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**REFORM OF STATE-OWNED ENTERPRISES
IN VIET NAM TO INCREASE PERFORMANCE
AND PROFIT**

Kunmin Kim and Nguyen Anh Tru

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Kunmin Kim is senior deputy director at the Ministry of Economy and Finance of the Republic of Korea. Nguyen Anh Tru is a lecturer at the Faculty of Accounting and Business Management of Vietnam National University of Agriculture.

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Please contact the authors for information about this paper.

Email: kunmin@fuji.waseda.jp

Asian Development Bank Institute
Kasumigaseki Building, 8th Floor
3-2-5 Kasumigaseki, Chiyoda-ku
Tokyo 100-6008, Japan

Tel: +81-3-3593-5500
Fax: +81-3-3593-5571
URL: www.adbi.org
E-mail: info@adbi.org

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Abstract

In Viet Nam, the reform of state-owned enterprises (SOEs) in recent years has become an essential mission to improve their performance in the context of international economic integration. It also represents the commitment of the Vietnamese Government to renovating economic institutions as well as constructing a market-oriented economy. This article aims to examine the reform of SOEs in Viet Nam. It finds that the net revenue positively affects the profit before taxes of SOEs, while sales expenses exert a negative impact on the profit before taxes. The article recommends policies to the government and SOEs to enhance performance and foster the achievement of the reform, including the enhancement of the roles of the state in SOEs, the transparency procedure of the reform, the improvement of the government's control and inspection in the equitization and divestment of SOEs, the selection of appropriate methods for equitization and divestment, the exact assessment of SOEs' value, and the consideration of the particular characteristics of different sectors.

Keywords: Reform, state-owned enterprise, Viet Nam, performance, profit

JEL Classification: G32, P31

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1. INTRODUCTION

Although the growth in 2016 was moderate, Viet Nam's economy presented a favorable environment. Economic growth decelerated slightly by 5.9% due to the impact of the drought on the agricultural output, cuts in the oil production, and slowing external demand. Currently, inflation remains below the official target of 5%. The slowdown of import growth led to an increase in the current account surplus, and the foreign direct investment (FDI) inflows remained robust (World Bank 2016).

Over recent decades, the agricultural sector of Viet Nam has accomplished enormous achievements, making crucial contributions to the national targets in food security, poverty reduction, social stability, and trade. However, this sector faces obstacles relating to competition from other sectors, such as industry and services, in terms of the use of resources like labor, land, and water. In addition, a rise in labor costs has led to a decrease in this sector's competitive ability in the international market. Clearly, consumers and trade partners have required higher standards for both products and production practices in recent years. This implies that Viet Nam's agriculture needs to create more economic value and farmer and consumer welfare as well as using fewer natural and human resources without degrading the environment (World Bank 2016).

By the end of 2015, 442,500 enterprises were operating in Viet Nam, an increase of 10% compared with the previous year. The number of non-state and FDI enterprises increased by 10.2% and 8.1%, respectively, while the number of SOEs dropped by 7% due to equitization. Similarly, the number of employees working in non-state and FDI enterprises rose by 9.4% and 7.9%, respectively. By contrast, the number of employees in SOEs declined significantly by 10.8% (General Statistics Office of Viet Nam 2017).

Due to inefficiency and misallocation of resources, SOEs continuously pose a challenge to the economy of Viet Nam. After the renovation (Doi Moi) in 1986, about 90% of the 100 largest SOEs reported pre-tax profits. However, these profits were the result of preferential treatment from the Vietnamese government and monopoly positions rather than efficiency (Berthold n.d.). There was a negative relationship between the growth of SOEs and the private sector, and the greater the density of SOEs in a particular province, the lower the gross domestic product (GDP) (Thang and Freeman 2009). International economic integration has influenced SOEs in Viet Nam since the early 2000s. It is also notable that, after participating in the World Trade Organization (WTO) in 2007, the market in Viet Nam has treated foreign products, enterprises, and investments similarly to domestic ones. By signing the Trans-Pacific Partnership (TPP) agreement and engaging in negotiations on the free trade agreement (FTA) with the European Union (EU), Viet Nam has committed to renovating SOEs' operations (Mai 2017).

It is possible to see the reform of SOEs as a component of the economic innovation process in Viet Nam (Nguyen 2016). However, the SOEs in this country face a number of challenges relating to complex ownership structures, weak management, and unclear financial and debt obligations (ADB 2015). Thus, it is necessary to reform SOEs to improve their productivity and efficiency. Currently, the Government of Viet Nam is extending this policy and implementing it in essential sectors, such as banking, insurance, telecommunication, aviation, maritime, petroleum, and agriculture. It has made significant attempts to accelerate the equitization and divestment of SOEs. Four key factors drive equitization: the government's need to mobilize financial resources to deal with the rising fiscal deficit and public debt; an increasing reform of SOEs to avoid the failure of these enterprises; obligations under free trade agreements; and the improvement of Viet Nam's stock exchanges (Hiep 2017). The reform of SOEs in Viet

Nam has made initial achievements, but this country is facing challenges in the reform process, consisting of the slow velocity of the reform, the low quality of the reform, and difficulties in inviting strategic and foreign investors to join SOEs after the reform. For instance, after the reform, the state still holds 80% of the capital in some enterprises, and this leads to concerns among investors about participating in these firms, since they have few decision rights in the operations of these enterprises. In this context, SOEs in agriculture are not an exception of the reform policy. In fact, various issues in the reform of SOEs in agriculture need consideration, including difficulties in attracting strategic investors, loss and inefficiency of SOEs in agriculture, and ineffective management of agricultural land.

