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**Equitization and Firm Performance:  
The Case of Vietnam**

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## 1. Introduction

The recent history of privatization begins in the early 1980s when the Thatcher government in the United Kingdom started to privatize state-owned enterprises (SOEs) on a wide scale. After the collapse of the Communist political system in the late 1980s, many transition economies also launched comprehensive privatization programs. Nowadays, privatization is a worldwide phenomenon that forms an important element of the increasing use of markets to allocate resources.

Although privatization seems to be accepted as a useful method to restructure the economy, it is still not clear under which conditions privatization is successful, and how it exactly affects firm behavior and macro-economic performance of a country. Some studies point at success stories (especially in non-transition economies), while others argue that there are major failures, such as the privatization program in Russia (for recent surveys see Megginson and Netter, 2001 and Parker and Kirkpatrick, 2005). It is therefore no surprise that a lively debate is taking place on the effectiveness of privatization. This debate focuses on a long list of issues, such as the optimal preconditions of privatization, under-pricing of initial public offerings (IPOs), the most appropriate form of privatization, the effects of privatization on firm performance and employment, the impact of the economic environment - and especially measures other than privatization (such as price deregulation) - on the effectiveness of privatization, the interrelationship between corporate governance and privatization, and the impact of privatization on the development of the domestic financial system, especially with regard to the stock market.

Many authors argue that much more research is needed to get a better view of the effectiveness of privatization (see, *e.g.*, Megginson and Netter, 2001). Among other things, these authors point at the utmost importance of closely examining the process of privatization by means of country case studies, the importance of precisely calculating the employment effects of privatization and the need for additional empirical studies on the effects of privatization on firm performance.

This study is the first study that examines the effects of privatization, called “equitization” in Vietnam, using data of 147 equitized firms and 92 SOEs. The case of Vietnam is interesting because this country’s equitization approach is different from privatization programs in many non-transition economies in that residual state ownership after privatization and the percentage of shares transferred to insiders are quite substantial. A more or less standard result from the empirical literature so far, however, is that particularly outside

ownership promotes performance improvement of the firms in question (see, *e.g.*, Earle and Estrin, 1996). On the basis of that, expectations regarding performance improvement of equitized firms in Vietnam would have to be modest. Following the methodology of Megginson, Nash and Randenborgh (1994), we first compare the pre- and post-equitization financial and operating performance of the full sample of firms. Then we partition the sample into several subgroups based on factors that the literature documents as potentially important for firm performance following privatization, and test for significant differences in performance between sub-samples. In addition, to examine which firms gain most from equitization, we apply cross-sectional regression analyses, wherein the impact of factors such as firm size, the percentage of residual state ownership after equitization, corporate-governance aspects, stock-market listing and location are examined. Finally, to overcome the shortcoming of the pre-post comparison method that it, in fact, is unable to isolate the impact of privatization on firm performance from that of other determinants, the so-called difference-in-difference (DID) method is employed.

The remainder of the paper is organized as follows. Section 2 is devoted to reviewing the literature on privatization. Section 3 briefly summarizes the equitization program in Vietnam. Section 4 describes the data used in this study. Section 5 presents the methodology and some testable predictions. The empirical results from the pre-post comparison method are summarized and discussed in Section 6 while Section 7 reports the outcomes of the regression analyses. The DID method and empirical results from this method are presented in Section 8. Finally, Section 9 concludes the paper and outlines some areas for further research.

## **2. Literature review**

### *2.1. The efficiency of state versus private ownership: theoretical review*

Is public or private ownership more likely to be efficient? This question has induced a fair amount of debate in the literature on privatization. Specifically, the literature in this issue can be divided into two branches: the social view and the agency view (LaPorta and López-De-Silanes, 1999). The social view is in favour of public ownership while the agency view supports private ownership. The theoretical arguments supporting these views are briefly summarized in subsection 2.1.1 and 2.1.2.

### *2.1.1. The social view*

The social view argues that public ownership has several advantages over private ownership. Traditionally, state-owned enterprises are viewed as instruments capable of curing market failures by implementing pricing policies that take social marginal costs and benefits of production into account (Shapiro and Willig, 1990). Additionally, state-owned enterprises are controlled by governments, maximising social welfare and improving decisions of private firms when monopoly power or externalities lead to a divergence between private and social objectives (Shleifer and Vishny, 1994). For example, under non-competitive conditions, efficiency requires a single company to exist, but with the maximising profit objective, the private company will exploit monopoly power to charge too high of a price and produce too low of a quantity. This potential inefficiency can be solved by public ownership.

### *2.1.2. The agency view*

Under perfect competition, more recent economic literature has taken a much less flattering view of public ownership and a more favourable view of private ownership. This literature stresses that principle reasons for privatization are the existence of information asymmetries and incomplete contracting problems, leading to severe incentive problems and therefore serious inefficiency of state-owned enterprises (agency view). Within the agency view, there are two complementary strands of the literature depending on whether the critical agency conflict is with the manager or with the politician (LaPorta and López-De-Silanes, 1999). The first, termed the managerial view, argues that SOE managers may lack high-powered incentives or proper monitoring (Vickers and Yarrow, 1988). The second, termed the political view, stresses that political interference in the firm results in excessive employment, poor choices of product and location, lack of investments, and ill-defined incentives for managers (Shapiro and Willig, 1990; Shleifer and Vishny, 1994).

#### *The managerial view*

According to the managerial view, poor monitoring and lack of high-powered incentives result in inefficiency of state-owned enterprises. Managers (agents) in both private and state-owned firms are assumed to maximise their own utility, rather than of the organization or its owners (principals). In private companies, this divergence is reduced through both external mechanisms, such as markets for managers, capital market, and corporate control, and internal

mechanisms, such as managerial participation in ownership, reward systems, and the board of directors. However, these mechanisms are virtually absent in state-owned companies. Moreover, the owner-managers relationship is broken down into two other agency relationships, the public as owners to politicians and politicians to managers, which effectively reduce the incentive for monitoring managers' behaviour.

