

Chapter 5

Investment in Agriculture in Recent Times: The Case of Vietnam

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and

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Abstract

This paper discusses about the recent trends of investment in agriculture of Vietnam, its opportunities and challenges and some implications to further attract investment in this sector. Numerous incentives and support programs have been granted by the national and local authorities over the last decade. New trends are emerging, such as changes in the structure and scale of production, increasing investment from large domestic firms, and more application of modern techniques and smart farming. However, total and FDI investment in agriculture remain limited. In the future, this sector faces the obstacles of declining land and labor, and climate change, while land access and poor infrastructure are unsolved. However, there are still opportunities as the sector receives priority support from the Government, and the growing middle-class and the deeper economic integration will create higher demand. More effort should be paid to harmonize and systematize the list of incentives to investors; to remove obstacles to land access; and to design more support for the distribution and marketing of agricultural products.

1. Introduction

Since *Doi Moi* or *Renovation*, Vietnam has progressively transformed from a centralized command economy to a market economy. Domestic reforms combined with economic opening and integration

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are the key drivers of the remarkable achievement of Vietnam over the most recent decades. Since 2000, the average economic growth rate of Vietnam has been around 6-7%, which is second highest in Asia, after only China. In 2018, the GDP of Vietnam is estimated to amount to USD 242.06 billion, with an average income per capita of USD 2,558.³ In 2010, Vietnam was recognized as a lower middle-income country, marking an impressive accomplishment for a country that in the mid-1980s was one of the poorest countries in the world (WB and MPI, 2016). The poverty rate of Vietnam fell from 58.1% in 1993 to under 10% recently (7% in 2017 as measured by multi-dimensional poverty).⁴

Remarkable progress is seen in almost all aspects of the economy. In the agricultural⁵ sector in the 1980s, Vietnam suffered from severe starvation and had to claim support from the international community. Currently, Vietnam has become the world's largest exporter of cashew nuts and black pepper, and one of the leading exporters of rice, cassava, coffee, and natural rubber (OECD, 2015). The Resolution No. 26/NQ-TW of the 10th National Congress⁶ in 2008, reflects the concerns and efforts of the whole political system of Vietnam to promote the development of agriculture and the quality of life of the farmers and the rural areas (called "*Tam Nong*"), which are placed in a strategic position for the growth process of Vietnam.

Over the last ten years since Resolution No. 26, a range of policies and programs have been issued to encourage development of agriculture and rural areas. In order to attract more investment in the sector, several incentives are granted to both foreign and domestic investors in the form of financial support (tax exemption, credit access), trade promotion, or land access to name a few. However, the Vietnamese agricultural sector still grows below its potential (OECD, 2015). Until 2016, only 6% of the total realized investment of the economy flows into agriculture, while FDI in this sector accounts for only 1% of the total FDI in Vietnam.⁷ Agricultural production of Vietnam is seen as small-scale, inefficient, and with low productivity.

³ Figures measured at current prices; exchange rate of VND 1 = USD 22,867 (the central VND/USD rate announced by the State Bank of Vietnam on 1 February, 2019).

⁴ <http://tapchiquptd.vn/vi/lam-that-bai-chien-luoc-dbhb/thanh-tuu-xoa-doi-giam-ngheo-%E2%80%93-mot-bao-dam-thuc-thi-nhan-quyen-vung-chac-o-viet-nam/11591.html>

⁵ Including agriculture (crop and livestock production), fishery, and forestry

⁶ Resolution No. 26/NQ-TW of the 10th Congress on Agriculture, Farmers and Rural Areas (or "*Tam Nong*")

⁷ Data taken from the General Statistics Office of Vietnam (GSO).

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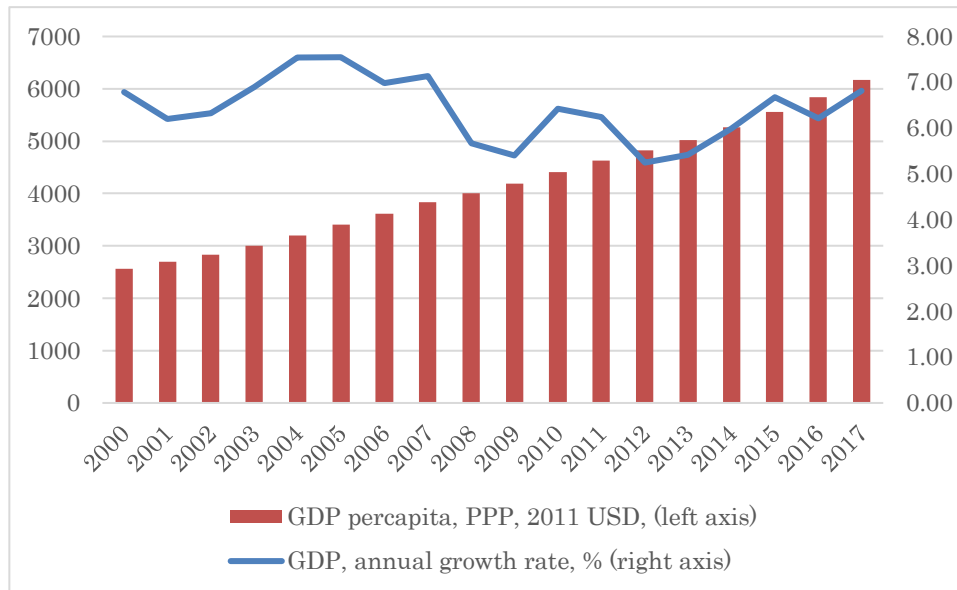
Given the strategic role of agriculture in the economy, Vietnam needs to continue its efforts to develop this sector further; by first attracting more investment in the field. This paper draws a general picture about the situation of investment in the Vietnamese agricultural sector, and discusses the opportunities and challenges in the new context. The paper is divided into five main parts. The first, provides an overview of the Vietnamese economy and the overall performance of the agricultural sector. The second, briefly reviews the most recent policies to encourage investment in the field. The third, presents the situation of investment in the agricultural sector of Vietnam, following by a discussion of the opportunities and challenges in the next part. The final part proposes some implications for Vietnam to boost investment in this sector before the conclusion part.

2. Overview of the Vietnamese Economy and the Agricultural Sector

The *Doi Moi* process of Vietnam started in the mid-1980s, commencing with a series of reforms to pave the way for development of the non-state sectors and to integrate into the regional and global economy. Since the year 2000, the economy of Vietnam has achieved rapid growth at an average annual rate of around 6.5% per year. During the same period, the GDP per capita of Vietnam has been rising steadily. The average income, when measured in purchasing power parity, has increased by more than double, from USD 2,562 in 2000, to 6,172 in 2017.

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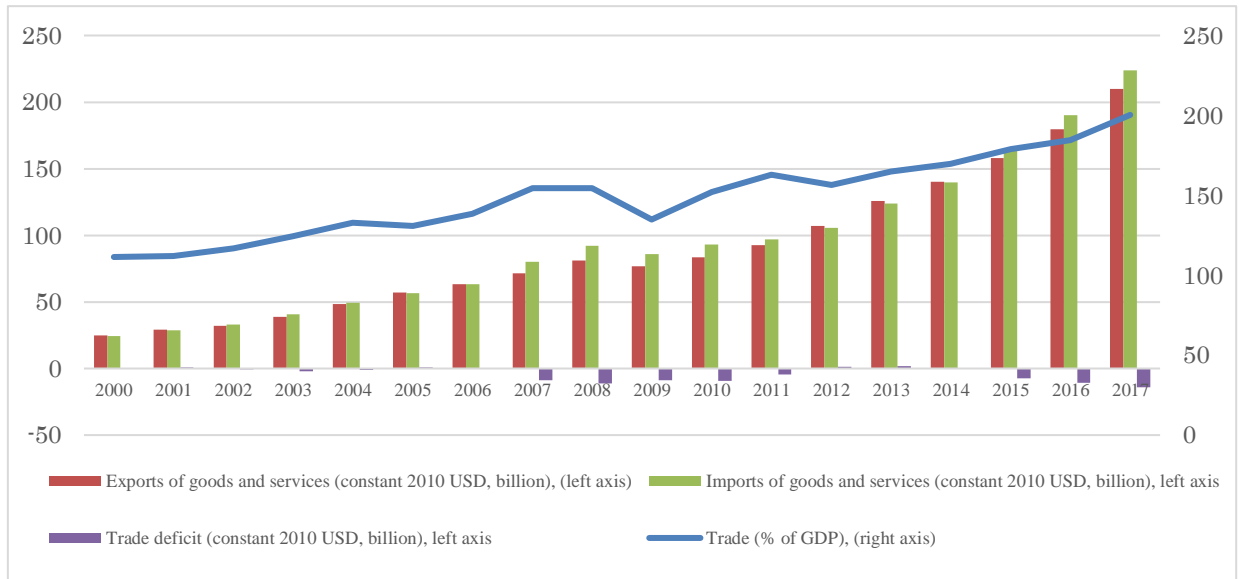
Figure 1: GDP Growth Rate and GDP per capita, 2000-2017



Source: World Bank Data (2018)

The economy of Vietnam has a very high level of openness. The ratio of trade over GDP reached 200% in 2017, which is nearly double the ratio in 2000 (around 110%). During the same period, the total value of imports and exports climbed from USD 50 billion to more than USD 400 billion (as measured in constant 2010 USD). In recent times, the value of imports has exceeded the value of exports and the trade balance is in deficit (Figure 2).