This article aims to highlight the policies and regulations in the reform of SOEs and to assess the situation of SOE reform in Viet Nam. Further, the article analyzes the reform of SOEs in the agriculture of this country to demonstrate the advantages and challenges in the reform of SOEs, the factors affecting SOEs' reform, and the outcomes of the reform. Lastly, it recommends policies to facilitate the success of SOEs' reform.

The rest of this paper proceeds as follows. Section 2 reviews the empirical studies on the reform of SOEs around the world and in Viet Nam. Section 3 provides an overview of enterprises in Viet Nam. Section 4 discusses the reform of SOEs in Viet Nam. Lastly, the conclusion and policy implications are summarized in section 5.

2. EMPIRICAL STUDIES ON THE REFORM OF STATE-OWNED ENTERPRISES AROUND THE WORLD AND IN VIET NAM

Several scholars around the world have investigated the reform of SOEs. Bower (2017) studied the reform of SOEs in 11 emerging European countries. The author found that SOEs' profitability and efficiency of resource allocation were lower than those of private firms in most sectors, with substantial cross-country variation. Specifically, SOEs' low performance may lead to three risks: uncertain public finances because of risky contingent liabilities, unstable finances due to the sizeable state ownership of banks, and negative productivity. Musacchio, Ayerbe, and Garcia (2015) investigated the challenges that governments face in reforming SOEs in Latin America. The authors pointed out two problems in the reform of SOEs: the corporate governance problem and the fiscal governance problem. To overcome these issues, governments should design governance mechanisms that rely on the market, on ex ante administrative controls, or on hybrid solutions. A study by Nellis (2005) examined the reform process of SOEs in Africa. He concluded that, to foster the achievement of SOE reform in Africa, the public and private infrastructure provision should be a dichotomy and the proposed practices of reform need to fit more closely with the expectations and sentiments of the affected government, consumer base, and general population. Moreover, Clo et al. (2015) studied the reforms of the top ten Italian SOEs during the period 2004–13. They concluded that, on average, the reforms have facilitated the management and performance of the Italian SOEs compared with their private and public European industry counterparts. Listed SOEs operating in liberalized markets have gained higher profits and dividends. However, due to business expansion in the international market of these firms, a high proportion of their revenues and employees have moved out of Italy. By contrast, unlisted SOEs that are still performing the public mission by providing universal services often fail, and taxpayers partly compensate for this.

Likewise, Cheng-Han, Puchniak, and Varottil (2015) examined the model for SOE reform in Singapore. Their results addressed the fact that SOEs in Singapore presented higher valuations than government-linked companies (GLCs) after imposing better corporate governance practices. Hardship in the economic conditions in addition to a democratic political environment in Singapore from the late 1950s to the early 1970s were crucial determinants of the improved performance of SOEs in this country. Heller and Delesgues (2016) investigated the reform of SOEs in the oil, gas, and mining industries of Myanmar. Their findings indicated the characteristics of SOEs in these industries that are consistent with reform, including a large influence over public revenues, increasing financial autonomy and growing accounts, ambiguous roles and responsibilities, contributions to political patronage, poor transparency, and military involvement. A study by Leutert (2016) examined the challenges involved in reforming SOEs in the People's Republic of China (PRC). Her research demonstrated that this country faced three issues in the reform of SOEs, consisting of determining the manner and time to give market forces a greater role, aligning mismatched executive incentives, and dealing with complicated internal factors of firms.

Hai and O'Donnell (2017) assessed the achievement and failure of the reform of SOEs in Viet Nam. Their results showed that SOEs exhibited poor performance in managing and using government resources. In Viet Nam, although the number of SOEs has tended to decrease in recent years, the equitization of SOEs is a strict task, since it has threatened the interests of powerful stakeholders. In addition, Nguyen (2016) examined the productivity and efficiency of SOEs in 24 sub-sectors of Viet Nam during the period 2002–11. He concluded that the average annual growth rate of total factor productivity (TFP) across all 24 sub-sectors accounted for 5.1%. Beverage SOEs had the highest productivity growth rate of 13.98% annually. The refined petroleum products sector presented the highest technical efficiency of 94.08%, followed by the beverage (90.79%), leather and related products (90.41%), wearing apparel (90.49%), and transport equipment sectors (91.26%). Research has also indicated that changes in output-oriented scale mix efficiency and environmental conditions were the main drivers of productivity improvement in Vietnamese manufacturing SOEs. Similarly, a study by Ngu (2003) estimated the TFP of industrial SOEs in Viet Nam during the period 1976–98. He claimed that the TFP and output of industrial SOEs, on average, increased by 3.05% and 40.9%, respectively. However, there are many issues that the government needs to consider in the SOE reform process in Viet Nam.

To sum up, several countries have carried out SOE reforms in different industries. Although each country has advantages and challenges in renovating SOEs, most of the studies have demonstrated that it is necessary to reform SOEs to improve productivity and efficiency.

3. MATERIALS AND METHODS

3.1 Data Collection

The authors gathered data on the business outcomes of 38 SOEs in Viet Nam to estimate the determinants affecting their performance. Specifically, they collected SOEs' business indicators, such as the profit before taxes, net revenue, revenue from financial activities, financial expenses, sale expenses, administrative expenses, owner equity, and salary fund, from the income statements on their website. Among the 38 SOEs, the government manages 6 groups and Ministries such as the Ministry of Industry and Trade, Ministry of Agriculture and Rural Development, Ministry of Finance, Ministry of Transport, Ministry of Construction, and so on manage 32 SOEs. Due to the

shortage of databases on the business outcomes of SOEs in Viet Nam, this research faced data restrictions, and the authors gathered data for selected years (2017, 2016, or 2015).

3.2 Data Analysis

The authors entered and managed the data on the business performance of 38 SOEs in Microsoft Excel and then used the Stata MP 14.2 software for analysis.