The privatization and monitoring incentives are essentially discussed in Yarrow (1986), Vickers and Yarrow (1991). Specifically, they argue that privatization leads the manager to focus on profit goals because under private ownership, the management is directly supervised by shareholders, although it might be constrained in its actions by a legal system. However, under public ownership, the management is monitored by the government, which in turn can be viewed as an agent of the voting population. In addition, based on the assumption that shareholders expect the firm to maximize profits, Yarrow (1986) notes that managerial incentives depend on the separation of ownership and control, the availability of performance information to shareholders, the effectiveness of the takeover mechanism and legal constraints. Moreover, Laffont and Tirole (1991) analyse a specific trade-off between a public company and a private regulated one. The authors argue that benefits of private ownership stem from the assumption that shareholders will not expropriate investments of manager in the company's assets while the government could re-deploy the investments to serve social goals. Thus, the manager's investment incentives are better under private ownership. However, the cost of private ownership, according to this study, is that the company's manager has to report to two different parties: the regulators and the shareholders. Therefore, conflicts between the regulators' and the shareholders' objectives would create an incentive problem to induce inefficiency of the company.

### *The political view*

The political view argues that poor performance of state-owned enterprises is caused by distortions in both the objective function that managers seek to maximise and the constraints they face, the so-called soft budget constraint. Specifically, managers of SOEs pursue strategies, such as excess employment, that satisfy the political objectives of politician who control them (Boycko et al., 1996). Moreover, politicians impose objectives on these firms that would help them to gain votes, but might conflict with efficiency (Buchanan, 1972; Niskanen, 1971). The reason why managers are able to do this without facing the threat of bankruptcy relates to the second distortion, the soft budget constraint. In any situation in which the firms have been engaged in unwise investments, it will be in the interest of the

central government to bail the firm out using the public budget. The rationale for this relies on the fact that the bankruptcy of companies would have a high political cost, whose burden would be distributed within a well-defined political group, like unions. On the other hand, the cost of the bailout can be spread over the taxpayers, a less organised and larger group in society, with diversified interests and preferences. Therefore, the threat of bankruptcy is non-credible under public ownership (Sheshinski and López-calva, 2003).

Shapiro and Willig (1990) argue that the government is better informed about the firm under nationalization than under privatization. The reason is that ownership of the firm gives privileged access to its accounting system. From a welfare-maximizing point of view, if the government is less informed, it is more difficult for the government to pursue its private agenda. Hence, privatization is seen as a constraint on the “malevolent” government.

Further, Boycko et al. (1996) develop a model of privatization to explain the relative inefficiency of state-owned companies and their performance improvements after privatization. The assumption of their model is that performance of SOEs is poor because these companies pursue the objectives of politicians, such as excess employment levels, rather than maximise efficiency. Indeed, the politicians prefer high employment level because it helps them to gain votes. In addition, the manager of the SOE in this model is assumed to represent for private shareholders. By allowing for corruption, the manager can bribe politicians for lower employment, and in some cases corruption can improve efficiency. However, a corruption contract is not usually legal and enforceable, so inefficiency of SOEs is not necessarily cured in this way. In the private company, the manager will set the employment at the efficient level because the company’s objective is to maximize profit. In this case, politicians can use government subsidies to convince the manager to keep up employment level. It is likely that providing new subsidies for high employment level is politically more costly to the politicians than using foregone profit for this purpose because the flow of subsidies is more easily observable than foregone profit of a firm. This model explains why privatization would lead to firm restructuring, even if subsidies remain to exist after privatization.

## *2.2. The impact of privatization on firm performance: a survey of the empirical literature*

With the increase in privatizations by governments over the last decades, the empirical literature concerning privatization has also grown. Most empirical studies related to privatization focus on examining the effect of privatization on firm performance (for recent

surveys, see Megginson and Netter, 2001 and Parker and Kirkpatrick, 2005). This section reviews the main empirical evidence on the impact of privatization on firm performance. It is important to note here that the survey is updated from Megginson and Netter (2001) and Parker and Kirkpatrick (2005). Moreover, the survey only concentrates on three categories of empirical studies involved in this field. Specifically, the first compares pre to post-privatization performance of selected privatized companies while the second compares the performance of privatized firms to state-owned enterprises under reasonably similar conditions. The final category focuses on examining the effect of ownership structure on privatized firm performance.

### *2.2.1. Empirical studies comparing pre versus post-privatization performance*

The empirical studies that examine the impact of privatization on firm performance by comparing post to pre-privatization financial and operating performance are summarized in Table 1. Generally, all of these studies provide empirical evidence to support the proposition that privatization improves the financial and operating performance of divested firms. Specifically, profitability, output (sales), operating efficiency and investment significantly increase following privatization. In addition, these studies report that leverage significantly decreases after privatization. It is important to note here that the effect of privatization on employment is not unambiguous. Indeed, Boubakri and Cosset (1998) documents significant increases in employment while Megginson et al. (1994), D'Souza and Megginson (1999) and D'Souza et al. (2001) find insignificant changes in employment after privatization. On the other hand, La Porta and López-de-Silanes (1999) and Harper (2002) show significant declines in employment during the post-privatization period.

### *2.2.2. Empirical studies comparing performance of privatized firms with state-owned firms*

Results of three empirical studies, which compare performance of privatized firms with state-owned firms under reasonably similar conditions, are summarized in Table 2. These studies employ a large sample of privatized and state-owned firms in Central and Eastern Europe to measure the impact of privatization on sale revenues, productivity, and employment of firms. The empirical evidence obtained from these studies reveals that privatized firms generally outperform state-owned enterprises in terms of sales revenues, productivity, and cost per unit of revenue. Specifically, Pohl, Anderson, Claessens and Djankov (1997) document that firms

that have been privatized for 4 years increase productivity, on average, 3-5 times higher than similar firms still owned by the state. In addition, Frydman, Gray, Hessel and Rapaczynski (1999) report that in the early stage of transition, the performance of both privatized and state-owned firms declines, but performance of privatized firms are higher than state-owned ones. Moreover, Claessens and Djankov (2002) find that privatized firms experience greater improvements in annual sale and annual labor productivity growth than state-owned enterprises. In fact, the mean annual sale growth of privatized firms increases by 0.11 percent, but annual sale growth of state-owned enterprises decreases by 0.63 percent. Similarly, annual labor productivity growth of privatized firms increases by 6.24 percent while annual sale growth of state-owned firms increases only by 1.12 percent. Especially, privatized firms have a significant lower rate of labor shedding than state-owned enterprises. For privatized firms the decrease is 6.11 percent while it is 7.42 percent for state-owned enterprises.