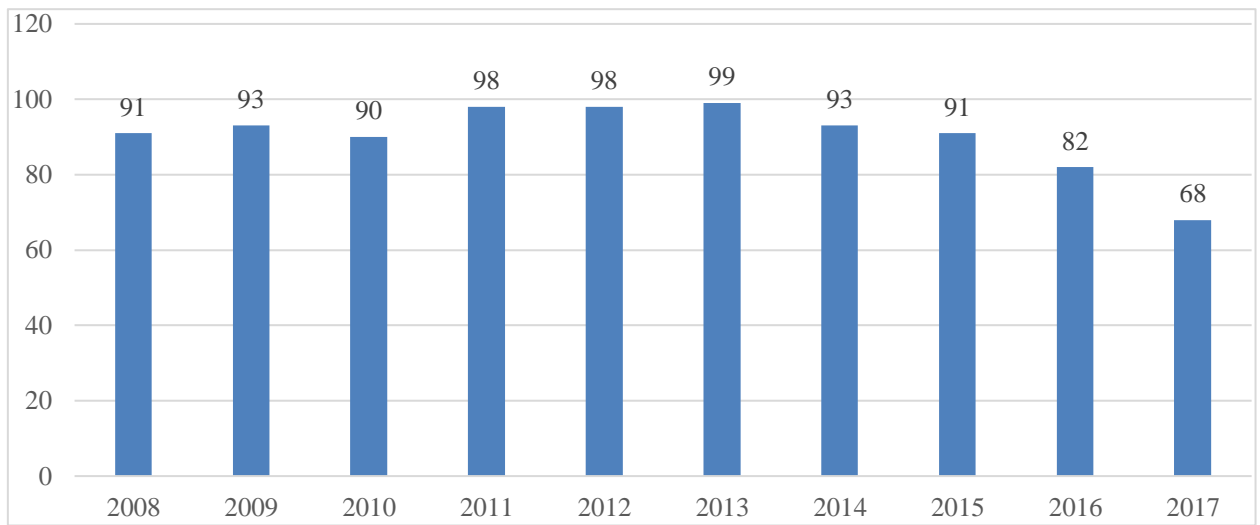
Figure 2: Trade Performance, 2000-2017



Source: World Bank data (2018)

In order to further encourage investment from both the domestic and international communities, the Vietnamese Government has committed to continue reforming the business environment of Vietnam. This is marked by issuance of Resolution No. 19 and others since 2014, with the ultimate goal of improving the competitiveness of Vietnam. These Resolutions set out such measures as improving the transparency of the State's apparatus, applying modern technology in the State's management, reducing the number of business licenses, and reducing time to establish new enterprises, to name but a few. These measures have resulted in increasing the global ranking of Vietnam in terms of the "Ease of doing business" as measured by the World Bank. As can be seen in Figure 3, the ranking of Vietnam has improved from the 93rd position to 68th from 2008 to 2017.

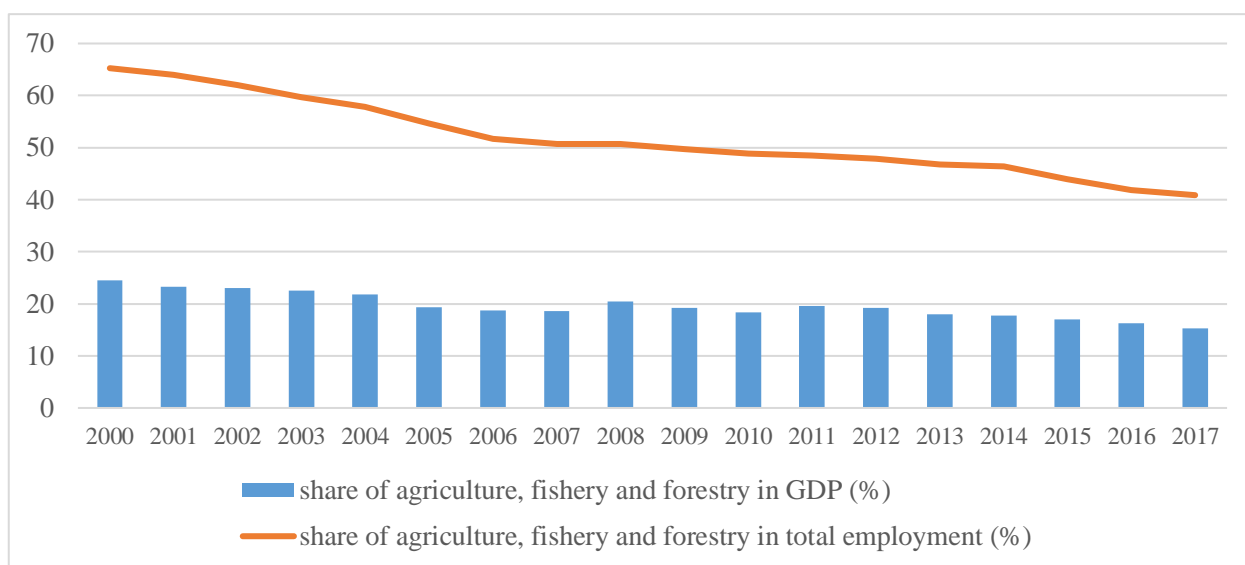
Figure 3: Ease of Doing Business in Vietnam, 2008-2017



Source: World Bank (2018)

In line with the overall progress of the economy, the agricultural sector of Vietnam has also experienced remarkable growth over the last decade. In the period 1986-2017, the sector grew at an annual rate of 3.5% per year. However, as other sectors (industry and services) has expanded at a faster rate, the contribution by agriculture to the GDP has decreased gradually from 24.5% in 2000 to 15.3% in 2017. At the same time, there is a structural transformation in that workers are moving from agriculture to the industrial and services sectors. Agriculture used to provide 62.5% of the total employment in the economy in 2000. However, the figure recently dropped to 40% in 2017. The share of employment by agriculture is still more than double the share of agriculture in the GDP, and this shows the relatively low productivity by this sector. (Figure 4).