3.2.1 Descriptive Statistics

The authors employed indicators of descriptive statistics, such as the mean, standard deviation (SD), minimum (min.), and maximum (max.), to describe the characteristics of SOEs in Viet Nam.

3.2.2 Multivariate Regression (MR) Model

The study employed MR to model and analyze multiple variables. This method can describe the relationship between a dependent variable and several independent variables. Moreover, it can provide predicting and forecasting. Thus, the MR model can be much more realistic than the uni-factorial regression model (Zsuzsanna and Marian 2012).

This study applied the MR model to investigate the influences of the determinants on the profit before taxes of SOEs in Viet Nam. Table 1 presents a description of the covariates in the MR model.

Table 1: Description of the Covariates in the MR Model

Variables	Label	Unit	Expected Signs
1. Dependent variable			
Profit before taxes of SOEs in a year	Y	D	
2. Covariates			
Net revenue of SOEs in a year	X ₁	D	+
Financial expenses of SOEs in a year	X ₂	D	-
Sale expenses of SOEs in a year	X ₃	D	-
Administrative expenses of SOEs in a year	X ₄	D	-
SOE types (1 for groups and 0 for otherwise)	D ₁		+/-

Note: D means Dong (the Vietnamese currency unit).

4. RESULTS AND DISCUSSION

4.1 Enterprises in Viet Nam: An Overview

In Viet Nam, by 2013, the state sector accounted for about a third of the economy, and it contributed almost 30% of the growth of the gross domestic product (GDP) in 2005–13. This sector employed about 10% of the total labor force and generated about 4% of new employment in the same period (Taussig, Hieu, and Linh n.d.).

The number of enterprises by ownership in Viet Nam increased by 69,272 from 373,213 enterprises in 2013 to 442,485 enterprises in 2015, in which the number of SOEs dropped by 364 enterprises while the number of non-state enterprises and

foreign investment enterprises rose by 67,916 and 1,720, respectively. In 2015, of the total 442,485 enterprises, the rate of SOEs and foreign investment enterprises accounted for only 0.64% and 2.7%, respectively, while the proportion of non-state enterprises was dominated by nearly 97%. By 2015, out of the total 427,710 non-state-owned enterprises, limited companies were leading with 65%, followed by joint stock companies without capital of the state with 20.3%, while the rate of joint stock companies with capital of the state accounted for only 0.32%. This implies a decrease in the number of SOEs and an increase in the number of non-state enterprises in Viet Nam in recent years due to the reform and restructuring of SOEs that the government has implemented. It also reflects the trend toward the development of non-state-owned enterprises, which presents important contributions to the economic growth in this country (Table 2).

Table 2: Number of Enterprises by Ownership in Viet Nam

Categories	2013	2014	2015
TOTAL	373,213	402,326	442,485
State-owned enterprises	3,199	3,048	2,835
Central	1,790	1,703	1,547
Local	1,409	1,345	1,288
Non-state enterprises	359,794	388,232	427,710
Private	49,203	49,222	47,741
Collective name	502	507	591
Limited companies	230,640	254,952	287,786
Joint stock companies with capital of the state	1,614	1,536	1,416
Joint stock companies without capital of the state	77,835	82,015	90,176
Foreign investment enterprises	10,220	11,046	11,940
100% foreign capital	8,632	9,383	10,238
Joint venture	1,588	1,663	1,702

Source: General Statistics Office of Viet Nam (2017).

Table 3: Number of Enterprises by Sector in Viet Nam

Categories	2013	2014	2015
TOTAL	373,213	402,326	442,485
Agriculture, forestry, and fisheries	3,656	3,844	3,846
Mining and quarrying	2,590	2,569	2,510
Manufacturing	58,688	63,251	67,490
Construction	52,147	55,198	61,264
Wholesale and retail trade	148,481	158,761	173,517
Transportation and storage	20,614	22,442	26,449
Accommodation and food services	13,616	15,010	16,457
Information and communications	7,770	9,022	9,820
Finance, banking, and insurance	1,864	1,983	2,169
Real estate	7,271	7,833	8,979
Others	323,968	347,746	381,480

Source: General Statistics Office of Viet Nam (2017).

In Viet Nam, the number of enterprises by sectors tended to rise for three years (2013–15), except in mining and quarrying. Specifically, the number of enterprises in wholesale and retail trade presented the strongest increase of 25,036, followed by

construction (9,117 enterprises), manufacturing (8,802 enterprises), and agriculture, forestry, and fisheries (190 enterprises). In contrast, the number of enterprises in mining and quarrying declined by 80 (Table 3).

Over three years (2013–15), the total number of employees working in enterprises rose by 1,291,000 persons. The number of employees working in non-state and foreign investment enterprises increased significantly by 857,800 and 721,800 persons, respectively. However, the number of employees in SOEs decreased sharply by 288,600 persons because of the drop in the number of SOEs in recent years (Table 4).

Table 4: Number of Employees Working in Enterprises in Viet Nam
(Thousand Persons)

Categories	2013	2014	2015
TOTAL	11,565.9	12,135.0	12,856.9
State-owned enterprises	1,660.2	1,537.6	1,371.6
Non-state enterprises	6,854.8	7,148.4	7,712.6
Foreign investment enterprises	3,050.9	3,449.0	3,772.7

Source: General Statistics Office of Viet Nam (2017).

From 2013 to 2015, the total amount of capital of enterprises rose by D4,379.8 trillion. The amount of capital in all types of enterprises presented a rapid increase, in which the amount of capital in non-state enterprises rose most strongly by D2392.8 trillion, followed by SOEs (D1151.5 trillion) and foreign investment enterprises (D835.5 trillion). The growth of capital reflects the financial power in the production and business operations of enterprises (Table 5).

