Moreover, seasonal harvests often result in temporary oversupply, leading to price declines, higher storage costs, and potential deterioration in product quality during prolonged storage [18]. These characteristics represent inherent features of agricultural production that cannot be entirely eliminated but can only be mitigated.

Furthermore, investment in agriculture typically requires substantial capital while generating relatively lower returns compared with other sectors. Agricultural entrepreneurship, particularly innovation-driven entrepreneurship, often involves high entry

costs and long investment cycles. For example, investments in land acquisition and land improvement, research on crop and livestock varieties, irrigation infrastructure, and the application of science and technology all require considerable financial resources. At the same time, enterprises must manage multiple risks, including adverse weather conditions, disease outbreaks, environmental pollution, and market fluctuations.

Meanwhile, demand for agricultural products tends to be relatively stable and exhibits low price elasticity. Even as income levels increase, demand for agricultural commodities rises only to a certain threshold. In addition, agricultural products are often highly substitutable, which intensifies competition in the market [19]. Consequently, agricultural start-ups face numerous structural challenges during their early stages of development. Their survival and growth depend not only on strong internal capabilities such as perseverance, knowledge, and adaptability but also on effective external support mechanisms.

2.3. The role of policies supporting entrepreneurship in the agricultural sector

Theories on entrepreneurship policy highlight the role of governments and institutions in supporting the entrepreneurial process through targeted interventions. Entrepreneurs typically operate under conditions of uncertainty and resource constraints. Consequently, entrepreneurship support policies aim to reduce these barriers by providing essential resources and fostering a favorable environment for the development and implementation of business ideas, thereby facilitating entrepreneurial opportunities even when business models are not yet fully defined [20], [21].

Previous studies emphasize that entrepreneurial success depends not only on individual characteristics but also on broader institutional, economic, and social conditions. Simón-Moya et al. argued that the entrepreneurial environment plays a crucial role in shaping entrepreneurial outcomes [22]. Similarly, Kaye and Al-Madadha showed that developed economies promote entrepreneurship through stable institutional frameworks, well-developed infrastructure, and effective education systems [23]. More specifically, Kuckertz and Wagner emphasized the importance of resource availability within the entrepreneurial environment, explaining why policy support programs can significantly influence entrepreneurial activities [24]. Policy instruments such as venture capital financing, access to credit, intellectual property protection, and entrepreneurial skills training can enhance both the motivation and the capacity of individuals to engage in entrepreneurship [23], [25].

Accordingly, policies supporting entrepreneurship play an important role in shaping entrepreneurial readiness by providing the resources, institutional conditions, and supportive networks necessary for business creation. Such policies extend beyond financial assistance to include interactions among multiple stakeholders, including government agencies, entrepreneurial networks, educational institutions, and business support organizations. This integrated approach contributes to the development of a dynamic entrepreneurial ecosystem, in which key components of the entrepreneurial process evolve in a coordinated manner [26]. To assist developing countries in strengthening their entrepreneurial environments, the United Nations Conference on Trade and Development (UNCTAD) has developed the Entrepreneurship Policy Framework. This framework identifies six areas for fostering entrepreneurship: (1) developing a national entrepreneurship strategy; (2) improving the regulatory environment; (3) strengthening entrepreneurship education and skills development; (4) facilitating technology exchange and innovation; (5) enhancing access to finance; and (6) promoting entrepreneurship awareness while supporting the formation of clusters, industry networks, and business associations [27].

3. METHODOLOGY

This study employs a qualitative research approach based on a systematic policy assessment to examine the policy framework supporting agricultural start-ups in Vietnam during the period 2015-2025. The study applies analytical and synthesis methods to systematize the collected policies into key domains, including land access, credit access, investment incentives, technology, production linkages, and agricultural insurance. A comparative approach is employed to trace policy evolution over time and identify changes in regulatory orientation. Based on this framework, the study identifies strengths and limitations of the current policy system and provides recommendations for improvement.