Figure 4: Share of agriculture in the GDP and employment, %

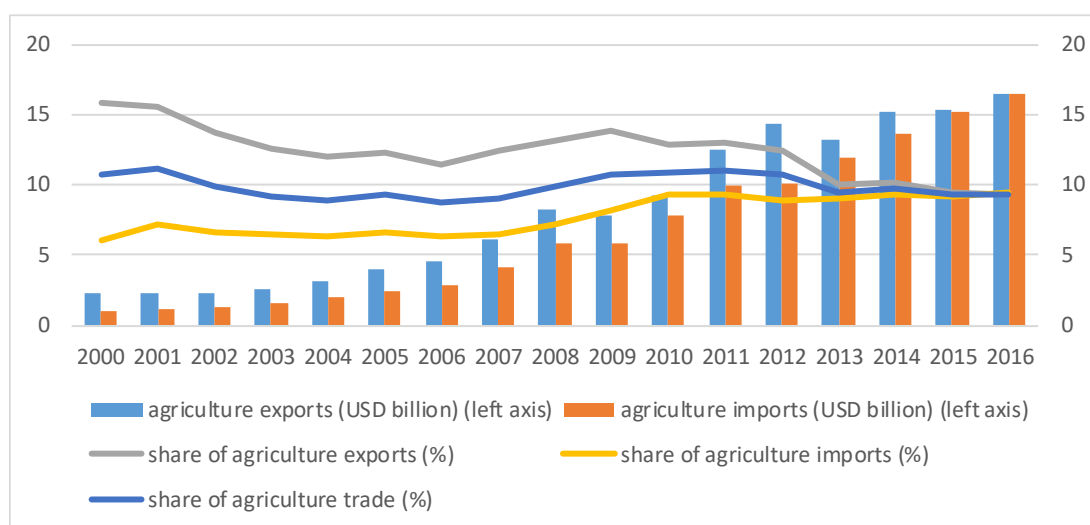


Source: GSO (2018)

For a long time, the trade balance of the agricultural sector was always in surplus until only recently (since 2016) when the value of imports equaled the value of exports. Total trade in agriculture increased from under USD 5 billion in 2000 to more than USD 42 billion in 2016. While the share of agricultural imports to total imports went up from 6% in 2000 to just under 10% in 2016, the share of agricultural exports in the total exports decreased from 11% to less than 10% in the same period. As a consequence, the share of agricultural trade in the total trade has remained quite stable at around 10% during nearly two decades. There are 10 exporting products that yield a turnover of more than USD 1 billion per year, including rice, natural rubber, coffee, black pepper, cashew nuts, cassava, vegetables, shrimp, cat-fish, and wood and timber products. Among them, 5 commodities (fruit, coffee, shrimp, wood, and timber products) have an export value of more than USD 3 million each. Agricultural products from Vietnam have been exported to more than 180 nations and territories. In terms of exports, Vietnam ranked second in Southeast Asia and 15th globally in 2018.⁸ Major trading partners of Vietnam include China, the United States, Japan and the European Union.

⁸ <https://baomoi.com/nhung-con-so-an-tuong-cua-nganh-nong-nghiep-nam-2018/c/29189952.epi>

Figure 5: Trade in agriculture



Source: FAO (2018)

According to the GSO (2018), by the end of 2016, Vietnam has a total of 27.3 million ha of agricultural land, which accounts for 82.3% of the total natural land. Among this area, 42.26% is used for crop production (15.16% paddy, 10.45% other annual crops, and 16.63% for perennial crops). More than 14.9 million ha are forestry land, accounting for 54.64% of the agricultural land. The water surface land for fishing accounts for only 2.92%, and the remaining land is used for salt production and other activities. (See Table 1).

Table 1: Agricultural land of Vietnam, 2016

Categories	Area (thous. ha)	Share (%)
Total	27,284.9	100
Land for crop production	11,526.8	42.26
Paddy land	4,136.2	15.16
Other annual crop land	2,852.1	10.45
Perennial crop land	4,538.5	16.63
Forestry land	14,908.4	54.64
Water surface land for fishing	797.3	2.92
Land for salt production	17.6	0.06
Others	34.8	0.13

Source: GSO (2018a)

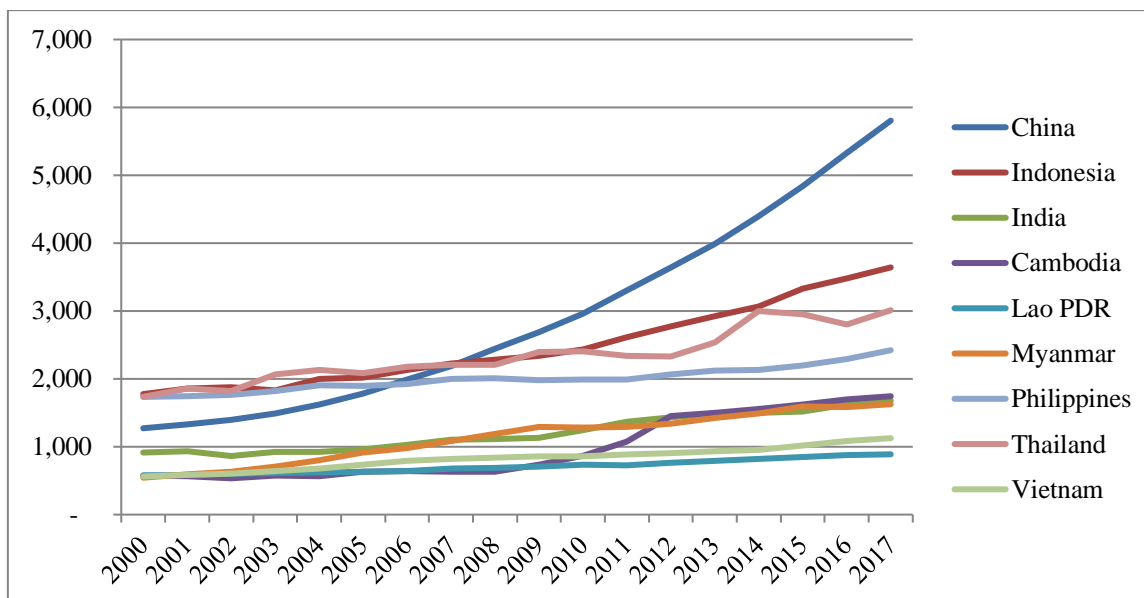
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It is worth noting that the arable land area allocated to each holder is quite small and fragmented. Currently, there are about 78 million plots across the country, and the average area of each plot is about 0.3 ha (CIEM, 2017). According to the GSO (2018b), there are 9.3 million households involved in the production of agriculture, fishery, and forestry. On average, each household handles 2.5 plots, and each plot is equivalent to around 0.18 ha. In addition, these plots are rarely located close to each other, with only about 10% of the total plots sharing the same boundaries (CIEM *et al.*, 2015). The small size and inter-farm fragmentation of the land prevent the application of machinery to take advantages of the economies of scale, which results in low productivity and efficiency of the agricultural production of Vietnam.

Figure 6 illustrates evolution of the value added per worker in the agricultural sector of Vietnam and some other Asian countries during 2000-2017 (measured in the constant value of the USD in 2010). In 2000, the productivity of Vietnam was at the same level with Lao, Myanmar, and Cambodia. However, after nearly two decades, Vietnam is lagging far behind Myanmar and Cambodia, and only ranks higher than Lao. Other countries, such as China, Indonesia, and Thailand have achieved a significantly higher growth rate per worker's productivity than Vietnam, making their gaps with Vietnam wider over time. By 2017, in the agricultural sector, a Vietnamese worker creates a value added of only USD 1,126 while the relevant figures for China, Indonesia, and Thailand are USD 5,805; USD 3,642 and USD 3,011, respectively.

Figure 6: Agriculture, forestry, and fishery value added per worker, 2000-2017

Unit: 2010 constant USD



Source: World Bank data (2019)

3. Overview of the policies to attract investment in agriculture of Vietnam

This section provides a brief overview of the latest policies to encourage investment in the agricultural sector of Vietnam.

Recently, a revised Investment Law and Enterprise Law was approved in 2014 to replace the laws from 2005. The new laws open the door for more foreign direct investment (FDI) by reducing the number of prohibited sectors and simplifying the legal procedure for investors to establish their business in Vietnam. It also regulates equal treatment for all kinds of investors (state, non-state, foreign and domestic). In addition, foreign investors are also allowed to hold unlimited shares of an economic organization, except for some specific cases.

In the agricultural sector, in order to encourage investment, the Government have issued a series of policies to provide incentives in the form of fee and tax exemptions, preferential credit, trade promotion, and other policies to support land access, farming contracts, or to reduce post-harvest

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losses. The most recent policies can be listed as: Policies to encourage enterprises to invest in agriculture and rural areas (Decree No. 210/2013/ND-CP, and its replacement by Decree No. 57/2018/ND-CP); Credit policies (Decree No. 55/2015/ND-CP); Insurance policy (Decree No. 58/2018/ND-CP on 18/4/2018); Policies to encourage public-private partnership (PPP) (Decree No. 15/2015/ND-CP, and Decree No. 63/2018/ND-CP); Support for contract farming on large-scale production (Decision No. 62/2013/QD-TTg; Decree No. 98/2018/ND-CP); Support to reduce post-harvest losses (Decision No. 68/2013/QD-TTg); Promotion of high-tech agriculture (Decision No. 1895/QD-TTg on 17/12/2012; Decision No. 575/QD-TTg on 04/5/2015, Decision No. 66/2-15/QD-TTg on 25/12/2015; Decision No. 19/2018/QD-TTg on 19/4/2018). Besides which, the Ministry of Agriculture and Rural Development (MARD) progressively undertakes reforms to improve the business and investment environment of the agricultural sector as regulated in the series of Resolution No. 19 to improve the competitiveness of Vietnam. The main content of these policies is summarized as follow.