Table 5: Annual Average Capital and Net Revenue of Enterprises in Viet Nam
(D trillion)

Item	2013	2014	2015
Capital			
TOTAL	17,764.4	19,677.3	22,144.2
State-owned enterprises	5,793.4	6,250.8	6,944.9
Non-state enterprises	8,628.1	9,613.8	11,020.9
Foreign investment enterprises	3,342.9	3,812.7	4,178.4
Net revenue			
TOTAL	12,201.7	13,516.0	14,949.2
State-owned enterprises	2,943.7	2,960.8	2,722.2
Non-state enterprises	6,203.6	7,039.5	8,075.1
Foreign investment enterprises	3,054.4	3,515.7	4,151.9

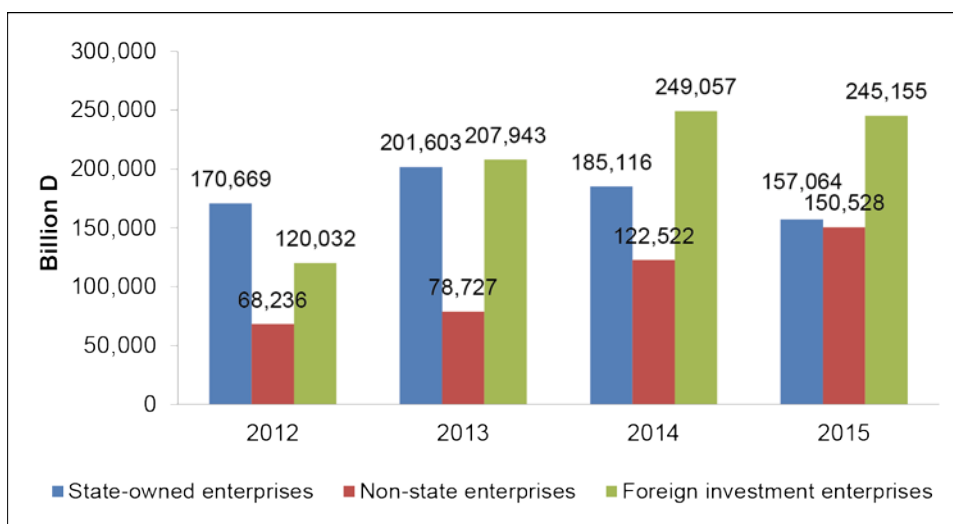
Note: D means Dong (Viet Nam currency unit).

Source: General Statistics Office of Viet Nam (2017).

In terms of net revenue, the total net revenue of enterprises increased sharply by D2747.5 trillion for three years (2013–15). Specifically, the net revenue of non-state and foreign investment enterprises rose by D1871.5 trillion and D1097.5 trillion, respectively. However, the net revenue of SOEs dropped significantly by D221.5 trillion, and this implies inefficiency in the production and business of SOEs, since the net revenue decreased simultaneously with rising capital. In addition, a decline in the net revenue of SOEs presents weaknesses in managing the production and business of the executive boards in these firms, although SOEs have often obtained support from the government in terms of land, labor, and capital (Table 5).

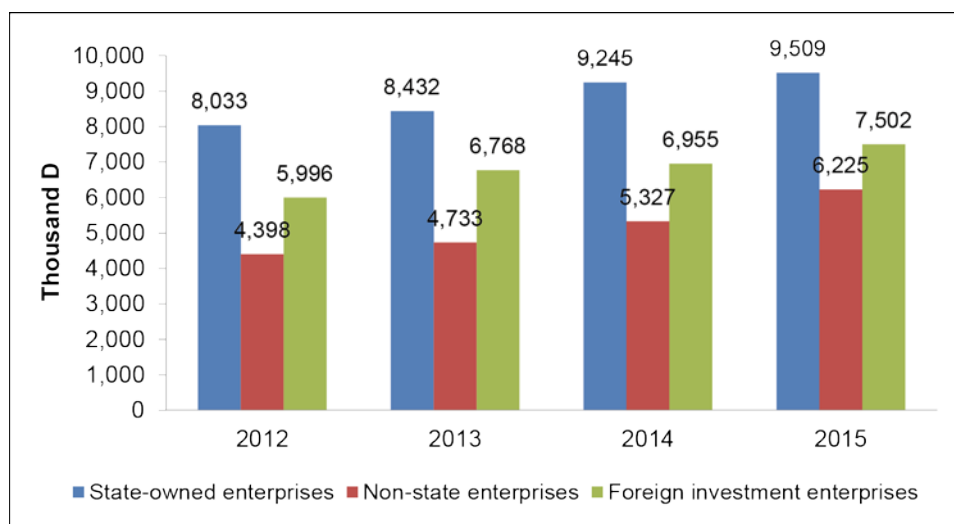
The profit before taxes of SOEs in Viet Nam rose dramatically by more than D30,000 billion from D170,669 billion in 2012 to D201,603 billion in the subsequent year. However, the profit levels of SOEs in this country fell sharply by nearly D50,000 billion from D201,603 in 2013 to D157,064 billion in 2015. By contrast, the profit before taxes of both non-SOEs and foreign investment enterprises (FIEs) increased significantly for four years (2012–15). For example, the profit of non-SOEs nearly doubled from D68,236 billion in 2012 to D150,528 billion in 2015. Similarly, the profit of FIEs more than doubled from D120,032 billion in 2012 to D245,155 billion in 2015. The results show that the profit of SOEs tended to decline while the profit of non-SOEs and FIEs presented a rapid increase for four years (2012–15). Thus, the contributions of non-SOEs and FIEs to the economy of Viet Nam have become important determinants in recent years (Figure 1).

Figure 1: Profit before Taxes of Enterprises in Viet Nam



Source: General Statistics Office of Viet Nam (2017).