Secondary data were collected from official legal documents and policy instruments issued by state authorities in Vietnam. These include Laws, Decrees, Decisions of the Prime Minister, and relevant Circulars providing implementation guidelines. To ensure relevance and consistency, the study applies the following inclusion criteria: (i) documents issued within the period 2015–2025; (ii) policies directly or indirectly related to supporting start-ups, and agricultural development; and (iii) documents with nationwide applicability. Documents were excluded if they: (i) were superseded or no longer in effect at the time of analysis; (ii) addressed highly specific local programs without broader policy implications; or (iii) were not directly related to the core policy domains examined in this study. The document selection process was conducted through official government portals and databases including Government Portal, Ministry-level legal databases. This process resulted in a dataset of key policy instruments representing major policy domains relevant to agricultural start-ups.

4. RESULTS

4.1. The formation process of policies supporting start-up enterprises in the agricultural sector in Vietnam

4.1.1. Policies supporting start-up enterprises

Innovative entrepreneurship is considered one of the key drivers of economic growth and national competitiveness. Therefore, in recent years, numerous policies and initiatives have been issued to support the development of the entrepreneurial ecosystem in Vietnam. In 2016, Resolution No. 35/NQ-CP dated May 16, 2016 on supporting and developing enterprises to 2020 was promulgated, setting the objective of building a community of one million enterprises. In the same year, Decision No. 844/QĐ-TTg dated May 18, 2016 approved the Project “Supporting the National Innovation Initiative to 2025.” This decision is regarded as a foundational policy document for the development of the innovative start-up ecosystem, aiming to create a favorable environment for individuals, organizations, and start-up enterprises with high growth potential based on the exploitation of intellectual property, technology, and innovative business models. The project targets individuals and groups with start-up ideas, start-up enterprises operating for no more than five years, as well as organizations providing start-up support services. In 2021, Decision No. 188/QĐ-TTg dated February 9, 2021 was issued to amend and supplement several provisions of Decision No. 844/QĐ-TTg, emphasizing the establishment of innovation centers and the expansion of the national start-up network, thereby strengthening linkages among stakeholders within both the domestic and international entrepreneurial ecosystem.

An important milestone in the development of the legal framework supporting entrepreneurship was the promulgation of the Law on support for small and medium-sized enterprises in 2017. For the first time, the concept of innovative start-up enterprises was formally recognized within the legal system, while support mechanisms such as intellectual property consulting, scientific research and technology development, trade promotion, and

network connectivity were institutionalized. Subsequently, Decree No. 80/2021/NĐ-CP dated August 26, 2021 was issued to provide detailed guidelines for implementing several provisions of the Law on support for small and medium-sized enterprises. The decree specifies various forms of support for innovative start-up enterprises, including incubation facilities, co-working spaces, consulting on standards and technical regulations, product testing and improvement, specialized training, as well as information provision and start-up network connections.

To promote investment in start-ups, Decree No. 38/2018/NĐ-CP dated March 11, 2018 was issued. This decree allows the establishment of start-up investment funds based on capital contributions from investors to support promising start-up projects. Currently, approximately 35 start-up investment funds with total capital exceeding VND 400 billion have been established under this mechanism, alongside around 200 foreign venture capital funds seeking and supporting start-up enterprises in Vietnam. In addition, the Small and Medium Enterprise Development Fund, established under Decision No. 601/QĐ-TTg dated April 17, 2013, has implemented financial support programs for start-ups, particularly those participating in industry clusters and value chains.

Policies supporting business incubation activities have also been increasingly emphasized. The Law on support for small and medium-sized enterprises encourages the establishment of incubation facilities, technical support centers, and co-working spaces through public-private partnership models. Accordingly, numerous start-up support programs have been implemented at both the central and local levels. To date, Vietnam has established approximately 20 innovation start-up support centers and nearly 100 incubation facilities across different localities.

Furthermore, several programs have been introduced to promote entrepreneurship among specific groups. These include Decision No. 897/QĐ-TTg approving the Program “Supporting youth entrepreneurship for the period 2022–2030” and Decision No. 1665/QĐ-TTg dated October 30, 2017 approving the Project “Supporting students’ entrepreneurship to 2025.” In addition, the Ministry of Science and Technology has established the National Innovation and Start-up Support Center to strengthen connections and develop the start-up network nationwide. Collectively, these policies have gradually contributed to the formation and development of Vietnam’s innovative start-up ecosystem.