3.1 Land access

In Vietnam, the land belongs to “All the people”, with the State holding representative management rights, and the households are granted land use rights certificate (LUCs). The Land Law 2013 revised the law in 2009, with several changes to promote development of the land market and large-scale agricultural production. Accordingly, the limitation of time for agricultural land use for households was extended from twenty to fifty years. Households or individuals are granted a quota of 02-03 ha of annual crops and 10-30 ha of perennial crops that are not subject to land fees. They are also allowed to receive land use rights transfer of an area not larger than 10 times the land quota. The new law provides more rights for agricultural land users, so they can convert, transfer, lease, re-lease, inherit, grant, and mortgage their use rights.

Any firms having agricultural projects in the encouraged or specially-encouraged sub-sectors and areas are fully exempted from land rent for the first 11-15 years since commencement, and enjoy a 50% reduction of land rent for the next 5-7 years. The Government also provides support for firms that rent land from households/individuals or firms that receive land as a stock contribution for the farmers to invest in the encouraged or specially-encouraged sub-sectors. The support value is up to 20% of the land rent during the first 5 years, or up to VND 10 billion.

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3.2 Promoting high-tech agriculture

In order to improve agricultural productivity and competitiveness, the Government of Vietnam has been very enthusiastic in providing support for the application of modern technology. As stated in the Law on High Technology in 2008, any organization or individual engaging in research, development and application of modern techniques for agricultural production will be granted with the highest level of fee and tax exemption (income tax, value-added tax, import-export tariffs, land use fees/taxes). They can also borrow money from commercial banks at an interest rate that is lower than the market rate. The Government might subsidize partly or all the costs associated with implementation of science and technology projects in agriculture, or with the transfer of modern technology to apply to agricultural production. They are also subject to further incentives provided by the local area's governments.

Following Decision No. 176/QĐ-TTg in 2010 approving the project to promote high-tech agriculture till 2020, high-tech agricultural zones have been established in different provinces across the country. These zones provide support for firms applying high technology and smart farming in agriculture, organize field exhibitions and training programs for farmers.

In 2017, the State Bank of Vietnam (SBV) launched a credit program that amounted to VND 100 trillion (around USD 4.2 billion) to support high-tech and clean agriculture. These credits are distributed by eight commercial banks to lend at interest rates that are 0.5-1.5% lower than the market rates to high-tech agricultural enterprises.⁹

3.3 Improving the business environment for agriculture

Since 2014, the Government has issued a series of Resolution No. 19 to improve the business environment and renovate the growth model of Vietnam. Line ministries are reviewing the State's management over economic activities to reduce the number of conditions to establish a new business, to simplify the registration procedure, and to implement e-government. Until now, the Ministry of Agriculture and Rural Development (MARD) has removed/revised/simplified 241 of a total of 345 conditions to establish enterprises in all sub-sectors of agriculture. MARD has also reduced 76% of the total number of commodities subject to special inspection by the Customs before exporting-importing. In order to align with the ASEAN Single Window Mechanism and the National Single

⁹ Decision no. 813/QĐ-NHĐĐ on 24/4/2017 of the State Bank of Vietnam (SBV).

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Window Mechanism to facilitate trade, MARD has established facilities to provide public services online for up to the 4th level for 18 administrative procedures. In 2018, MARD implemented another ten administrative procedures online, adding to the total percentage of Customs clearance procedures that can be conducted online to 95%.¹⁰

3.4 Insurance for agriculture

Since 2011, the Vietnamese Government has adopted a pilot program to provide insurance in twenty-one provinces with the participation of two big state insurance companies: Bao Viet and Bao Minh. However, the program proved to be unsuccessful with very limited purchases by the farmers. In 2018, the Government continues to issue Decree nN. 58/2018/ND-CP to regulate the agricultural insurance market and provide supports for farmers. Beneficiaries of the support include farmers involved with crop production (rice, rubber, pepper, cashew nuts, coffee, fruit, and vegetables); livestock production (buffalo, beef, pork, poultry); and fishery (black tiger shrimp, white shrimp, cat fish). Households that belong to the poor or near-poor groups (classified by the authorities) will be supported for 90% of the insurance premium. Other households are supported up to 20% of the premium. Any form of collaboration between the farmers to produce on a large scale, or among farmers and enterprises in value chains that apply modern technology to produce clean, safe, and environmentally friendly products are supported for 20% of the insurance premium.

3.5 Credits for agriculture

There are different preferential credit programs granted to households and firms for several policies to support agricultural production. Individuals, households, cooperatives, or farm owners may borrow from commercial banks from VND 50 million to VND 3 billion without a mortgage. Enterprises, cooperatives, or cooperative unions who engage in farming contracts that apply modern technology may borrow without a mortgage an amount up to 70% of the value of the project.¹¹

3.6 Other policies

¹⁰ <https://laodong.vn/kinh-te/cat-giam-dieu-kien-kinh-doanh-va-kiem-tra-chuyen-nganh-truoc-het-phai-cai-cach-tu-duy-641221.ldo>

¹¹ Decree No. 55/2015/ND-CP on 09/6/2015, on credit policies to promote agriculture and rural areas.

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There are many other policies to promote investment in agriculture. Decree No. 63/2018/ND-CP declares that the Government encourages public-private-partnership (PPP) to invest in agricultural infrastructure and rural development services, in agro-processing, and the distribution of agricultural products. Since 2010, MARD has established a number PPP task forces to promote this kind of partnership in certain sub-sectors, such as the production of coffee, tea, vegetables, fruit, and fishery (OECD, 2015). Other support programs also grant firms purchasing machinery/equipment to reduce post-harvest losses, and to firms engaged in farming contracts with households/cooperatives.

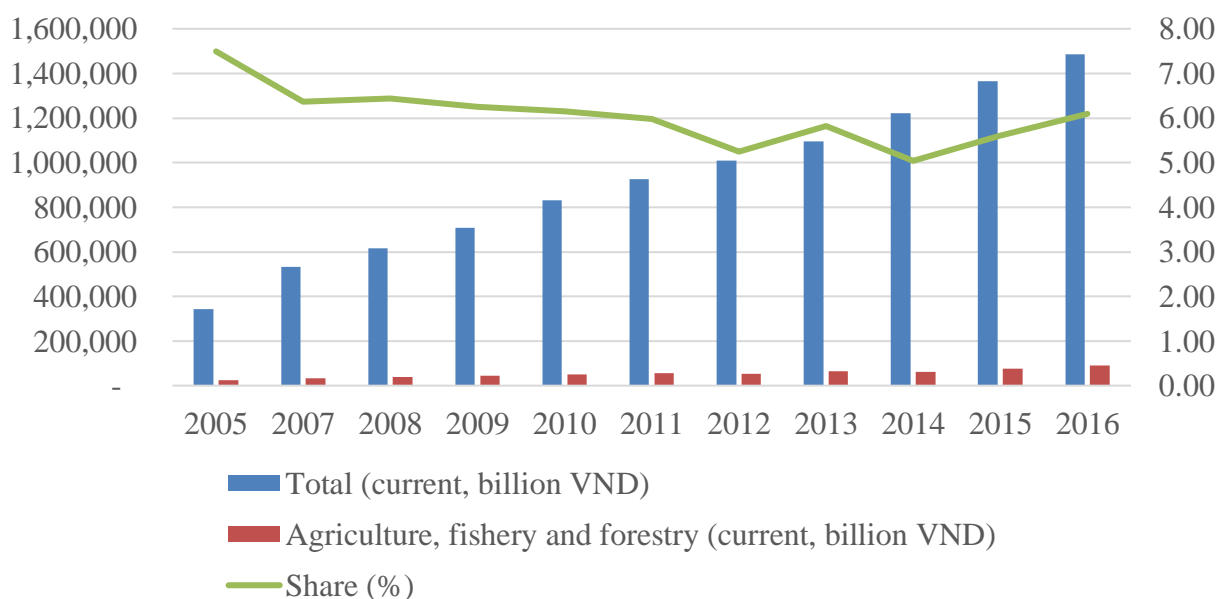
4. Current status of investment in the agriculture of Vietnam

4.1 Modest investment in agriculture, and mostly in processing

Since implementing *Doi Moi*, the stock of foreign direct investment (FDI) into Vietnam has been increasing remarkably. From 2005 to 2016, the value of the realized investment of the whole economy nearly tripled, from under VND 500,000 billion to VND 1,500,000 billion in 2016. However, investment in agriculture did not move at the same pace. In fact, the share of realized investment in agriculture dropped from 7.5% of the total realized investment in 2005 to just above 6% in 2016.¹² (Figure 7)

¹² The value in current VND

Figure 7: Realized Investment in Agriculture, 2005-2016



Source: GSO data.