### *2.2.3. Empirical studies examining the effect of ownership structure and corporate governance on firm performance*

Since the collapse of the Communist political system in 1989, large-scale privatization programs have been launched in the transition economies of Central and Eastern Europe and the former Soviet Union. These countries have employed various methods of privatization, including sales to outsiders (asset sales, share offerings), management-employee buyouts (insider privatization), leasing and management contract, and voucher privatization. Practically, different privatization methods result in different ownership structures in privatized firms, and in turn they would affect firm performance. To test for the effect of different privatization methods or ownership structures on performance of newly privatized firms, a number of studies have been undertaken. Some of these studies are briefly summarized in Table 3.

First of all, these studies document that concentrated ownership generates greater improvements in the performance of firms than diffuse ownership following privatization (Weiss and Nikitin, 1998; Claessens and Djankov, 1999a; Dean and Andreyeva, 2001; and Pivovarsky, 2001). Specifically, Weiss and Nikitin (1998) find that ownership concentration by large individual shareholders is associated with positive improvements in all performance measures, but concentrated ownership by funds does not improve the firm performance. In addition, Pivovarsky (2001) reports that ownership concentrated by foreign companies and banks results in better performance than domestic owners' ownership concentration. Contrary



to these findings, Dean and Andreyeva (2001) argue that ownership concentrated by insiders exhibits the best performance. Secondly, it is found that foreign ownership is associated with greater performance improvements than entirely domestic ownership (Smith et al., 1997 and Claessens and Djankov, 1999a). Further, Walsh and Whelan (2001) document that majority outside ownership firms outperform majority inside ownership or state-owned enterprises. However, Estrin and Rosevear (1999) find that outsider-dominated ownership firms do not outperform insider-dominated ownership or even state-owned enterprises. Finally, according to Claessens and Djankov (1999b), the appointment of new managers is associated with improvements in profit margins and labor productivity, especially if such managers are appointed by private owners.

To sum up, the impact of privatization on firm performance has extensively studied in both developed and developing countries over the last decades. The empirical evidence derived from these studies strongly supports the proposition that privatization is associated with significant improvements in the financial and operating performance of privatized firms. Specifically, these studies document statistically significant increases in profitability, output (sales), operating efficiency, capital expenditures as well as significant decreases in leverage following privatization. However, the findings regarding employment are mixed. Indeed, some studies report significant increases in employment and few find insignificant changes while the remaining documents significant declines in employment. Moreover, the empirical results reveal that ownership structure plays an important role in performance improvements of firms. Specifically, concentration ownership is associated with higher performance than diffuse ownership. Additionally, outside ownership is likely to be superior to inside ownership in term of performance improvement, and foreign ownership, where allowed, performs better than entirely domestic ownership.

In short, the theoretical literature reviewed in this section helps to shed light on the impact of privatization on firm performance. The social view argues that public ownership has several advantages over private ownership. However, the agency theory points out that agency conflicts are the source of the inefficiency of SOEs. Privatization helps to solve this problem and therefore improves the performance of firm. Although the theory is conflict, the majority of empirical studies provide evidence that privatization improves the financial and operating performance of divested firms. Specifically, profitability, output (sales), operating efficiency, and capital expenditures significantly increase, and the leverage significantly decreases following privatization. However, the evidence of privatization effect on employment level is still ambiguous. Indeed, some studies document significant increases in

Table 1: Summary of empirical studies comparing pre versus post-privatization performance of privatized firms

Study	Sample description	Methodology	Main findings
Megginson, Nash, and Randenborgh (1994)	Using data of 61 firms from 18 countries and 32 industries, full or partial privatization through public share offerings, over the period of 1961-1990	<p>Comparing the three-year pre to three-year post-privatization financial and operating performance</p> <p>Employing profitability, operating efficiency, capital investment, output (real sales), employment, leverage and dividend as the financial and operating performance measures.</p> <p>Testing for the significance of median changes in ratio values in post versus pre-privatization period, and of percentage of firms changing as predicted</p>	Profitability, operating efficiency, real sales, investment spending, dividend payments, and leverage are significantly improved following privatization. Employment also increases after privatization, but insignificantly.
Boubakri and Cosset (1998)	Employing data of 79 newly privatized firms headquartered in 21 developing countries that were privatized over the period from 1980 to 1992	Using the same measures and methodology as Megginson, Nash, and Randenborgh (1994)	Profitability, operating efficiency, real sales, investment spending, dividend payments, and employment level significantly increase while leverage significantly decreases during the post-privatization period.
D'Souza and Megginson (1999)	Obtaining data of 85 firms in 28 countries and 21 industries that were privatized through public share offerings for the period from 1990 to 1996.	Using the same measures and methodology as Megginson, Nash, and Randenborgh (1994)	Profitability, operating efficiency, real sales, dividend payments, and leverage have significant increases during the post-privatization period. Moreover, capital investments significantly increase in absolute values, but not related to sales and assets. Finally, employment declines following privatization, but insignificantly.

Table 1: Continued

La Porta and López-de-Silanes (1999)	Using data of 218 state-owned companies in 26 different sectors privatized from 1983 to 1991 in Mexico	Comparing post-privatization financial and operating performance ratios to pre-privatization	Operating income to sales and net income to sales increase 24.1 and 40.0 percent, respectively, and output (sales) increases 54.3 percent in comparison with pre-privatization. In addition, employment level significantly declines, 53.4 percent for blue-collar workers and 53.3 percent for white-collar workers, and operating efficiency, as measured by the average cost per unit, drops 21.49 percent following privatization. However, the capital investment in fixed assets is mostly unchanged. Further, the improvement in profitability is decomposed into three components: (1) 5 percent is due to higher product prices, (2) 31 percent comes from laid-off workers, and 64 percent is induced by productivity gains.
D'Souza et al., (2001)	Collecting data of 118 firms (from 29 countries and 28 industries), privatized through public share offering for the period between 1961 and 1995	Using the same measures and methodology as Megginson, Nash, and Randenborgh (1994)	Profitability, real sales, operating efficiency and capital expenditure significantly increases, and leverage significantly decreases following privatization. Moreover, employment level increases during the post-privatization, but insignificantly.  Further, changes in ownership structure significantly contribute to performance improvements, and the level of capital market development has positive impact on the amount of performance improvements following privatization.