4.1.2. Policies supporting enterprises in the agricultural sector

To support enterprises in general and agricultural start-ups in particular, the Government of Vietnam has introduced a wide range of policies covering land access, agricultural credit, investment incentives, high-tech agriculture development, production linkages, and agricultural insurance. These policies have gradually established a legal framework and a more enabling environment for investment and innovation in the agricultural sector (*see Table 1*).

Table 1. Policy framework for agricultural start-ups in Vietnam during the period 2015 - 2025

Area	Key policies	Main contents	Key limitations
Land access	- Land Law No. 31/2024/QH15 - Land Law No. 45/2013/QH13	Expands land accumulation mechanisms: broader scope for land-use right exchange; higher ceilings on land transfers; allows economic organizations to acquire agricultural land-use rights; enables access to land beyond allocation limits	No clear legal framework for the State to act as an intermediary in leasing land from farmers and subleasing to enterprises; lack of mechanisms to support land consolidation

Area	Key policies	Main contents	Key limitations
Credit	- Decree No. 55/2015/NĐ-CP - Decree No. 116/2018/NĐ-CP - Decree No. 156/2025/NĐ-CP - Decree No. 38/2018/NĐ-CP	Preferential credit with capped interest rates; start-up support funds; establishment of venture capital funds	Limited access due to lack of collateral; small scale of start-ups; underdeveloped agricultural venture capital; weak coordination among financial institutions
Investment incentives	- Decree No. 57/2018/NĐ-CP - Circular No. 53/2022/TT-BTC	Incentives on land rent, taxes, and infrastructure; support for training, R&D, branding, and technology application	Limited financial support; complex administrative procedures; insufficient budget allocation; low investor attractiveness
Science, technology and innovation	- Decision No. 844/QĐ-TTg - Decision No. 188/QĐ-TTg - Decision No. 813/QĐ-NHNN	Support for innovation ecosystem; development of high-tech agriculture; technology transfer; incubation and start-up support centers	Limited R&D capacity; weak linkages among stakeholders; low technology adoption; insufficient commercialization support
Production linkages and value chains	- Decree No. 98/2018/NĐ-CP - Decision No. 1088/QĐ-BNN-KTHT	Promotes cooperation between enterprises and farmers; development of raw material areas and value chains	Unstable linkages; weak contract enforcement; lack of trust among stakeholders
Agricultural insurance	- Decree No. 58/2018/NĐ-CP - Decisions 22/2019, 03/2021, 13/2022/QĐ-TTg	Provides insurance support for crops and livestock; risk-sharing mechanisms	Limited coverage; low participation; strong dependence on local implementation
Entrepreneurship support ecosystem	- Law on SMEs 2017 - Decree No. 80/2021/NĐ-CP - Decision No. 897/QĐ-TTg	Legal recognition of start-ups; incubation, training, networking; support for youth and student entrepreneurship	Fragmented policies; lack of specific policies for agricultural start-ups; overlapping management responsibilities

Regarding land access, Land Law No. 31/2024/QH15 introduces several reforms aimed at promoting the accumulation and consolidation of agricultural land. Land accumulation can be implemented through two main mechanisms: (1) the transfer of agricultural land-use rights, and (2) capital contribution in the form of land-use rights. Compared with Land Law No. 45/2013/QH13, the new law expands the scope of agricultural land-use right exchanges from within the same commune-level administrative unit to within the same provincial-level administrative unit, thereby providing greater flexibility for reorganizing agricultural production. In addition, Land Law No. 31/2024/QH15 increases the ceiling for agricultural land-use right transfers received by individuals to a maximum of fifteen times the local land allocation limit. The law also broadens the group of eligible recipients of agricultural land-use rights to include economic organizations and individuals who are not directly engaged in agricultural production. These changes create more favorable conditions for investors with financial and technological capacity to participate in large-scale agricultural production.