The average income per month of employees of SOEs in Viet Nam was higher than that of non-SOEs and FIEs. For instance, the average income of employees of SOEs rose by about D1.5 million per month from D8 million in 2012 to D9.5 million in 2015. In the same period, the income of employees of non-SOEs and FIEs rose by nearly D2 million per month. By 2015, the income of employees of SOEs was higher than that of employees of non-SOEs and FIEs by D2 million per month and more than D3 million per month, respectively (Figure 2).

Figure 2: Average Income per Month of Employees of Enterprises in Viet Nam

Source: General Statistics Office of Viet Nam (2017).

4.2 Reform of State-Owned Enterprises in Viet Nam

4.2.1 Policies and Regulations in the Reform of State-Owned Enterprises in Viet Nam

In Viet Nam, the government implemented the reform of SOEs in three main periods, the first of which was from 1992 to mid-1998; the second was from 1998 to 2011; and the last was from 2012 to the present.

The First Period (1992–mid-1998)

In this period, the Government issued Decision 202 regarding the initial transformation of some SOEs into joint stock companies on 8 June 1992. Next, it issued Decree 28/CP on transforming SOEs into joint stock companies on 7 May 1996 to substitute for Decision 202. Then, the Government released Decree 25 on 26 March 1997 to modify some articles in Decree 28.

The Second Period (1998–2011)

In this period, the Government issued Decree 44 concerning the transformation of SOEs into joint stock enterprises on 29 June 1998. After that, it issued Decree 64 (19 June 2002) and Decree 187 (16 November 2004) on transforming SOEs into joint stock companies. Then, the Government released Decree 109 (26 June 2007) on transforming enterprises with 100% state-owned capital into joint stock companies. On 23 November 2011, the Prime Minister issued Decision 2092 on the foundation and organization of the managerial board for the renovation and development of enterprises (Ban chỉ đạo đổi mới và phát triển doanh nghiệp (MBRDE)). The MBRDE assists the Prime Minister in terms of researching, executing, implementing, and controlling the renovation of enterprises as well as supervising the registration of enterprises based on the Law of Enterprise.

The Last Period (2012–Present)

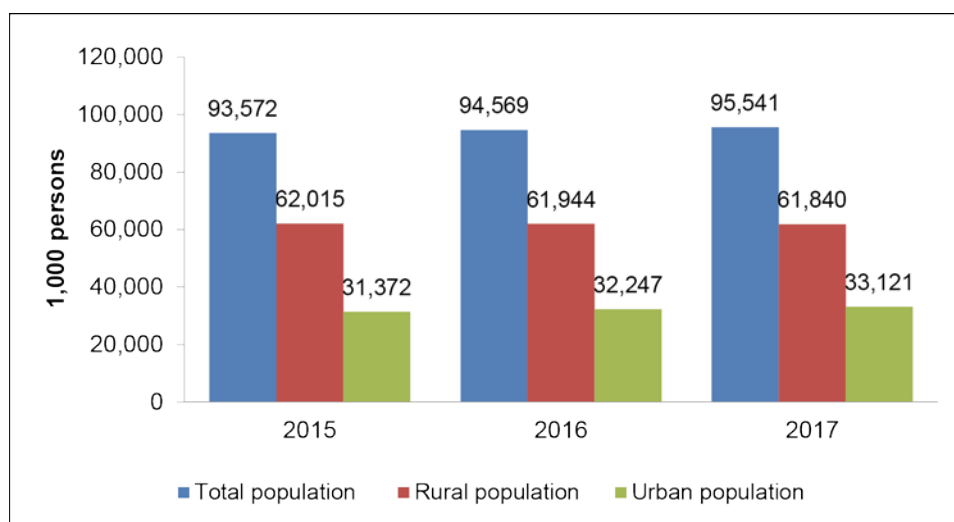
On 17 July 2012, the Government released Decision 929 on restructuring SOEs, focusing particularly on state corporations in 2011–15. Next, on 18 June 2014, it issued Decision 37 on the classification of SOEs to restructure and renovate the current SOEs. The aim of this decision was to specify and classify SOEs based on the proportion of capital owned by the state. On 13 November 2013, the government issued Decree 172, relating to guidance on the foundation, dissolution, and ruination of state limited companies. The National Assembly approved the Law of Enterprise on 26 November 2014. This is an important legal document, because it regulates the foundation, operation, dissolution, and ruination of enterprise categories such as joint stock companies, limited companies, and private enterprises.

4.2.2 Factors Affecting the Reform of SOEs

Socioeconomics

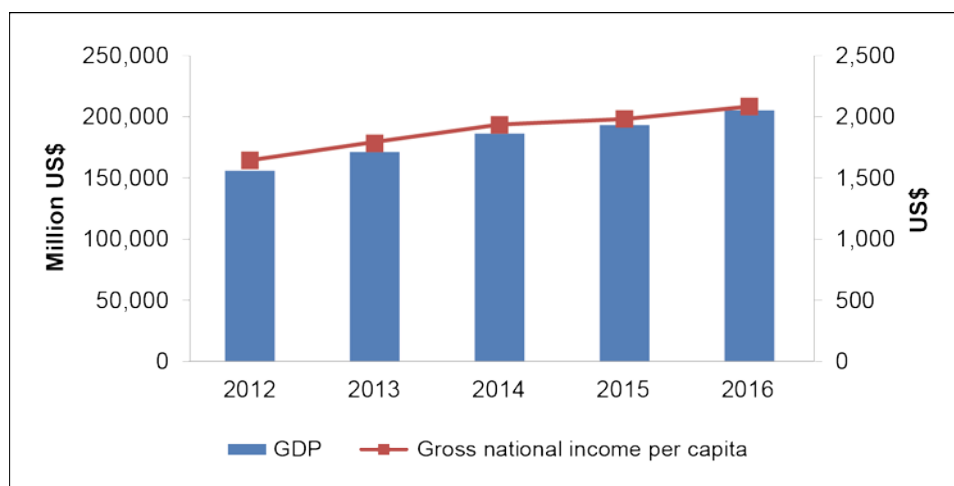
Over a three-year period (2015–17), the population of Viet Nam increased by 1% (or nearly 2 million people) from 93.5 million people in 2015 to 95.5 million people in 2017. In 2017, the rural population decreased by 170 thousand people while the urban population rose by 1.7 million people compared with 2015, and this implies an urbanization process in Viet Nam. However, the rural population still accounted for about 65% of the total population (Figure 3).