Table 1: Continued

Dewenter and Malatesta (2001)	Obtaining data of 63 firms privatized during the period from 1981 to 1994	Using the same methodology as Megginson, Nash, and Randenborgh (1994) – comparing pre to post-privatization performance measures.	Return on sales and return on assets are statistically significant increases, but return on equity and EBIT-based profitability measures are statistically insignificant decreases after privatization. Additionally, the study finds that all the measures of leverage significantly decline following privatization. Finally, the study reports that labor intensity (employees on sales and employees on assets) significantly decrease after privatization.
Boubakri and Cosset (2002)	Employing data of 16 newly privatized firms headquartered in Africa during the period from 1989 to 1996	Using the same methodology and performance measures as Megginson, Nash, and Randenborgh (1994) with some exceptions due to unavailable data	Profitability, sales efficiency and real sales increase while the leverage ratios decrease after privatization, but all changes are statistically insignificant. Moreover, capital investments, measured by capital expenditure on sales and capital expenditure on total assets, significantly increase following privatization.
Harper (2002)	Using data of 453 privatized firms in the first and second waves of Czech privatization	Using the same methodology as Megginson, Nash, and Randenborgh (1994)  Employing a cross-sectional regression to identify the sources of performance changes following privatization with industry, size, timing, debt, ownership, percent privatized, foreign influence as explanatory variables	Return on sales, net income and sales efficiency significantly increase, but return on assets insignificantly decreases following privatization. Additionally, real sales and employment significantly decline during the post-privatization period. Moreover, firms privatized in the second wave perform better than firm privatized in the first wave. Furthermore, small firms have greater improvement than large ones following privatization. Finally, ownership structure has a little effect on performance improvements of the firms following privatization.

Table 1: Continued

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Boubakri, Cosset and Guedhami (2004)	Using data of 50 firms from 10 countries in Asia privatized during the period from 1980 to 1997	Using the same methodology as Megginson, Nash, and Randenborgh (1994)	Privatization leads to statistically significant improvements in profitability, efficiency and output. Employment also increases, but insignificantly. Further, corporate governance and the economic environment have an effect on the extent of performance improvements. For instance, more developed stock markets and involvement of foreign investors are important determinants of performance changes following privatization.
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Table 2: Summary of empirical studies comparing performance of privatized firms to state-owned enterprises

Study	Sample description	Methodology	Main findings
Pohl, Anderson, Claessens and Djankov (1997)	Using data of over 6,300 privatized and state-owned firms in seven eastern European countries (Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovak Republic, and Slovenia) during the period of 1992-1995	Comparing the extent of restructuring across firms	Privatization has positive impact on firm restructuring. Firms privatized for 4 years have an increase in productivity 3-5 times more than similar state-owned firms.
Frydman, Gray, Hessel and Rapaczynski (1999)	Using a sample of 90 state-owned and 128 privatized enterprises in the transition economies of Central Europe (Czech Republic, Hungary, and Poland)	Comparing the performance of privatized firms to state-owned firms, and examining the impact of ownership structure on firm performance  Using sales revenues, employment, labour productivity (revenue per employee) and labour and material cost (per unit of revenue) as performance measures of firms.	Privatized firms generally outperform state-owned firms, particularly in terms of revenue growth. Especially, privatization has the significantly positive impact on the performance of firms that are controlled by outsiders. However, privatization has no significant effect on all performance measures of firms that are controlled by inside owners.
Claessens and Djankov (2002)	Using data of 3,181 newly privatized and 3,173 state-owned enterprises in seven Eastern European countries (Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovak Republic and Slovenia) during the initial transition period from 1992 to 1995	Studying the benefits of privatization by comparing changes in the performance of newly privatized to state-owned enterprises  Using sale revenues, labour productivity and employment as the company's performance measures	Privatization is associated with statistically significant improvement, for the whole sample, in sales revenues and labour productivity and with a low rate of labour shedding. Especially, firms privatized for 3 years or more significantly outperform state-owned firms, but privatized firms for less than 2 years do not have significant difference in performance compared with state-owned firms.

Table 3: Summary of empirical studies examining the effect of ownership structure and corporate governance on the privatized firm performance

Study	Sample description	Methodology	Main findings
Smith, Cin, and Vodopivec (1997)	Using a sample of 22,735 Slovene privatized firms during the period from 1989 to 1992	Using the production function to measure effects of foreign and employee ownership on firm performance	Firms with higher revenues, profits and exports are more likely to exhibit foreign ownership and employee. Moreover, an elasticity analysis shows that one percentage point increase in foreign ownership is associated with about a 3.9 percent increase in value-added, and for employee ownership with about a 1.4% increase.
Weiss and Nikitin (1998)	Using data of 755 Czech firms over the period 1993-1995	Employing both robust and OLS regression techniques	Ownership concentrated by large individual shareholders other than investment funds and companies is associated with positive improvements in all performance measures. However, concentrated ownership by funds does not improve the firm performance.
Claessens and Djankov (1999a)	Using a sample of 706 Czech privatized firms over the period from 1992 to 1997	Using the OLS regression analysis to determine the relationship between ownership structure and firm performance  Employing profitability and labour productivity as measures of the firm performance	Concentrated ownership is associated with positive changes in both profitability and labour productivity. Specifically, a 10 percent increase in concentration leads to a 2 percent increase in labour productivity and 3 percent in profitability. Moreover, foreign strategic investors and non-bank-sponsored investment funds outperform bank-sponsored funds and local strategic investors.
Claessens and Djankov (1999b)	Using a sample of 706 Czech privatized firms over the period from 1993 to 1997	Using the OLS regression analysis	The appointment of new managers induces improvements in profit margins and labour productivity, especially if the managers are selected by private owners.