Furthermore, the law clarifies regulations on capital contribution through land-use rights, specifying the rights and obligations of both contributing and receiving parties. While Land Law No. 45/2013/QH13 prohibited land-use right transfers exceeding statutory limits, Land Law No. 31/2024/QH15 allows individuals who require agricultural land beyond the allocated quota to lease land from the State without conducting a land-use right auction or investor selection bidding for land-use projects. The law also standardizes the concept of capital contribution through land-use rights, eliminating previous ambiguities between “capital contribution by the value of land-use rights” and “capital contribution by land-use rights,” thereby clarifying the legal rights and obligations of the parties involved (*see Table 2*).

Table 2. Comparison between the 2013 Land Law and the 2024 Land Law in aspects related to agricultural land access

Criteria	Land Law 2013 (No. 45/2013/QH13)	Land Law 2024 (No. 31/2024/QH15)	Implications
Scope of land-use right exchange	Restricted to within the same commune-level administrative unit	Expanded to within the same provincial-level administrative unit	Enhances flexibility in reorganizing agricultural production
Ceiling on agricultural land-use right transfer	The limit for receiving agricultural land use rights from individuals to no more than 10 times the local land allocation limit	Ceiling increased to up to 15 times the local land allocation limit	Supports land accumulation for large-scale agricultural production
Eligible subjects of land-use rights	Economic organizations are not allowed to receive transfers of rice land, protection forest land, or special-use forest land from households or individuals, except where land-use purpose conversion is approved	Expanding the subjects eligible to receive transfer of rice land use rights to economic organizations and individuals who do not directly produce agriculture	Creates favorable conditions for investors with financial and technological capacity to participate, reducing land abandonment and the inefficient fragmentation of agricultural land.
Distinction between “land concentration” and “land accumulation”	No clear distinction between the two concepts	Clearly distinguishes between: * <i>Land concentration</i> : expansion of agricultural land through land exchange, leasing, or cooperation using land-use rights * <i>Land accumulation</i> : expansion through transfer or capital contribution using land-use rights	Clarifies policy objectives and supports appropriate mechanisms for expanding production scale
Access to land beyond allocation limits	Prohibits transfers exceeding statutory limits	Individuals requiring agricultural land in excess of the allocated limit are allowed to lease land from the State without undergoing land-use right auctions or investor selection bidding procedures.	Increases flexibility in expanding production scale

Regarding access to credit, Decree No. 55/2015/NĐ-CP dated June 9, 2015 on credit policies for agricultural and rural development was issued and subsequently amended by Decree No. 116/2018/NĐ-CP dated September 7, 2018 and Decree No. 156/2025/NĐ-CP dated June 16, 2025. These regulations establish a legal basis for expanding access to preferential credit for entities engaged in agricultural production, including start-up enterprises. Under these policies, interest rates fall within one of the five preferential groups prescribed by the Government, with the maximum rate capped at 6.5%. In certain cases, the State also provides interest rate subsidies to reduce the cost of capital for enterprises. The comparison indicates that Decree No. 156/2025/NĐ-CP introduces several important improvements in terms of credit accessibility, administrative simplification, and policy flexibility (*see Table 3*).

Table 3. Comparison between Decree No. 55/2015/NĐ-CP and Decree No. 156/2025/NĐ-CP on agricultural credit policies

Criteria	Decree No. 55/2015/NĐ-CP	Decree No. 156/2025/NĐ-CP	Implications
Unsecured loan limits	- Individuals/households: up to VND 300 million - Cooperatives/ business households: up to VND 500 million - Farm owners: up to VND 3 billion - Cooperatives: up to VND 5 billion	- Individuals/households: up to VND 300 million - Cooperatives/ business households: up to VND 500 million - Farm owners: up to VND 3 billion - Cooperatives/unions: up to VND 5 billion	Expands access to credit, especially for small-scale producers and start-ups
Administrative procedures	Borrowers without collateral must submit land-use right certificates or confirmation of land status (no disputes) certified by local authorities	Borrowers and credit institutions may agree on submitting land-use right certificates or ownership documents during the loan period	Reduces transaction costs and improves accessibility for SMEs
Debt restructuring mechanisms	Credit institutions may reschedule debt and maintain loan classification in cases of force majeure; may extend new loans based on feasibility and repayment capacity.	Assigns the State Bank of Vietnam to regulate debt restructuring and loan classification; provides guidance on risk provisioning	Reduces financial pressure and supports business continuity during shocks (e.g., disasters, epidemics)
Support for organic and circular agriculture	Not specified	Introduces credit incentives for organic and circular agriculture, equivalent to high-tech and value chain-linked production models	Promotes sustainable agriculture and supports environmentally friendly production models