Figure 3: Population of Viet Nam



Source: Food and Agriculture Organization (FAO) (2018a). Accessed 30 April 2018. <http://www.fao.org/faostat/en/#data/OA>.

Both the GDP and the annual income per capita of Viet Nam tended to rise from 2012 to 2016. The average GDP growth of this country was 7.1% (or \$49.4 billion). The annual income per capita increased by 5.6% (or \$406) as a result of the growth in the GDP and a slight increase in the total population (Figure 4).

Figure 4: GDP and Gross National Income per Capita of Viet Nam

Source: FAO (2018b). Accessed 30 April 2018. <http://www.fao.org/faostat/en/#data/MK>.

By 2016, agriculture, forestry, and fisheries contributed 16.32% to the economic structure of Viet Nam; 32.72% came from the industry and construction sector; and the service sector contributed 40.92%. The total retail sales of goods and services reached D3,568.1 trillion, growth of about 10.7% relative to the previous year. At the same time, the export and import turnover of goods reached \$176.6 billion and \$174.8 billion, respectively (General Statistics Office of Viet Nam 2017).

By 2016, the labor force aged 15 and above had reached 54.4 million people, a rise of about 461.1 thousand people relative to the previous year. The proportion of laborers working in agriculture, forestry, and fishery, industry and construction, and services was 41.9%, 24.7%, and 33.4%, respectively. At the same time, the unemployment rate was 2.3%, of which 3.23% was the unemployment rate in the urban areas and 1.84% was the rate in the rural areas (General Statistics Office of Viet Nam 2017).

Simultaneously, the average consumer price index rose by 2.66% compared with that in 2015 and the average annual inflation was 1.83%. The number of newly established enterprises reached 110,100, an increase of 16.2% compared with the number in 2015. In 2016, the total registered capital was D891.1 trillion, rising by 48.1%; the average registered capital of newly established enterprises in 2016 reached D8.1 billion, increasing by 27.5%; and the total number of registered employees of newly established enterprises was 1,268,000 persons (General Statistics Office of Viet Nam 2017).

Legal Environment

All types of enterprises in Viet Nam operate under the Law of Enterprise, which the National Assembly approved on 26 November 2014. This law contains 10 chapters and 213 articles that regulate the foundation, organization, operation, dissolution, and failure of enterprises. The Law of Enterprise is an important legal platform to direct and adjust the operations of enterprises. Moreover, in recent years, the Prime Minister has issued decisions to supervise the reform of SOEs. For example, the Prime Minister issued Decision 707 on 25 May 2017 regarding restructuring SOEs during the period 2016–20 and Decision 31 on 17 July 2017 on transforming state non-profit organizations into joint stock companies. The Prime Minister issued Decision 1232 on 17 August 2017 in relation to establishing the list of SOEs requiring divestiture during the period 2017–20.

Industry Characteristics

Attributes of different sectors may affect the reform of SOEs. More importantly, the SOEs that need reforming are often big enterprises operating in crucial sectors of the nation, such as energy, construction, banking, insurance, and agriculture. As these enterprises belong to the state, they have obtained government investments for land, labor, capital, and equipment. The government should ensure that the reform of SOEs is consistent with the characteristics of each sector. For example, the operations of the energy sector are associated with exploiting and consuming natural resources, such as coal and oil. The operations of the agricultural sector are related to managing and using agricultural land. Hence, the government should consider the characteristics of industries when reforming SOEs.

4.2.3 Equitization of SOEs

Viet Nam has a plan to equitize 127 SOEs from 2017 to 2020, 44 SOEs during 2017, 64 SOEs during 2018, 18 SOEs during 2019, and one SOE during 2020. By the end of September 2017, the country as a whole had equitized 37 SOEs, specifically the Ministry of National Defence (17 enterprises), the Ministry of Construction (two enterprises), Binh Duong province (two enterprises), Hung Yen province (one enterprise), Thua Thien Hue province (one enterprise), Soc Trang province (two enterprises), Vinh Long province (two enterprises), Bac Ninh province (one enterprise), Kien Giang province (one enterprise), Tuyen Quang province (two enterprises), Quang Tri province (one enterprise), Dong Thap province (two enterprises), Viet Nam Television (one enterprise), Bac Giang province (one enterprise), and Quang Ninh province (one enterprise) (MBRDE 2017).

4.2.4 Divestment of SOEs

Until the end of September 2017, the total amount of capital divested from SOEs was D3,838 billion. The total revenue resulting from the renovation of SOEs reached D12,099 billion, of which the collection from equitization accounted for D683,823 billion and the remaining D11,415.5 billion came from divestment.

4.2.5 Registration of SOEs on the Stock Exchange

The government has requested that SOEs release their shares listed on the stock exchanges as soon as possible to enhance the divestment process. Some SOEs have completed this task, including Vietnam Airlines, the Airport Corporation of Vietnam, Sabeco, Habeco, and Petrolimex (Hiep 2017). However, until 15 August 2017, according to an announcement of the Ministry of Finance, 747 SOEs had not registered and released shares on the stock exchanges (MBRDE 2017).