Table 3: Continued

Estrin and Rosevear (1999)	Using data of 150 enterprises in Ukraine by conducting a survey	Using the OLS regression analysis to examine the relationship between firm performance and ownership structure	Private ownership is not associated with performance improvements of firms. Moreover, outsider-owned firms do not perform better than insider or even state-owned companies.
Walsh and Whelan (2001)	Using survey data for 220 privatized manufacturing firms in Bulgaria, Hungary, Slovakia and Slovenia for the period from 1990 to 1996	Employing the OLS regression model	Majority outsider ownership firms outperform majority insider or state-owned ones, but for firms inheriting CMEA (Council for Mutual Economic Assistance) trade oriented production from central planning. However, for firms inheriting EU trade oriented production from central planning, ownership have no impact on firm performance.
Dean and Andreyeva (2001)	Using a sample of 190 Ukrainian privatized companies	Using the OLS regression analysis	Concentrated ownership has a significantly positive effect on firm performance. Specifically, concentrated insider-owned firms exhibit the best performance.
Pivovarsky (2001)	Using data of 376 Ukrainian firms for the year of 19998	Using the OLS regression model to measure the relationship between ownership concentration and firm performance	Ownership concentration has the positive effect on firm performance. Specifically, ownership concentrated by foreign companies and banks is associated with better performance than domestic owners' ownership concentration.



employment and few find insignificant changes while the remaining report significant declines in employment. Furthermore, the evidence derived from empirical studies indicates that ownership structure plays an important role in performance improvements of firms. Specifically, concentration of ownership is associated with higher performance than diffuse ownership. Additionally, outside ownership is likely to be superior to inside ownership in term of performance improvements, and foreign ownership outperforms entirely domestic ownership.

### **3. Overview of the equitization process in Vietnam**

The privatization program in Vietnam, officially called “Equitization Program” (*co phan hoa*) started in 1992 as part of the State-Owned Enterprise Reform Program, in the context of general economic reform. Equitization is defined as the transformation of SOEs into joint-stock companies and selling part of the shares in the company to private investors in order to improve the performance of the firms in question. Equitization differs from privatization in the usual Western sense in that it does not necessarily mean that the government loses its ultimate control over the firm. To the contrary, in the case of Vietnam the government still holds decisive voting rights in many cases. Another remarkable difference with usual Western privatization practices, to be discussed later on in this section, is that employees and managers of the firms acquire a substantial portion of the shares in the equitized firms.

#### *3.1. Stages of equitization*

The equitization process in Vietnam can be divided into two stages. The first one is called the pilot stage, ranging from 1992 to 1996, and the second is the expansion stage, from 1996 onwards.

##### *The pilot stage of the equitization program (1992 -1996)*

Based on a resolution of the tenth session of the Eighth National Assembly, the Prime Minister issued Decision 202-CT to launch the equitization program on June 8, 1992. According to this Decision, SOEs involved in the pilot equitization program should be small or medium-sized and profitable or at least potentially profitable enterprises, but should not be “strategic enterprises”. Moreover, the Decision stipulated that employees of equitized enterprises have a first right to buy the shares at preferential terms. Being afraid of a social

collapse such as in Eastern and Central European countries, the Vietnamese government launched the equitization process very carefully. In the pilot period from 1992 to 1996 only five SOEs were equitized. It involved small SOEs from the transportation, shoes, machine and food-processing industries. In most of those enterprises, the employees hold the dominant portion of shares, and the government still owns nearly 30 percent of the shares. The capital and ownership structure of the first five firms in the pilot stage is summarized in Table 4.

Table 4: Capital and ownership structure of the first five equitized firms in the pilot period

Firm Name	Capital (billion VND <sup>*</sup> )	Ownership structure (%)		
		State	Employees	Outsiders
Transportation Service Co.	6,200	18.0	77.0	5.0
Refrigeration & Electrical Engineering Co.	16,000	30.0	50.0	20.0
Hiep An Shoes Co.	4,793	30.0	35.2	34.8
Animal Food Processing Co.	7,912	30.0	50.0	20.0
Longan Export Product Processing Co.	3,540	30.2	48.6	21.2

Source: Chu (2002).

<sup>\*</sup> VND stands for Vietnamese Dong, the currency of Vietnam. The USD/VND exchange rate over the period relevant in the context of this article was around 15,000 VND per USD.

#### *The expansion stage of the equitization program (1996 – present)*

Recognizing the need for a more aggressive approach, the Government issued Decree 28-CP in May 1996 to end the pilot stage and open a new stage of the equitization process. This decree maintains the general principles of the pilot equitization program, extends the scope of equitization to all non-strategic small and medium-sized SOEs, and requires SOEs' controlling agencies (ministries, People's Committees and State Corporations) to select enterprises for equitization. However, the process did not take off fast. Practically, there were only 25 firms to be added to the list of equitized firms during the period from 1996 to 1998.

The equitization process has accelerated since the promulgation of Government Decree No. 44/1998/ND-CP in mid-1998. The Decree provides a fairly clear and comprehensive framework for transforming SOEs into equitized firms. Consequently, a hundred of SOEs have been equitized annually following the issue of this Decree. Although the Decree 44 has played an important role in stimulating the equitization process, it still has some shortcomings, *e.g.*, regarding the valuation method of firms to be privatized. As a result, the

Government by mid-2002 issued Decree 64 to replace the Decree 44. The new Decree, which has about 10 major changes compared with the former Decree 44 such as concerning firm valuation methods, initial public offering requirements, founders' obligations, has a strong effect on cranking-up the pace of the equitization process. Indeed, a number of SOEs that have successfully transformed to equitized firms in the period from 2003 to 2004 reach to 1,292, accounting for about 57.6 percent of the total number of equitized firms.

Over 12 years of implementation, the equitization process in Vietnam has harvested some first results. In fact, up to the end of 2004 a total of 2,242 SOEs with total capital of about VND 17,700 billion have been completely equitized. However, the equitization process has progressed slowly, and it is hard to achieve the Government's goal, converting about 3,000 SOEs into equitized firms by 2005. In addition, most of the SOEs that have been selected for equitization are small and medium-sized. Indeed, according to a report of the National SOE Reform Board, firms that have less than VND 10 billions in capital account for 81.5 percent of the total equitized firms. It is important to note here that the "strategic" SOEs are not included in the equitization program. Regarding ownership structure, the report reveals that insiders (employees and management board) hold dominant shares in the equitized firms, and the state still owns over one-third of the total issued shares of the firms. Specifically, by the end of 2004, in 2,242 equitized firms insiders on average control 46.5 percent, and the state on average still holds 38.1 percent of the total shares of the firms. The rest, only 15.4 percent on average, belongs to outside investors. Furthermore, firms in which the state owns more than 50 percent of the shares account for 29.5 percent of the total number of equitized firms<sup>1</sup>. Table 5 provides a comparison of ownership structure between equitized firms in Vietnam and privatized firms in other transition countries, showing that, with the exception of Georgia, the share of outsiders in equitized firms in Vietnam, is low even compared with other transition economies. Table 6 presents the number of equitized firms in Vietnam for the period from 1993 to 2004.