With regard to investment incentives, Decree No. 57/2018/NĐ-CP dated April 17, 2018 provides mechanisms encouraging enterprises to invest in agriculture and rural areas, including exemptions and reductions in land-use fees, land rent, and water surface rent. Additional support measures include human resource training, market development, investment in agricultural product preservation and processing facilities, support for enterprises providing public services, and investment in rural infrastructure. For agricultural

start-up activities, Circular No. 53/2022/TT-BTC dated August 12, 2022 provides financial support for the development of innovative start-up models in rural areas. Eligible activities include advanced training in technology and technical skills, research contracts with universities and research institutes for experimental product development, and expenditures for packaging design, labeling, advertising, and brand building. Support levels range from 50% to 75% of eligible costs.

To promote the development of high-tech agriculture, the Government has implemented several key policies, including Decision No. 1895/QĐ-TTg dated December 17, 2012 on the High-Tech Agricultural Development Program under the National High-Tech Development Program to 2020; Decision No. 575/QĐ-TTg dated May 4, 2015 on the master plan for high-tech agricultural zones and regions to 2020 with orientation to 2030; and Decision No. 813/QĐ-NHNN dated April 24, 2017 of the State Bank of Vietnam on a credit program encouraging the development of high-tech and clean agriculture. These policies aim to improve productivity and strengthen the competitiveness of the agricultural sector.

To promote cooperation and linkages in agricultural production and marketing, the Government issued Decree No. 98/2018/NĐ-CP dated July 5, 2018 on policies encouraging cooperation and linkages in agricultural production and product consumption. This decree establishes a legal framework for developing cooperative models and production linkages in agriculture. In addition, the project “Pilot Development of Standardized Agricultural and Forestry Raw Material Areas for Domestic Consumption and Export in the Period 2022–2025” was approved under Decision No. 1088/QĐ-BNN-KTHT dated March 25, 2022.

Regarding agricultural insurance, the Government promulgated Decree No. 58/2018/NĐ-CP, together with Decision No. 22/2019/QĐ-TTg, Decision No. 03/2021/QĐ-TTg, and Decision No. 13/2022/QĐ-TTg on the implementation of agricultural insurance support policies. Based on these regulations, local authorities determine the geographical areas and categories of crops and livestock eligible for insurance support.

In addition, in response to the growing demand for innovative entrepreneurship in agriculture, the Central Committee of the Vietnam Farmers’ Union issued the project “Enhancing the role of the Vietnam Farmers’ Union in supporting farmers’ innovative entrepreneurship for the period 2020–2025.” The project focuses on advisory services, training, science and technology transfer, market linkages, and facilitating access to financial resources from the Farmers’ Support Fund and credit institutions. These initiatives contribute to creating more favorable conditions for farmers and other entrepreneurial actors to participate in agricultural production and business development.

4.2. Limitations in policies supporting start-up enterprises in the agricultural sector

First, despite the issuance of numerous policies to support start-up enterprises, including those in the agricultural sector, significant limitations remain in both policy design and implementation. One of the most critical issues is the fragmentation of the policy framework. Current policies supporting start-ups in general, and agricultural start-ups in particular, remain fragmented across numerous legal documents and are administered by different authorities. This fragmentation complicates policy access and reduces implementation effectiveness in practice. Moreover, there are no policy instruments specifically designed for agricultural start-ups, despite the sector’s high exposure to risks associated with natural disasters and unpredictable weather conditions.