4.2.6 Movement of SOEs to the State Capital Investment Corporation (SCIC)

To facilitate the divestment process, the Government has also asked SOEs to transfer state capital ownership to the SCIC. For example, from 2011 to 2015, the SCIC obtained D8,726 billion (\$440 million) in transfers from SOEs (Hiep 2017). By the first nine months of 2017, the SCIC had obtained 11 SOEs with a total amount of capital amounting to D836.7 billion. However, 176 SOEs have not transferred to the SCIC. According to the government's plan for divestment, SOEs will transfer at least D250 trillion (\$11 billion) to the SCIC (MBRDE 2017).

4.2.7 Reform of SOEs in Agriculture in Viet Nam

In the agricultural sector of Viet Nam, the government has equitized 15 SOEs, and currently this sector is equitizing three other SOEs, the Vietnam Rubber Group, Vietnam General Chemical Corporation, and Vietnam Southern Food Corporation. It has divested six SOEs, the Vietnam National Vegetable, Fruit and Agricultural Product Corporation, Vietnam Tea Corporation, Vietnam Forestry Corporation, Consultancy and Development of Vegetable, Flower and Fruit Company Limited, Construction and Technological Transfer in Irrigation, and National Veterinary Joint Stock Company (Thanh 2017).

There are advantages in reforming SOEs in agriculture. The Ministry of Agriculture and Rural Development (MARD) has a close cooperation with the government, the Ministry of Finance, the Ministry of Planning and Investment, and so on to solve the existing bottlenecks of SOEs in agriculture. In addition, managerial boards in SOEs have expressed their commitment to implementing reforms of their enterprises (Bộ Nông nghiệp và Phát triển nông thôn (MARD) 2018).

However, the reform of SOEs in agriculture involves numerous issues. The MARD manages a few SOEs, but these are big corporations, which have special operations, such as the Vietnam Rubber Group, Vietnam General Chemical Corporation, and Vietnam Southern Food Corporation. These SOEs are facing many challenges from the past that the government needs to resolve, and these negatively affect the attitude and motivation of employees. Furthermore, the restructuring and innovation of SOEs in agriculture are proceeding with a slow velocity and low performance. Some agricultural SOEs have either low profits or losses in the long run, leading to their collapse and failure. The weak management and the dependence of some managers in agricultural SOEs on the support and guidance of the government and the MARD are also challenges in their reform. The restructuring and innovation of state-run farms have to overcome some issues, because these enterprises are often located in border regions and remote areas and therefore need to perform two missions, production and the protection of national security, at the same time. Moreover, conflicts and disputes regarding land sometimes occur between state-run farms and locals. Finally, it is very difficult to resolve the debts of SOEs, because these enterprises are unable to repay their debts due to inefficient production and business (MARD 2018).

It is necessary to consider the reasons for the difficulties arising in the reform of SOEs in agriculture. Firstly, due to inefficient production and business, some agricultural SOEs lose the majority of state capital, and this interrupts the reform process. As a result, some SOEs need to be dissolved, because they have no state capital to divest. Secondly, it is very difficult for SOEs in agriculture to attract strategic and foreign investors, since investors often think that they must face low efficiency and high risks when investing in agriculture. Moreover, equitization and divestment are especially stern and slow in state-owned farms because of the land difficulties. For example, of the total area of 7.5 million hectares of agricultural land that SOEs manage in agriculture, they transform 15,137 hectares illegally, they do not use 78,000 hectares, and they use 428,515 hectares for other purposes (Nhi 2015). Specifically, some state-owned farms operate inefficiently, and, as a consequence, they allocate agricultural land to households for non-agricultural purposes. Households have obligations in terms of paying productivity to state-owned farms (Thanh 2017).

4.3 Influences of the Determinants of SOEs' Business Performance in Viet Nam

On average, the profit before taxes of the surveyed SOEs is D7,680 billion (or \$333 million). The maximum profit before taxes of SOEs reaches D248,000 billion (or \$10.7 billion), and the average net revenue of SOEs reaches D29,300 billion (or \$1.27 billion). On average, the financial, sale, and administrative expenses of SOEs are D11,300 billion (\$490 million), D4,230 billion (\$184 million), and D9,730 billion (\$422 million), respectively. The ratio of profit before taxes and net revenue (profit before taxes/net revenue) is 0.262, and this implies that the proportion of profit before taxes accounts for 26.2% of the net revenue. Of the total net revenue, the proportion of financial, sale, and administrative expenses accounts for 38.5%, 14.4%, and 33.2%, respectively (Table 6).

Table 6: Business Outcomes of the Surveyed SOEs in Viet Nam

Variables	Mean	SD	Min.	Max.
Profit before taxes (VND)	7.68e+12	4.02e+13	-1.10e+10	2.48e+14
Net revenue (VND)	2.93e+13	8.98e+13	5.62e+09	5.09e+14
Financial expenses (VND)	1.13e+11	4.87e+11	0	2.87e+12
Sale expenses (VND)	4.23e+10	2.52e+11	0	1.56e+12
Administrative expenses (VND)	9.73e+10	4.74e+11	0	2.92e+12

Note: SD means standard deviation.

Source: Survey data, 2018.

Shapiro and Wilk (1965) developed the Shapiro–Wilk (SW) test, and the test statistics are as follows (Park 2003): $W = (\sum a_i x_i)^2 / \sum (x_i - \bar{x})^2$, in which W represents the statistical value of the SW test; a_i is the constant; $x = (x_1, \dots, x_n)$ are ordered random observations from normal distribution; and \sum denotes the covariance matrix of x .