### *3.2. Main features of the equitization program*

As briefly mentioned at the beginning of this section, the equitization programme in Vietnam has its own characteristics that differ from the privatization process in other countries. The main features of the programme can be summarised as follows.

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<sup>1</sup> These figures are drawn from a report of the National SOE Reform Board, according to Nguyen (2005).

Table 5: Ownership structure of privatized firms in Vietnam (2004) and other transition countries (%)

Country	The state	Insiders	Outsiders
Vietnam (2004)	38.1	46.5	15.4
Georgia (1997)	23.3	64.4	12.4
Kazakstan (1997)	16.1	37.6	46.3
Kyrgyz Republic (1997)	5.6	70.8	23.6
Moldova (1997)	23.8	38.0	38.2
Russia (1997)	14.7	59.6	25.7
Ukraine (1997)	15.4	61.5	23.1

Source: Nguyen (2005) for Vietnam and computed from Djankov (1999) for the other transition countries

Table 6: Number of equitized firms and their capital

Year	Number of equitized firms	Total capital (Million VND)	Mean of capital per firm (Million VND)
1993	2	22,200	11,100
1994	1	4,793	4,793
1995	2	11,452	5,726
1996	6	19,032	3,172
1997	4	55,800	13,950
1998	101	480,223	5,163
1999	254	1,311,636	12,171
2000	212	n.a.	n.a.
2001	206	n.a.	n.a.
2002	164	n.a.	n.a.
2003	537	n.a.	n.a.
2004	753	n.a.	n.a.
<b>Total</b>	<b>2,242</b>		

Source: Dang (2000), Nguyen (2004) and Nguyen (2005)

#### *Objectives of the equitization*

The following issues are defined in the government's policy on the SOE reform as objectives of the equitization program:

- improving the performance and competitiveness of enterprises by ownership diversification;

- mobilising capital from employees and outside investors, including domestic and foreign investors, for renewing technologies and developing enterprises' business;
- balancing interests of the state, employees and shareholders in the equitized enterprise.

#### *Forms of equitization*

In order to convert the SOEs into equitized enterprises, the enterprises can choose one of the following forms of equitization depending on their characteristics:

- maintaining the existing capital of the SOE and issuing additional shares to mobilise more capital for developing their business;
- selling a part of the existing state capital of the SOE;
- selling the entire existing state capital of the SOE;
- partially or entirely selling the existing state capital of the SOE and concurrently issuing additional shares to mobilise more capital.

#### *Valuation of the SOEs to be equitized*

The valuation of the SOEs is the most important and difficult work in the equitization implementation process. Since the interest of the government and investors (many of them are employees of the enterprise to be equitized) regarding the valuation of the enterprises usually conflict, it is hard and usually time-consuming to achieve the agreed value. According to Decree 187/2004/ND-CP issued by the Prime Minister on November 16 2004, the valuation of the SOEs can be determined by the following methods:

- the asset method;
- the discounted cash-flow (DCF) method.

#### **The asset method**

According to the asset method, the value of the SOE at the time of equitization is determined by the following formula:

$$\text{Enterprise value} = \text{Total assets value} - \text{Total liabilities} + \text{Commercial advantages}$$

where:

$$\text{Total assets value} = \text{Total fixed assets value} + \text{Total current assets value}$$

For tangible fixed assets and physical current assets the values are computed on the basis of quantity, market price of new and comparable assets at the time of equitization and remained quality based on the following formula:

$$\text{Assets value} = \text{Actual quantity} \times \text{Market price} \times \text{Remained quality (\%)}$$

The value of other assets is based on the accounting book value. Similarly, liabilities are based on the accounting value at the time the SOE is to be equitized, including debt payable, reward and welfare funds for employees.

Furthermore, the commercial advantages (geographical location, brand names, etc.) are calculated on the basis of an excess rate of return for the last three year before equitization by the following formula:

$$\text{Commercial advantages} = \text{Total state capital} \times \text{Excess rate of return}$$

where:

$$\text{Excess rate of return} = \text{3-year average rate of return on equity of the SOE} - \text{10-year state bond rate}$$

### **The discounted cash flow (DCF) method**

With this method, the value of the SOE is determined on the basis of projections of net income for dividend and the discount rate, regardless of the SOE's current asset values. By regulation, the method is applicable to SOEs operating in financial and consulting services, construction designing, informatics and technology transfer, and having an average return on equity in five consecutive years before equitization higher than the return on 10-year government bonds.

### *Organisation of the valuation of the SOEs*

According to Decree 187, if the SOEs under equitization have total asset values of VND 30 billion or more, their valuation must be conducted by a professional organisation such as an auditing company, a securities company, a price evaluation organisation or an investment bank, either domestic or foreign. However, if the SOEs have total asset values less than VND 30 billion, it is not absolutely necessary to hire any valuation organisation to determine their valuation. In this case, the SOEs are permitted to evaluate themselves, but the valuation results have to be submitted to the authorized agency for approval.

### *First shares offering*

The structure of first shares issue (the percentage of share held by the state, employees, outside investors) is included in the equitization plan and approved by the authorised agency. First of all, in principle, the state holds a portion of shares depending on the kind of SOE. The remaining shares, then, are sold to employees and strategic investors of the enterprise with a special discount. It is important to clarify here that strategic investors should be domestic

investors who play an important role in the enterprises' business such as regular suppliers of raw materials, customers who undertake to buy the products of the enterprises on a long-term basis. According to Decree 187 the strategic investors are allowed to purchase a maximum of 20 percent of the total shares for sale at a discount of 20 percent compared to the average auction price. However, they are obligated to hold these shares for a period of three years after the date when business registration certificates are issued to the equitized enterprises. In special cases the strategic investors can transfer their shares to other investors, but the deal must be approved by the board of directors. Finally, the remaining shares are offered to other outside investors, including foreign investors through a public auction. However, foreign investors are not allowed to hold more than 30 percent of the total shares in an equitized company.

The form of the public auction is dependent on the value of shares that is allocated to the outside investors. Specifically, the auction must be conducted through an intermediary financial organisation if the value is greater than VND one billion. Especially, the auction should be held at the Securities Trading Centre in the case that the value exceeds VND 10 billion. However, the auction can be implemented at the enterprise if the value of shares offered to the public is equal to or less than VND 1 billion.