Second, a key underlying challenge lies in the gap between policy design and policy implementation. Although policies are often formulated with supportive intentions, their effectiveness is frequently undermined during implementation. In many cases, policy provisions remain general and require further interpretation through subordinate regulations,

leading to inconsistent application across localities and institutions. In addition, implementing agencies and financial institutions retain considerable discretion, which may result in the imposition of additional conditions beyond those stipulated in official policy documents.

The gap between policy design and implementation is particularly evident in credit policies. Although instruments such as Decree No. 55/2015/NĐ-CP aim to improve access to preferential credit, agricultural start-ups continue to face significant barriers in practice. While unsecured lending is formally permitted, commercial banks often require collateral or impose stringent financial conditions that exceed the capacity of small and newly established firms. Several agricultural enterprises have reported difficulties in accessing loans under Decree No. 55/2015/NĐ-CP, as banks often require collateral and impose financial criteria that are not aligned with the scale and capacity of small firms. Similarly, many firms indicate that inventories or agricultural products are rarely accepted as eligible collateral, further constraining access to formal credit. Besides, accessing credit remains procedurally complex, as it requires multiple certificates, registrations, collateral, and other conditions, which discourages enterprises. Notably, the lack of clear regulations and guidance on valuing on-land assets constitutes a major barrier to credit access for both enterprises and farmers. As a result, most agricultural start-ups, typically small in scale, with short operating histories and limited assets, struggle to mobilize capital and often rely on internal or informal financing sources.

In practice, Vietnam has recently seen a growing presence of foreign investment funds; however, agriculture is not a primary target sector for these funds. They tend to focus on start-up projects with a high degree of innovation or advanced technology. For agricultural start-up models, it remains difficult to establish clear criteria for evaluating their success. First, most capital funds prioritize sectors with high growth potential, rapid scalability, and short investment cycles, such as technology and digital services. In contrast, agricultural start-ups typically involve longer production cycles, slower capital recovery, and higher exposure to risks related to weather, diseases, and market fluctuations. Second, many agricultural start-ups operate on a small scale, with limited standardization and unclear performance metrics, making it difficult for investors to assess profitability and scalability. This increases perceived investment risk and reduces their attractiveness to venture capital. Third, the investment structure and financial instruments of existing funds are not well adapted to the needs of agriculture, which often requires patient capital, blended finance mechanisms, or risk-sharing arrangements rather than purely profit-driven, short-term investment models. As a result, despite the presence of multiple investment funds, their sectoral focus and investment criteria do not align well with the financing needs of agricultural start-ups, thereby limiting their actual contribution to the development of this sector.

Third, existing investment incentives are not sufficiently attractive to encourage enterprises to invest in agriculture. One key reason is the limited availability of financial resources. The central government budget has not allocated additional funding for these policies, while local budgets are primarily devoted to infrastructure development. Consequently, financial resources for supporting agricultural investment remain very limited. When enterprises compare the time, effort, and administrative procedures required to access preferential policies with the relatively modest level of financial support provided, many show little interest in participating in these programs.

Fourth, land remains the primary and irreplaceable means of production in agriculture. However, land resources are limited and cannot be expanded, while production demand continues to increase. Although Vietnam has advantages in water resources, agricultural land remains relatively scarce. The average agricultural land area per capita in Vietnam is only about 0.12 hectares, equivalent to approximately one-sixth of the global average. Meanwhile,

the average agricultural production land per capita is about 0.25 hectares, significantly lower than the global average (0.52 hectares) and the regional average (0.36 hectares) [28].

Currently, most agricultural land is owned by farming households and is characterized by small-scale and fragmented holdings. The subdivision of agricultural land parcels is relatively common, particularly in areas where land prices have increased rapidly. This situation leads to severe land fragmentation and creates major obstacles to land accumulation and consolidation for large-scale agricultural production. Enterprises seeking to organize commodity-based production must therefore lease land from multiple farming households under different contractual conditions, making negotiations and consensus-building difficult. In some cases, disputes may arise when households request the early termination of land lease contracts. These challenges are also reflected in practice. For instance, several high-tech agricultural enterprises in Lam Dong have reported difficulties in consolidating land due to fragmented land ownership, as they must negotiate with multiple smallholder farmers under diverse contractual arrangements. This process increases transaction costs and creates risks related to contract stability, particularly when individual households may terminate agreements prematurely.