To implement the SW test, the sample size needs to be greater than or equal to seven and less than or equal to 2,000 and the W value needs to be positive or less than or equal to one (Park 2003). This research applies the SW test to examine the normal distribution of variables in the sample, since it meets the above requirements. The hypotheses are as follows:

Null hypothesis (H_0): The distribution of the sample is normal.

Alternative hypothesis (H_a): The distribution of the sample is not normal.

We reject the null hypothesis if the p-value is less than or equal to the predetermined value (0.05), and, by contrast, we retain the null hypothesis if the p-value is greater than the predetermined value.

The p-values are equal to zero, and this implies that the distributions of all the variables are not normal (Table 7). Table 8 presents the impacts of the determinants on the profit before taxes of the surveyed SOEs. To increase the accuracy of the estimation, we calculate all the quantitative variables using the logarithm.

Table 7: SW Test for Normal Data

Variables	W	V	z	P-value
Profit before taxes (D)	0.185	30.944	7.200	0.000
Net revenue (D)	0.350	24.693	6.727	0.000
Financial expenses (D)	0.433	21.518	6.438	0.000
Sale expenses (D)	0.041	36.419	7.542	0.000
Administrative expenses (D)	0.353	24.567	6.716	0.000
SOE types (1 for groups and 0 for otherwise)	0.821	6.781	4.016	0.000

Source: Survey data, 2018.

The F-value and p-value are equal to 5.509 and 0, respectively, and these reflect the fitness of the model. The R-square is equal to 0.462, implying that we can interpret 46.2% of the variation in the profit before taxes of SOEs as independent variables in the model (Table 8).

Table 8: Results of the MR Model for the Profit before Taxes of Surveyed SOEs

Variables	Coefficient	Standard Error	t	P-Value
Log_net revenue (D)	1.397***	0.294	4.75	0.000
Log_financial expenses (D)	0.087	0.616	0.14	0.888
Log_sale expenses (D)	-0.350*	0.205	-1.70	0.099
Log_administrative expenses (D)	0.335	0.641	0.52	0.605
SOE types (1 = groups and 0 = otherwise)	-0.404	0.999	-0.40	0.688
Constant	-6.545*	3.611	-1.81	0.079
Number of observations	38			
Number of parameters	6			
RMSE	1.722			
R-square	0.462			
F-value	5.509			
P-value	0.000			

Note: *** and * mean statistical significance at the 1% and 10% levels, respectively.

Source: Survey data, 2018.

The results show that the net revenue and sale expenses are statistically significant, while the rest of the variables (financial expenses, administrative expenses, and SOE types) are not significant. The net revenue positively affects the profit before taxes, and this suggests that, if the net revenue increases by D1, then the profit before taxes will rise by D1.39, ceteris paribus. By contrast, the sale expenses have a negative relationship with the profit before taxes, and this implies that, if the sale expenses increase by D1, then the profit before taxes will decrease by D0.35, ceteris paribus (Table 8). The findings are consistent with the conclusions of O'Toole, Morgenroth, and Ha (2016); Tran, Nonneman, and Jorissen (2015); Loc, Lanjouw, and Lensink (2006); and Cuong et al. (2006).

5. CONCLUSION AND POLICY IMPLICATIONS

The reform of SOEs in agriculture in Viet Nam is an ongoing process; it can be neither hasty nor easy because of the complexities of the managerial mechanisms, economic institutions, and production and business performances of SOEs in agriculture. Therefore, it is necessary to recommend policies to the government and SOEs to improve the performance and facilitate the success of the renovation.

For the government, it is necessary to enhance the roles of the state in renovating SOEs. To implement this task, Viet Nam needs to improve the government's management of SOEs and complete the policies for the equitization and divestment of SOEs. However, the government should intervene less in the production and business operations of SOEs to enhance the obligations in the business outcomes of SOEs. In addition, transparency in the reform procedure of SOEs in each period is a necessity for SOEs to select the appropriate reform methods. It is necessary to enforce the government's and authorized ministries' control and inspection of SOEs' operations, and, more importantly, the National Assembly needs to examine the policies for the equitization and divestment of SOEs to ensure a consistent direction in terms of transforming SOEs into joint stock companies.

For SOEs, to achieve the targets of the SOE reform, Viet Nam needs to choose appropriate methods for equitization and divestment. The most common method for the equitization of SOEs in Viet Nam is an auction, because this assists in specifying and evaluating the exact value of SOEs before implementing the equitization. Consequently, it will maintain the capital and property of the state and limit corruption. In this case, the real value of SOEs will be justifiable in the stock market. Specifying the value of SOEs before equitization is the most difficult task in the reform of SOEs. In most cases, Viet Nam has only calculated the value of tangible assets, such as housing, stores, machines, and so on, and has often ignored the value of intangible assets, such as property rights and business opportunities, during equitization; therefore, it has not assessed the value of SOEs precisely. Before performing equitization and divestment, it is necessary to justify and resolve the debts of SOEs and to identify clearly the value of shares that they have sold to employees, especially in SOEs that have not released their stocks in an initial public offering (IPO). Indeed, it is necessary to indicate the rate of shares that they have sold to external shareholders to ensure appropriate directions for SOEs after equitization. SOEs need to construct feasible business strategies, facilitate productivity and efficiency, and improve the working environment for employees. Further, SOEs should consider the characteristics of their sector before reforming. For example, unlike the industry and service sectors, the objects of agriculture are crops and animals. Agricultural production presents seasonality and has a longer cycle than other sectors. Agricultural production often takes place in outdoor environments and therefore depends heavily on the weather. Specification in agriculture is simpler than in the industry and service sectors, because agricultural laborers are able to perform different tasks, such as plantation, fertilizer and chemical applications, and harvesting. Finally, SOEs should manage their expenditures more efficiently to enhance their profit.

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