So far, households are still the largest investors in agricultural production, with more than 9.2 million households. The number of firms investing in this sector has increased from 10,050 firms in 2005 to 44,297 firms in 2016. However, this number is increasing at a slower pace compared with that in other sectors. As a consequence, the share of agricultural firms has decreased from 23.81% in 2005 to only 8.77% in 2016 (See Table 2). By 2018, the total number of firms in the agricultural sector increased to more than 49,600 firms, which is equivalent to around 8% of the total number of firms in the economy. Among agricultural firms, only 1% are involved directly in the production of crops, livestock, fishery, and forestry (around 7,600 firms). The remaining firms operate in agricultural processing¹³. It should be also noted that almost all firms in Vietnam are small and medium size firms, and there is no exception in the agricultural sector. In fact, more than 96% of firms in agriculture are small or very small in scale. Firms with less than 10 employees account for 57.34%, and firms with 10 to 200 employees account for 38.72% (MPI, 2018).

¹³ <https://vov.vn/kinh-te/so-luong-doanh-nghiep-dau-tu-vao-nong-nghiep-chi-co-8-793803.vov>

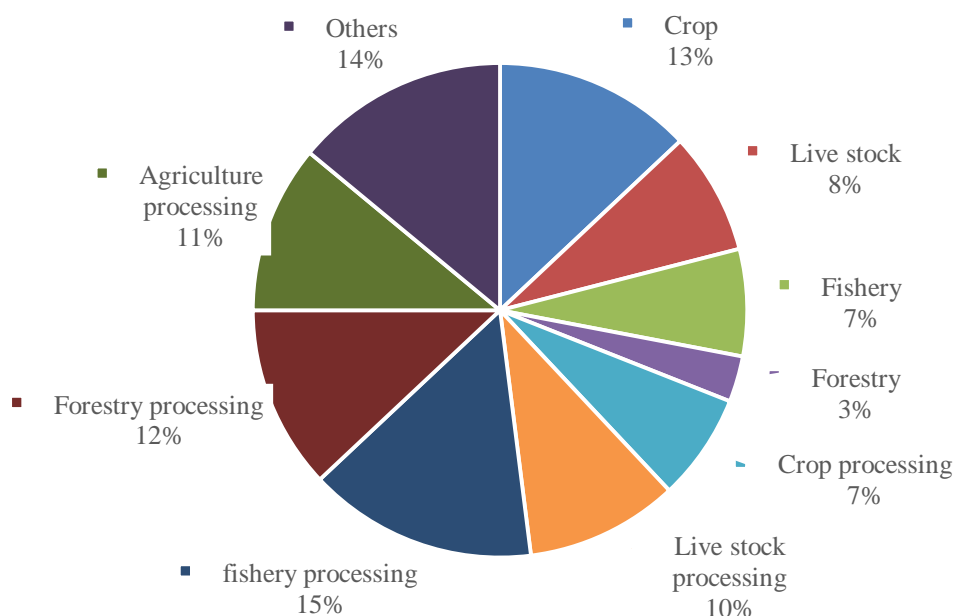
Table 2: Number of Firms Investing in Agriculture, 2005-2016

	2005	2010	2015	2016
Total number of firms	42,234	106,616	279,360	505,059
Number of firms investing in agriculture	10,058	14,813	28,403	44,297
Share	23.81%	13.89%	10.17%	8.77%

Source: MPI (2018)

Figure 8, provides more detailed information about the share of firms investing in different sub-sectors of agriculture. About 30% of the firms are involved directly in the production of crops, livestock, fishery, and forestry. The share of firms in these sub-sectors are 13%, 8%, 7% and 3%, respectively. A larger number of firms focus on processing, in which 11% are in agriculture, 12% in forestry, 15% in fishery, and 10% in live-stock processing.

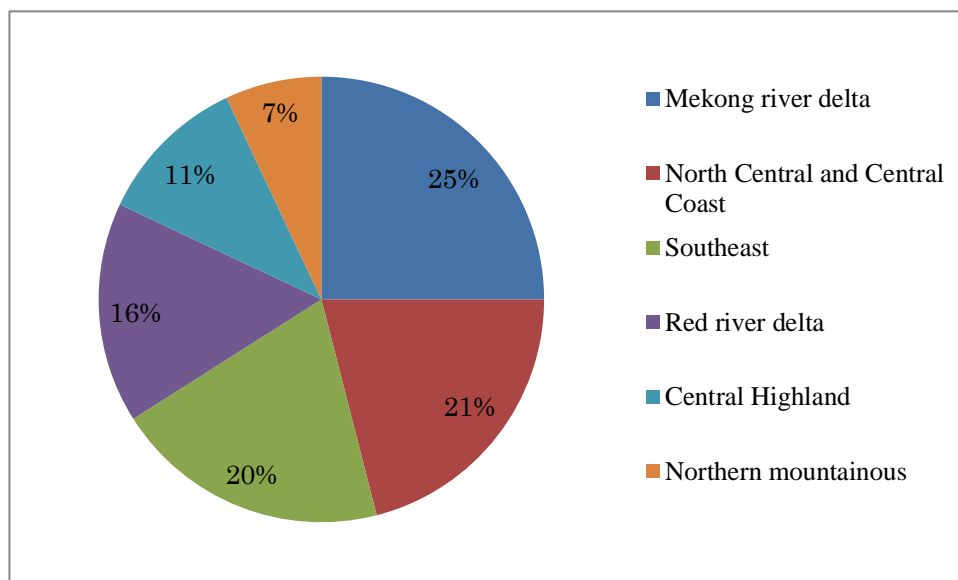
Figure 8: Share of Agricultural Firms by Sub-sector, 2016



Source: Calculation from the 2016 Enterprise Census data (GSO)

Regarding the allocation of agricultural firms, the majority are concentrated in the central and the south of Vietnam. 25% of the firms are located in the Mekong river delta and another 20% in the southeastern provinces. In central of Vietnam, there are 21% of agricultural firms in the north central and central coast region, and 11% in the Central Highlands. The Red River delta attracts only 11% of firms. This is explained partly because of the more favorable conditions in the south and central regions of Vietnam for agricultural production. (Figure 9).

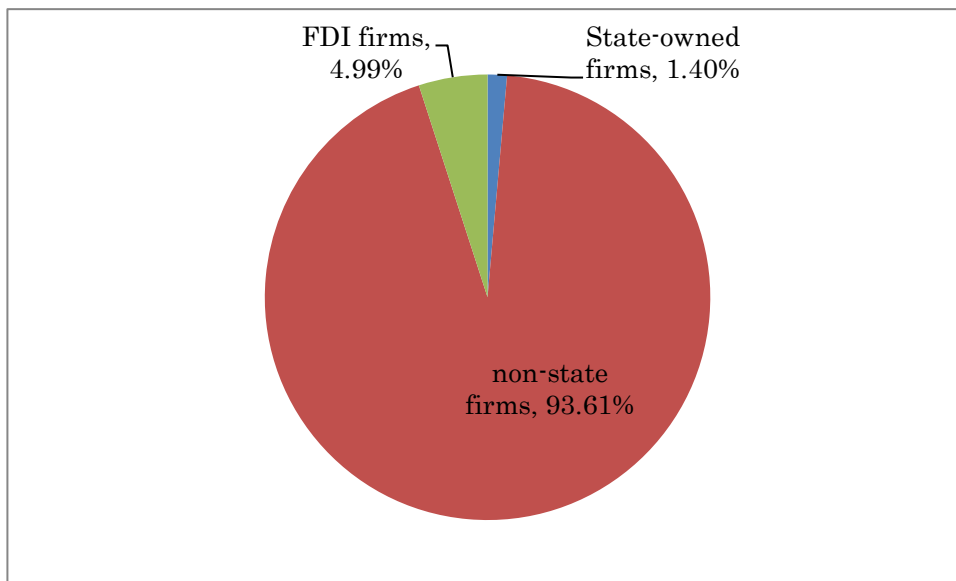
Figure 9. Location of agricultural firms, 2016



Source: Calculation from the 2016 Enterprise Census data (GSO)

Classified by type of ownership, more than 90% of the firms operating in the agricultural sector are non-state firms. State-owned firms only account for 1.4%, and FDI firms account for about 5% of the total number of firms. The figure shows that the domestic private sector is the largest investor in agriculture. It also proves the efforts of the Government of Vietnam in restructuring public investment to reduce its direct involvement in the economy (Figure 10).