In addition, some agricultural land parcels are interspersed within residential areas, making it difficult to establish concentrated production zones. This issue is particularly evident in peri-urban districts of Hanoi and Ho Chi Minh City, where agricultural land is increasingly fragmented and embedded within rapidly expanding urban and residential spaces. In these areas, farmland is often located in small, discontinuous plots surrounded by housing, infrastructure, and non-agricultural activities, which constrains the formation of large-scale, contiguous production zones. Under such conditions, preparing land-use plans for state land allocation becomes challenging. Furthermore, there is currently no clear legal framework allowing the State to act as an intermediary in leasing land from farmers and subleasing it to enterprises. Nor are there specific mechanisms supporting enterprises in the process of leasing and consolidating agricultural land. Moreover, the Land Law No. 31/2024/QH15 and the Law on Enterprises No. 59/2020/QH14 allow individuals and organizations to contribute land-use rights as capital to enterprises. However, current legislation does not clearly distinguish between two forms: (1) capital contribution for cooperative production and business activities without transferring the land-use rights of the contributor, and (2) capital contribution for the establishment of a legal entity in which land-use rights are transferred to the receiving enterprise. In practice, this mechanism remains rarely applied. Farmers often fear losing their land-use rights if enterprises perform poorly or face dissolution or bankruptcy, as land-use rights transferred to enterprises would be handled according to legal procedures. Conversely, enterprises may encounter governance difficulties when a large number of shareholders are farmers. Due to the absence of a consistent legal framework and effective coordination mechanisms among relevant stakeholders, capital contribution through land-use rights has not yet been widely implemented.

Fifth, the quality of human resources in agriculture remains limited. The agricultural labor force mainly consists of two groups: formally trained personnel capable of applying science and technology in production, and farmers with relatively low levels of formal education but extensive practical experience. However, the latter group often relies on traditional cultivation methods and faces difficulties in adopting modern technologies. Overall, the proportion of trained labor in agriculture remains very low and has improved only marginally over time. The share of workers aged 15 and above who have received formal training in the agricultural sector has fluctuated between approximately 4.0% and 4.6% since 2010 [7]. In addition, agricultural training institutions, particularly those specializing in high-tech agriculture, still face limitations in research facilities and practical training infrastructure. These constraints contribute to the relatively low productivity of

agricultural labor in Vietnam compared with many countries in the region. According to the report *Asian Development Outlook 2017* by the Asian Development Bank (ADB), agricultural output per worker in Vietnam is only about one-third of that in Indonesia and less than half of that in Thailand and the Philippines.

Finally, information asymmetry and weak institutional coordination further reduce policy effectiveness. Many start-ups, particularly those operating in rural areas, have limited access to information about available support programs or lack the capacity to navigate complex administrative procedures. At the same time, coordination among government agencies, financial institutions, and support organizations remains insufficient, leading to fragmented implementation and increased transaction costs. The absence of robust monitoring and enforcement mechanisms also limits policy accountability, allowing gaps between policy objectives and actual outcomes to persist.

Overall, these limitations highlight that the challenges faced by agricultural start-ups are not only a result of resource constraints but also stem from deeper structural and institutional issues. Addressing these challenges requires not only expanding policy coverage but also improving policy coherence, strengthening implementation mechanisms, and enhancing coordination among stakeholders within the entrepreneurial ecosystem.

4.3. Policy recommendations

First, policies promoting innovative entrepreneurship in agriculture should be further strengthened, particularly by improving agricultural start-ups' access to financial resources. In this regard, regulations should be developed to facilitate bank credit for start-ups while encouraging financial institutions to provide preferential loan packages for high-tech agricultural projects. In addition, greater efforts are needed to mobilize resources for agricultural research and development through venture capital funds, alongside increased public investment in research and innovation. Policies should also encourage the establishment and development of private venture capital funds and angel investors in order to attract greater private capital for agricultural start-up activities.