#### *Preferences for equitized companies*

According to Decree 187 equitized companies will receive preferential treatment from the government. The main preferences as follows:

- preferences with respect to the enterprise income tax in line with any newly-established enterprises (in the normal case, the enterprise is exempted from income tax for the first two years and a 50 percent reduction of income tax for the third and fourth year after equitization);
- exemption from the registration fee for registered assets of the new companies;
- entitlement to borrow from state commercial banks and other state financial organisations using the same mechanisms and interest rates that are applied to SOEs;
- entitlement to continue using social assets, such as nursery schools, clubs, these assets are not included in the enterprise value);
- compensation for equitization expenses from the proceeds.

#### *Preferences for employees in equitized enterprises*

Employees of SOEs that are selected for equitization receive some special treatment from the government following equitization. Specifically, they will be entitled to buy a maximum of

100 shares (VND 10,000 for each) for each year they have worked for the SOEs at a 40 percent discount on the basis of an average auction price. Especially, since 2005 these shares are freely transferred regardless of how long they are kept. Moreover, the employees will be retrained if their skills are not suitable to work for the newly-equitized enterprises. Finally, employees who are laid-off as a result of the equitization process will receive lump-sum compensation from the government.

#### **4. An overall description of the sample**

##### *4.1. Description of data collection*

To collect data and information for the empirical study on the impact of equitization on firm performance, interviews among both equitized firms and SOEs were held. In order to develop questionnaires, a pilot survey of 15 equitized companies and 15 SOEs was conducted in the Mekong River Delta (MRD) region by interviewing the chairperson of the board of directors or the manager of these firms. The pilot survey helped to uncover the real situation of equitized firms and to identify possible irrelevant questions. Based on the pilot survey, the irrelevant questions were eliminated or modified and some new questions were added. The questionnaires had to be revised several times before reaching the final version that served to obtain the data set used in Section 6, Section 7 and Section 8<sup>2</sup>.

Official surveys on equitized firms were organized in 2004 and 2005. To measure the impact of equitization on firm performance, this study first compares post-equitization performance indicators of equitized firms to pre-equitization ones. Therefore, equitized firms that were chosen for being included in the surveys had to satisfy two conditions. First, they have to be former SOEs and, second, their financial information should be available and sufficient (at least two year before and after equitization). Additionally, to serve as the basis for the collection of data for the so-called “difference in differences” (DID) method a survey on SOEs was also conducted in 2005. All surveys took place in the southern region of Vietnam (HCMC and the MRD) because of budget limitations.

In the surveys, three public officers who have worked for Local SOEs Reform Boards<sup>3</sup> and four researchers of Ho Chi Minh City (HCMC) Institute for Economic Research were asked to do the surveys. It is important to note here that the selection of the public officers as

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<sup>2</sup> The entire questionnaires are presented at the end of this report.

<sup>3</sup> Each province has its own SOEs Reform Board.



interviewers may have influenced the results because interviewees may provide distorted data in order to receive some benefits from the government through the public officers. However, it is impossible to acquire the information of many equitized firms in the context of Vietnam if interviewers would not already have a good relationship with respondents (managers of firms). Consequently, the study had to rely on the access of the interviewers to the firms concerned.

Since the number of equitized firms in the region that satisfy the conditions mentioned above was limited, we decided to try to interview all of them. Unfortunately, some of them absolutely refused when interviewers tried to contact them. Consequently, only 110 equitized firms were interviewed. A similar approach in the survey among SOEs resulted in financial information of 92 SOEs.

Beside the direct interviews, mail interviews among equitized firms from other parts of Vietnam were also used to obtain data and information for the study. For this purpose, about one hundred equitized firms were selected for the survey from the list of equitized firms. However, this survey was not successful in that only four questionnaires with complete information were sent back.

Furthermore, data and information on equitized companies were obtained in other ways. First, financial data and other information on listed companies were collected by downloading information from their websites. By regulation these companies have to expose all their financial information to investors. On this way, financial data and information of 12 listed companies were collected. Second, we contacted some organisations that have stored the information and data of equitized companies, for providing these data. As a result, a data set of 21 equitized firms from Northern provinces was acquired. These data contain some useful information, but not as much as expected. Specifically, they include several pre- and post-equitization performance measures, such as sales, income, number of employees, average salary of employees, and return on equity. However, information regarding the equitization process, ownership structure and corporate governance of these firms is not available. Finally, by combining the data from different sources a data set of 147 equitized firms and 92 SOEs is available for the empirical study. Some descriptive statistics of the sample are presented in the following section.

## *4.2. A statistical description of the sample*

### *4.2.1. Structures of the samples*

### *The sample of equitized firms*

The sample structure of equitized firms is presented in Table 7. To serve the empirical study in the following section, the surveyed equitized firms are first classified into two groups depending on their main business: manufacturing industries, and trade and services. According Table 7, manufacturing firms account for 54.4 percent of the sample while trade and service firms contribute 45.6 percent to the sample. Regarding the location of the firms, Table 7 shows that firms located in HCMC and the MRD account for 51.7 and 30.6 percent of the sample, respectively. In addition, firms situated in the other part of Vietnam make up 17.7 percent of the sample.

Table 7: Firms classification by sectors and locations

	Number of firms	Percentage (%)
<i>The main business of the firms</i>		
– Manufacturing industries	80	54.4
– Trade and services	67	45.6
– <b>Total</b>	<b>147</b>	<b>100.0</b>
<i>Location</i>		
– The MRD region	45	30.6
– HCMC	76	51.7
– The other part of Vietnam	26	17.7
– <b>Total</b>	<b>147</b>	<b>100.0</b>

Source: Own surveys in 2004 and 2005

### *The sample of SOEs*

The structure of the sample of SOEs by sectors and locations is shown in Table 8. It can be readily seen from the table that the sectoral distribution of the surveyed SOEs is similar to that of the sample of equitized firms. Specifically, 52.2 percent of SOEs are in manufacturing, while trade and service SOEs account for 47.8 percent of the sample. Unlike the sample of equitized firms, the survey of SOEs focuses only on SOEs in the MRD and HCMC. Indeed, Table 8 shows that SOEs located in the MRD dominate the sample, accounting for 68.5 percent of the sample while SOEs situated in HCMC contribute to the sample by only 31.5 percent.