Figure 10: Agricultural Firms by Type of Ownership, 01/01/2017



Source: MPI (2018)

As can be seen in Figure 10, the FDI sector holds a very small proportion of the total number of firms investing in agriculture. By July 2018, there were 501 FDI projects in agriculture with a total value of USD 3.37 billion. FDI in agriculture accounts for 1.9% of the total number of the FDI projects in Vietnam, and 1.01% of the total registered FDI in the economy (MPI, 2018). Most of the FDI in agriculture of Vietnam are green field¹⁴ (OECD, 2015). Among FDI firms, around 87% of them are 100% foreign-owned, 13% are joint-venture, and the balance are joint-stock firms. FDI projects are mainly directed towards agricultural processing (forestry, fishery, livestock feedstuffs, etc.). In addition, the scale of these projects is relatively small, with the average value of around USD 7 million.¹⁵ A majority of FDI investors are from Asia, especially Chinese Taipei, Japan, China, Hong Kong, Thailand, and Singapore, which accounts for more than 60% of the total FDI in this sector (Nguyen, 2017).

4.2 A wave of large domestic firms investing in agriculture

¹⁴ Investment involves building or establishing new infrastructure

¹⁵ <http://ndh.vn/chinh-sach-dang-can-tro-thu-hut-fdi-vao-nong-nghiiep-20160415080538381p145c153.news>

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In recent years, there has been a wave of investment in agriculture by large domestic firms, whose traditional portfolios do not include this sector. With the advantage of large financial capital and market experience, they are investing in large-scale and high-tech agricultural production. One of the pioneers that should be mentioned is the Hoang Anh Gia Lai Group (HAG). Since 2011, this corporation has re-structured its portfolio and started to invest in agriculture, besides its traditional investments in the real estate market. HAG has projects in Vietnam, Cambodia, and Myanmar focusing on crop production (rubber, sugarcane, palm oil, and maize) and beef farming.¹⁶

Vinamilk and THtrueMilk are the two leading companies for milk production. So far, they have been contracting with thousands of households to supply fresh milk for their production. In recent years, they have been establishing dairy farms that apply the latest techniques. THtruemilk invested USD 1.9 billion in Nghe An to establish the largest dairy farm in Asia that has applied modern techniques imported from Israel, the US, and the EU (certified in 2015). THtruemilk has expanded its investment in Russia to build a dairy farm, factory, and distributional channel with a total capital of USD 2.7 billion¹⁷. Vinamilk operate ten dairy farms with total number of 25,000 cattle so far, and all have achieved Global GAP certificates. Its dairy farm in Da Lat has received the organic certificate issued by the Control Union in the Netherlands.¹⁸

Vingroup is another big investor in agriculture to date. Since 2015, Vingroup has established Vineco to invest in the agricultural sector. In September 2016, Vineco launched the program “Companion, support, and promotion of the Viet agricultural production” by contracting with 1,000 cooperatives and households to supply clean and safe products for the market. Vineco organizes training programs for farmers and cooperatives on clean farming techniques, provides support in terms of farming techniques, equipment, breeds, and quality control services before and after harvest, and in purchasing and distribution outputs. By the end of March 2018, Vineco will contract with more than 1,500 households to supply nearly 1,000 tons of vegetables and fruit that comply with the Viet GAP and Vineco standards. These agricultural products are sold in the chain of 1,500 stores of Vinmart and Vinmart+ across the country. In 2016, Vingroup commenced a glasshouse system, Vineco in Tam Dao, over an area of 4.5 ha. This system applies technology to produce sprouts, named Microgreen, supplied by the TEshuya TEshuva Agricultural Projects (TAP)

¹⁶ <http://www.hagl.com.vn/AgriBusiness/AboutUs/6>

¹⁷ <http://www.thmilk.vn/>

¹⁸ <https://www.vinamilk.com.vn/>

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from Israel. So far, Vingroup has expanded to fourteen farms in other provinces, including Ha Nam, Quang Ninh, and Thua Thien Hue.¹⁹

Since 2016, FPT, a leading ICT corporation in Vietnam, has collaborated with Fujitsu (Japan) to apply the cloud computing technology named “Akisai”. They established the Centre for Collaboration on Smart Farming FPT-Fujitsu in Hanoi. The center is now applying two models: “Greenhouse” and “Vegetable factory” to produce medium-size tomato and low-potassium salads.²⁰ THACO, a leading motor company in Vietnam, collaborated with the Loc Troi Corporation in 2017, with a total capital of VND 7,800 billion, to industrialize agriculture and operate an end-to-end chain from production, harvesting, processing, delivery, and distribution of products in Thai Binh Province.²¹ Geleximco in 2017 had a project valued at VND 1,200 billion to plan high-quality rice and establish a fishery area in combination with ecological services in Tien Hai district, Thai Binh Province.²²

The new wave of domestic investors in agriculture has brought about a breakthrough in agricultural production in several provinces of Vietnam. These investors have proved that agriculture can yield a considerable profit if applying modern techniques and methods in production, management, and distribution. This should be a credit to the efforts of the Vietnamese Government and the local authorities in promoting domestic investment. They have been enthusiastic in providing support and incentives for firms and organizing investment promotion. For example, in Ha Nam and Thai Binh Province, the authorities directly rent land from households for up to 20 years, and use the budget to pay in advance for the households. Then they re-lease the land to firms that just have to pay rent for the first ten years upon signing the rental contract. The remaining rent is paid after ten years. Some other provinces are attempting to do the same as Ha Nam. However, this practice is not aligned with regulation of the Law of Land (it does not allow local authorities to sign contracts to rent land from households and does not allow the provincial provinces to sign land rent contracts without a decision to clear the land and compensate for the affected households). In addition, the practice also violates the regulation of the Law of the State Budget, which does not allow local authorities to use

¹⁹ <https://vineco.net.vn/gioi-thieu>

²⁰ <https://fpt.com.vn/vi/tin-tuc/chi-tiet/fpt-va-fujitsu-khai-truong-trung-tam-hop-tac-nong-nghiep-thong-minh-fpt-fujitsu>

²¹ <https://baomoi.com/gan-26-000-ty-dong-dau-tu-vao-nong-nghiep-thai-binh/c/21965644.epi>

²² <http://kinhtevn.com.vn/thai-binh-rong-cua-don-cac-du-an-nong-nghiep-cong-nghe-cao-26709.html>

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their budget to pay rent for households then collect that budget from the enterprises later.²³ Besides, there is no regulation on this practice, and what would happen if the enterprises should fail to pay all the rent to the local authorities.

4.3 Other investment trends in agriculture

4.3.1 High-tech agriculture

Applying modern technology is considered the key to improve agricultural productivity (WEF and ADB, 2018). In Vietnam, investors are increasingly concerned about applying the most recent techniques in smart farming to reap the benefit from very limited inputs and unfavorable conditions for agricultural production. As mentioned in the previous part, large domestic firms are leading this new trend. In addition, with a lot of support and effort from the Government, by June 2018, there were thirty-five high-tech agricultural zones established across the country. Among them, three zones were established by the Government in Hau Giang, Phu Yen, and Bac Lieu. Another eight similar zones are on the way to be built according to the plan stated in Decision No. 575/2015/QD-TTg. By late May 2018, the total credit granted to high-tech agricultural projects has amounted to around VND 40,000 billion with 14,723 customers. The interest rate for the short-term is around 5.3-6.5%/year, and for medium- and long-term is about 8.5-10% (MARD, 2018).²⁴ Currently, there are forty enterprises specialized in high-tech agriculture certified by MARD. Among them, there are twelve enterprises in plantation, nineteen enterprises in aquaculture and fishery, and nine enterprises for cattle production. In 2017, there are 193 agricultural cooperatives all over the country that apply high-tech in their production.²⁵ However, because of the limited number of certified organizations, only 30% of the credit budget of VND 100,000 billion has been lent.