Second, policies supporting investment in agriculture should continue to be refined in a more focused and targeted manner, ensuring that incentives are sufficiently attractive to encourage enterprise participation while avoiding the dispersion of incentives that may place pressure on the state budget. The policies should concentrate on several key areas, including human resource training and development, high-tech agricultural production costs, and research and development activities. These measures should prioritize essential expenditures that represent a significant share of enterprise cost structures, thereby reducing production costs and improving operational efficiency. At the same time, policy design should ensure targeted resource allocation, consistency with national development priorities, and transparency in monitoring and evaluation during implementation.

Third, the legal framework governing capital contribution in the form of agricultural land-use rights should be further refined, with particular emphasis on clarifying regulations relating to two forms of capital contribution: capital contribution for business cooperation and capital contribution for the establishment of legal entities. Such clarification would help establish a transparent legal framework, protect the rights and interests of participating parties, and reduce risks in cooperative arrangements. At the same time, policies should be developed to support enterprises in leasing land from farmers and in developing linkage models with farming households in order to establish stable raw material zones and ensure a reliable supply for production. The improvement of these regulations would contribute to promoting the consolidation of agricultural land, enhancing land-use efficiency, and encouraging investment in large-scale and modern agricultural production.

Fourth, policies should be introduced to strengthen training and capacity building in modern business management for agricultural start-ups. This would contribute to developing a new generation of entrepreneurs with strong managerial capabilities, innovative thinking, and professional ethics capable of meeting the evolving demands of economic development. In addition, training programs for farmers should be continuously updated to support the professionalization of the agricultural workforce, enhancing farmers' skills and their understanding of science and technology, market mechanisms, and value chain-based production aligned with sustainable development goals. Educational institutions should also integrate emerging trends such as high-tech agriculture, digital agriculture, ecological agriculture, and agricultural entrepreneurship into their curricula while strengthening research activities and entrepreneurship education to foster knowledge-based entrepreneurs in the agricultural sector.

Fifth, communication and outreach programs should be implemented to raise public awareness of the role and potential of agriculture in sustainable economic development. At the same time, opportunities should be created for students to gain practical experience through study visits and experiential learning activities at experimental farms, research institutes, and innovation centers. These initiatives can stimulate entrepreneurial thinking and innovation among young people, students, farm owners, and enterprises. In addition, disseminating and scaling up successful models of high-tech agricultural start-ups, particularly those initiated by young entrepreneurs, can inspire broader societal engagement in agricultural development.

Sixth, greater attention should be devoted to strengthening entrepreneurial networks within the agricultural sector. In particular, stronger linkages should be fostered between agricultural start-ups and universities, research institutes, high-tech agricultural zones, professional consultants, start-up incubators, government and community support funds, and venture capital funds. Mechanisms should also be established to enable agricultural start-ups to participate more deeply in global value chains. At the same time, research and development centers should be developed through collaborative models involving the government, enterprises, universities, and research institutes. Such centers would facilitate the testing, application, and evaluation of innovative solutions, products, and services under real-world production conditions.

5. CONCLUSION

In a context where innovation is increasingly recognized as a key driver of economic growth, agricultural start-ups are emerging as important actors in promoting economic expansion, job creation, and enhancing the competitiveness of the Vietnamese economy. The rapid advancement of the Fourth Industrial Revolution, together with the expansion of high-tech and smart agriculture, has created new opportunities for innovative start-ups to improve productivity, reduce production costs, and strengthen resilience to challenges such as climate change, shrinking agricultural land resources, and increasingly stringent requirements for agricultural product quality. Despite these opportunities, entrepreneurial activities in agriculture continue to face significant barriers, particularly the limitations of the entrepreneurial ecosystem and the lack of coherence in existing support policies. Addressing these challenges requires a coordinated policy framework that improves access to financial resources, strengthens investment support mechanisms, facilitates agricultural land consolidation, promotes entrepreneurship education, and enhances linkages among key stakeholders within the entrepreneurial ecosystem. The effective implementation of these measures will contribute to the development of a dynamic and sustainable agricultural start-up ecosystem, thereby generating higher value added for the economy.

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