²³ <https://baomoi.com/can-xem-lai-mo-hinh-chinh-quyen-gom-dat-cua-dan-cho-doanh-nghiep-thue/c/28422666.epi>

²⁴ <https://congthuong.vn/phat-trien-nong-nghiep-ung-dung-cong-nghe-cao-dat-hieu-qua-cao-106042.html>

²⁵ <http://baochinhphu.vn/Khoa-hoc-Cong-nghe/Nhieu-du-dia-cho-nong-nghiep-cong-nghe-cao/341333.vgp>

Box 1: Development of high-tech agriculture in some provinces

Since 2015, many models of high-tech agriculture have been established and proved initially successful in several provinces of Vietnam.

In Binh Duong Province, the total arable land applying modern techniques amounts to nearly 2,500 ha, increasing by 47% compared with 2015. The number of cattle and poultry animals being raised with high-tech methods has doubled during the same period. Agriculture continues to contribute significantly to the economic development of the province.

In Lam Dong, the current level of technology being applied in the agricultural zones is valued at the same level as that in Thailand or Malaysia. By June 2018, there are twenty-six high-tech agricultural zones and areas in Lam Dong. In these areas, the structure of agricultural production is as follows: 19,000 ha of vegetables, with a value of VND 450 million per ha; 3,700 ha of flowers with a value of VND 800 million per ha; 160 ha of strawberry and atiso, with productivity of 4,700 tons. Currently, the share of high-tech agricultural production accounts for 35-40% of the total agricultural production value by the province.

In An Giang Province, many projects applying modern techniques have been implemented successfully. There are nearly 77,778 ha of land producing high-quality rice, where the farmers clear land using a laser, and employ machines to harvest and collect the rice. There are about nineteen cooperatives, thirty-two groups, and twenty-two enterprises farming these land areas.

Source: <https://congthuong.vn/phat-trien-nong-nghiep-ung-dung-cong-nghe-cao-dat-hieu-qua-cao-106042.html>

4.3.2 Organic agriculture

More recently, organic agriculture is one of the fastest growing areas of agriculture business in terms of the area of land used for organic farming, the number of organic farmers, and the value of the production (Kristiansen *et al*, 2006). This sub-sector grows at double-digit rates in almost all markets, and amounts to a global market of USD 89.7 billion in 2016²⁶. In Vietnam, the Government also

²⁶ Data provided by the Research Institute of Organic Agriculture FiBL and IFOAM in 2018, viewed at <https://www.fibl.org/en/service-en/news-archive/news/article/ein-boomender-biosektor-578-millionen-hektar-bioflaeche-biomarkt-waechst-auf-fast-90-milliarden-us.html>.

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provides incentives to promote organic agriculture, as it is considered to be environmentally friendly and its products are good for people's health. On 29/8/2018, the Government issued Decree No. 109/2018/ND-CP on Organic Farming with several support programs for organic producers. Most importantly, Decree No. 109 sets out the standards to certify a product as organic and regulates the labeling and traceability on such organic practices. Up to date, organic farming has been adopted in 33/66 provinces and over an area of 76.6 thousand ha. This area is more than threefold the area in 2010.²⁷

4.3.3 Following best practice in agricultural production

On 28/1/2008, MARD issued the Vietnamese Good Agricultural Practice (VietGAP) for crop, livestock, and fishery. The VietGAP covers all stages and factors of production, from farm preparation, cultivation, harvesting, post-harvest storage and processing, and factors including the environment, chemicals, preservatives, packaging, and even the working conditions and welfare of the workers on the farms. According to GSO (2018), there are 1,495 producers certified with VietGAP and equivalent standards. Among them, 540 producers are households (36.1%), 551 collaborating groups (36.9%), 199 cooperatives (13.3%), 200 firms (13.4%); and others (0.3%).

4.3.4 Changes in the production structure

In recent years, the government has gradually removing the strict regulations on the use of agricultural land. Accordingly, rice land could be converted perennial crop land or fishery land, on the condition that it could easily be re-converted to rice land.²⁸ In 2013-2017, 627.7 thousand ha of rice land that were less effective were transformed to other more effective sub-sectors, such as for fishery, aquaculture (fruit plants, plants to make food for livestock). The tendency is clearly seen in the deltas of the Red river and the Mekong river. In areas that used to suffer from drought or salinization, the farmers are gradually switching to other plants that grow better in these conditions, or plant grass for animal feed, or to raise aquaculture products (Department of Agricultural Economy, MPI 2018).

²⁷ <http://vneconomy.vn/nong-nghiep-huu-co-duoc-nha-nuoc-danh-nhieu-ho-tro-20180904111303259.htm>

²⁸ Circular No. 19/2017/TT-BNNPTNT by MARD of 09/11/2017, that amends and supplements Circular No. 19/2016/TT-BNNPTNT of 27/6/2016.

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In recent years, there has been a shift from crop and livestock production to fishery and forestry. During 2011-2016, the share by entities operating in forestry increased from 0.6% to 1.2%; and the share by fishery entities increased from 6.9% to 7.7%. At the same time, the share by parties involved in crop and livestock production decreased from 92.5% to 91.1% (GSO, 2018b).

4.3.5 Increasing scale of production

Another movement in agricultural production can be seen in the increasing scale of production, which is crucial for development of commercialization. In 2016, compared with 2011, the number of households running 5 ha or more of land for annual crop production has grown by 13.6%; and for perennial crop by 15%. The average area of land for annual crops has increased from 12 ha in 2011 to 13.4 ha by 2016; and the area of land for perennial crops has increased from 11.8 ha to 12.2 ha during the same period. The average area of a farm has increased from 6.3 ha in 2011 to 7.9 ha by 2016.

In recent years, the authorities have been promoting the formation of “large-fields”, by which households remove the barriers to their plots and unite their plots to take advantage of the economies of scale. By July 2016, nearly 2,300 large-fields were formed across the country with an average cultivated area of 257.2 ha. The larger fields allow farmers to reduce production costs, apply best practices, and engage in farming contracts with firms to buy inputs or to sell their products. (GSO, 2018b).

5. Challenges and opportunities to invest in agriculture in Vietnam

5.1 Opportunities

There are still many opportunities for development of the agricultural sector in Vietnam to serve the demand by both the domestic and international markets.

First, Vietnam does have a number of important comparative advantages for tropical agricultural production. The country has a diverse ecosystem, plentiful sunshine and water, and a large stock of young, hard-working and low-cost workers. In fact, the process of institutional reform, mechanism, and economic integration have contributed to significant growth by the agricultural sector.

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The sector has grown at an average rate of 3.5%/year over the period 1986-2017. However, the productivity level by this sector is still low. Therefore, there is much room for the sector to continue to grow.

Second, there is a growing demand for food, especially high quality food from the domestic market. Due to economic growth and population expansion, demand has increased for almost all kinds of food. During 2011-2015, the food market of Vietnam grew at an average rate of 15.4%, which is the highest among ASEAN countries (all under 10%/year). It is forecast that until 2020, Vietnam's food market will still be the fastest growing region. A survey in Hanoi and Ho Chi Minh City reveals that the customers are willing to pay 30% more for food products if they know that they are clean and safe.²⁹ The growing middle-class will create a huge demand for high quality agricultural food. According to the latest report by the WB (2018), between 2010 and 2017, the middle class of Vietnam has grown by 20% with an average of 1.5 million people joining the middle class each year.

Third, the realization of many FTAs between Vietnam and its trading partners will open up more opportunities for exporting firms. Vietnam is already a member of the World Trade Organization, the ASEAN Free Trade Agreement (FTA) and FTAs between ASEAN and other countries. Recently, Vietnam joined a new generation of FTAs, such as the FTA (EVFTA) and Investment Protection Agreement (IPA) between Vietnam and the European countries (the EU), and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). Such economic integration will open up more opportunities for Vietnamese agricultural exports, as well as help Vietnam to attract more investment into this sector. So far, the EU has been the second largest export market of some commodities from Vietnam, including coffee, cashew nuts, pepper, and fishery products. After the EVFTA comes into effect, 99% of the tariff lines will be removed within ten years, thus will make Vietnam's agricultural products more competitive in these markets. For CPTPP, Vietnam will have the chance to access new markets including Canada, Mexico, and Australia. The exporters of commodities such as timber, wood products, and fishery products are likely to benefit the most. Opportunities can also be seen in the brighter prospects for Vietnam to attract more investment into these sectors and apply new technology to upgrade and diversify these sectors.

Fourth, agriculture continues to have a strategic position in the economic development process of Vietnam. In the future, the Vietnamese Government plans to have more policies and

²⁹ <http://cafef.vn/dai-gia-bat-dong-san-xan-tay-lam-nong-nghiep-ngay-cang-nhieu-20180807152952935.chn>

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incentives to attract more investment into this sector. Preferential treatment will be given to the application of modern techniques to improve the productivity and competitiveness of this sector.

5.2 Challenges

However, future development of the agricultural sector also faces several challenges.

First, the factors of production, such as the land, labor, and climate are becoming less supportive for sustainable growth by this sector. As a consequence of the process of industrialization and urbanization, more arable land is being converted to serve for non-agricultural purposes, and the workers are moving to the industrial and service sectors. From the year 2000 onwards, the average area of agricultural land being transferred to other uses has amounted to around 7,400 ha per year. Further, the remaining agricultural land is becoming degraded and less fertile due to the farming practices of using excessive fertilizers and chemicals and the poor treatment of waste in rural areas (Tran and Nguyen, 2018). Deforestation and urban encroachment are other factors leading to degradation of the land and loss of biodiversity.

The agricultural sector might also face a shortage of highly-skilled labor. As workers move to industry and services, and due to economic growth, the labor cost for agricultural production is increasing. The remaining workers in this sector are mainly older households and unskilled people. As revealed by the national survey in 2016, the average age of a worker in agriculture has increased by 38.54% in 2011 to 40.16% in 2016. There were a total of 31.02 million people of working age in 2016, but 65.9% of them are unskilled. 18.3% have received short-term training, and only 15.9% (accounting for 4.91 million people) have either vocational education or tertiary education. Only 4% have a university or college education (GSO, 2018b). The low skill level of agricultural workers makes it harder for the further application of modern techniques in agriculture and thus to improve the sector's productivity level.

Climate change is another challenge for the development of agriculture. Vietnam is among the five countries likely to be worst-affected by climate change (GFDRR, 2011). Over the last four decades, the average temperature of Vietnam has increased by 0.4 degrees Celsius. The country has been experiencing more frequent “hot” days, which is in converse to the frequency of “cold” days.

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Sea level changes are recorded at different places of Vietnam³⁰. These changes are forcing the country to restructure its agricultural production, to alter the traditional farming methods, and to apply modern techniques so that it will be less vulnerable to any change in the natural conditions.

Second, access to land continues to be one of the worst obstacles to investment in agriculture. The fact that agricultural land is divided in very small plots to numerous households makes it difficult to collect land to produce on a large scale. The agricultural land market is still underdeveloped, especially in the north of Vietnam. As pointed out by Khai *et al* (2013), land market sales play a relatively tiny role in re-allocating land in large parts of Vietnam. Surveys show that only 8% of the plots operated by households are acquired through the market (the proportion in the north is only 2.5 per cent) (Markussen, 2017). Individual households and firms are also subject to a limitation on the area of land they can accumulate, thus impeding the land accumulation process for large production. From another aspect, CIEM (2018) provides evidence that many households still try to keep their agricultural land even though they no longer use the land. The reasons behind this are that they want to keep the land in case they fail to find employment in the non-agricultural sector, or they expect to receive some indemnity if the land is acquired by the State.

Third, infrastructure is one of the bottlenecks to agricultural investment, as it is usually in poor condition and not properly maintained (OECD, 2015). According to the assessment by the World Economic Forum (2013), Vietnam was one of the countries at the bottom of the ranking in terms of ports and air transport quality and its road quality was worse than most countries in the region. The under-developed rural infrastructure results in higher cost and lower competitiveness for firms to operate in the rural areas.

6. Some implications to encourage investment in agriculture in Vietnam

As there is still much potential for development of agriculture in Vietnam, the country should reform further in order to attract more investment in this field by foreign and domestic investors.

³⁰ Average sea level has decreased by 0.2 cm/year during 1965-2006 at Hon Dau station, by 0.26cm/year during 1978-2006 at Son Tra station; while it increased by 0.398 cm/year during 1981-2006 at Vung Tau station (GFDRR, 2011).

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First, there are different types of incentives provided to investors in agriculture. However, these incentives are regulated by several different policies issued by different ministries. The weak coordination among these ministries creates a lot of overlap and gaps in the policies and regulation (OECD, 2015). In addition, each province also provides additional incentives and preferential treatment to attract investment on their own. Many incentives are even product-specific. All these differences make it difficult for investors to identify what type of support they might receive, while some others are even unaware of the support available. Thus, there is a need to systematize the incentives provided for the investment in agriculture at both the national and local level. Then, all the information should be disseminated widely to the investor community through investment promotion activities and to make them available online for public access.

Second, there should be more effort to solve the difficulties of land access by investors. In the long-term, the land market should be developed to enable land acquisition through exchange in this market. For that, the limitations in the quota of land being accumulated, or on the type of crops produced on each plot should be removed. In addition, there should be more employment available for the workers move out of agriculture, especially when the application of modern techniques requires less workers to work on the farms. However, in the short-run, the authorities should play a critical role in mobilizing land for investors. The pioneer practices in Ha Nam and Thai Binh Provinces could be expanded to other regions. Besides, difficulties in access to land could be resolved through the existence of farmers' organizations (cooperatives or collaboration groups), by which investors can reduce the time negotiating with farmers and the farmers themselves could have more power to act for their own benefit.

Third, the support for agriculture so far has been heavily focused on the supply side and the production stages. No less important is the distribution process and the demand side. More support should be directed towards setting up distribution channels and exhibition stores for investors (firms, cooperatives, and individual households) to easily introduce and sell their products. In addition, clean, safe, and organic products should be clearly distinguished from other low quality products through the official certification program or origin traceability technology. Opportunities from the realization of FTAs should be widely inform to the public to boost investment in this sector. In addition, the State should still play a critical role in upgrading the rural infrastructure to contribute to reduce the production costs and promote competitiveness of agricultural products.

Last but not least, policies to attract investment in agriculture should give priority to projects that apply modern techniques to improve the productivity level of the sector. There should be

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criteria to select projects that ensure the sustainability of production and bring positive spill-over effects through the creation of new employment, upgrading the workers' skills, and transferring technology and management skills. The emerging policies to promote investment mainly focus on domestic firms, while the support for FDI firms is not proportionately and separately stated in the policy documents. Therefore, the government should revise its policies to ensure a balanced treatment between domestic and FDI firms in agriculture.

7. Conclusion

Although Vietnam has been progressively promoting the development of the industrial and services sectors, agriculture still plays a significant role in the economy. This sector contributes only 16% to total GDP in 2017, but provides employment for more than 40% of the labor force. Enhancing the productivity and efficiency of agriculture is considered as the key solution to raise the income and living standard in rural areas in particular, and the whole country in general. Resolution No. 26 issued in 2008, already emphasized the strategic concerns of the political system of Vietnam to improve development of agriculture, farmers, and rural areas (or Tam Nong). Over the last decade, numerous incentives and support programs have been granted to investors in agriculture in terms of tax/fee exemption, credit access, land access, technology transfer, and trade promotion. Such policies have had a certain positive impact to attract investment from the private sector to boost agricultural production. The recent years have seen a new wave of increasing domestic investment in this sector, especially by large non-agricultural enterprises that can apply modern technology to produce on a large scale. However, so far, investment in agriculture is still modest with little progress over time. Total realized investment in agriculture accounts for only 6% of the total realized investment of the economy, while FDI in agriculture accounts for just 1% of the total FDI registered into Vietnam. More effort should be paid to harmonize and systematize the list of incentives to investors; to remove obstacles to mobilize land for investment, and to design more support for the distribution and demand side of agricultural products. Above all, with the strong commitment from the Government to promote agriculture and the growing involvement of the private sector in this field, the prospect for the agricultural sector in Vietnam is promising.

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