Table 8: Sample structure of the surveyed SOEs by sectors and locations

	Number of firms	Percentage
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<b>By sectors</b>		
Manufacturing	48	52.2
Trade and services	44	47.8
Total	<b>92</b>	<b>100.0</b>
<b>By location</b>		
The MRD region	63	68.5
HCMC	29	31.5
Total	<b>92</b>	<b>100.0</b>

Source: Own survey in 2005

#### 4.2.2. Size of the samples

In this sub-section, the size of both equitized firms and SOEs is measured by the firm's charter capital. Charter capital is defined as the capital to be contributed by shareholders (owners) and recorded in the firms' charter. The charter capital of the surveyed firms is presented in Table 9.

##### *The sample of equitized firms*

Table 9 shows that charter capital of equitized firms varies enormously. It ranges from VND 590 million to VND 150,000 million, with a standard deviation of 19,144. Additionally, the mean charter capital of the equitized firms is VND 13,800 million. Furthermore, firms with capital above VND 10 billion account for 43.6 percent of the sample while firms having capital less than VND 10 billion contribute to the sample by 56.4 percent (see Table 10).

Table 9: Charter capital of the surveyed firms (million VND)

	Obs.	Min.	Mean	Median	Max.	St. dev.
Equitized firms	126	590	13,800	8,196	150,000	19,144
SOEs	90	1,472	42,337	17,709	606,754	86,843

Source: Own surveys in 2004 and 2005

Table 10: Distribution of the sample of the surveyed firms by charter capital

Charter capital of the firms	Number of firms	Percentage (%)
<b>Equitized firm</b>		
Less than 5 billion VND	38	30.2
From 5 to 10 billion VND	33	26.2
More than 10 billion VND	55	43.6
Total	126	100.0

## SOEs

Less than 5 billion VND	15	16.7
From 5 to 10 billion VND	16	17.8
More than 10 billion VND	59	65.5
Total	90	100.0

*Source: Own surveys in 2004 and 2005*

### *The sample of SOEs*

According to Table 9, charter capital of the SOEs ranges from VND 1,472 million to VND 606,754 million, with an average of VND 42,337 million. Regarding the structure of the SOEs by charter capital, Table 9 reveals that firms having capital more than VND 10 billion account for 65.5 percent while firms having capital less than VND 10 billion make up 34.5 percent of the sample.

### *4.3. Some aspects of the equitization process: results from the survey*

#### *4.3.1. Duration of the equitization process*

According to the survey, the firm has to spend much time on completing the process. Indeed, the duration of the process ranges from 1 to 44 months, with an average of 12.9 months. Moreover, firms that have more than VND 10 billion take more time to complete the equitization process than firms having less than VND 10 billion in terms of charter capital. Specifically, the mean equitization period is 15.1 months for the former, and 11.6 months for the latter.

The duration of the equitization process have been significantly reduced since the promulgation of Decree 44-CP/TTg on “Transforming SOEs into joint stock companies” in 1998. In fact, according to the findings derived from a survey of 14 equitized firms that were equitized from 1992 to the end of 1997, conducted by Mekong Project Development Facility (MPDF), the duration of the equisition process ranged from 9 to 79 months, with an average of 27 months. Since the selected firms in our survey were mostly equitized after the year of 1998, these results imply that the Decree 44 has been instrumental in shortening the equitization period.

Table 11: Duration of the equitization process of the sample (month)

	Obs.	Min.	Mean	Median	Max.	St. dev.
Equitized firms having chartered capital to 10 billion VND	71	1.0	11.6	12.0	42.0	7.3
Equitized firms having chartered capital more than 10 billion VND	41	6.0	15.1	12.0	44.0	8.4
Total sample	112	1.0	12.9	12.0	44.0	7.9

*Source: Own surveys in 2004 and 2005*

#### 4.3.2. Reasons for equitization

In order to determine the main reasons that encourage the SOEs to equitize, the question “*what are the main reasons that you decided to equitize your firm?*” is added in the questionnaire. Interviewees were asked to grade four possible reasons. The respondents are asked to grade each reason as follows: (1) very unimportant, (2) unimportant, (3) neutral, (4) important, and (5) very important. The ranking is presented in Table 12.

Table 12: The ranking point of the reasons of equitization

Reasons	Obs.	Min.	Mean	Median	Max.	St. dev.
Tax advantages	114	1.0	2.6	2.0	5.0	1.0
Improving firm performance	114	2.0	4.4	4.5	5.0	0.7
Mobilizing more capital with low cost	114	1.0	2.8	3.0	5.0	1.2
Obligated from the government	114	1.0	3.7	4.0	5.0	1.4

*Source: Own surveys in 2004 and 2005*

According to Table 12, “improving firm performance” is the most important reason (4.4 points) to stimulate the SOEs’ equitization. Many respondents say that equitization is the best way to restructure the firms and encourages employees to work efficiently because their benefits are derived from the firm performance. Thus, firm performance could be improved following equitization. The second reason that leads to equitization of the firms is “obligated from the government” (local or central government). Surprisingly, tax exemption (income tax) and mobilizing more capital, according to the respondents, are not the main reasons to encourage them to equitize their firms. They assert that tax advantages do not significantly contribute to the performance of the firms. Similarly, some of the respondents think that mobilising more capital by issuing new shares is not the most efficient way for good

performance firms because the issue could reduce shareholders' dividend. Therefore, instead of issuing new shares, the firms should ask for loans from commercial banks. Practically, it is not difficult for these firms to borrow capital from the banks.

#### 4.3.3. Main problems and constraints in equitized implementation

As mentioned in Section 3, the equitization program has slowly progressed. In order to discover the causes of this slow progress, the following question has been added “*Please indicate the range of importance of the following constraints and problems that you think are the causes of the slowness in the equitization process*”. The question helps to grasp the perception of the key persons in the equitized firms about this issue. This question provides a list of constraints that are derived from the pilot surveys and articles. In addition, the respondents could add some more constraints that they think are of importance, but not including in the question. Moreover, each constraint is assigned ranking points formulated as follows: (1) very unimportant, (2) unimportant, (3) neutral, (4) important, and (5) very important. The importance of these constraints is summarised in Table 13.

Table 13: The main constraints and problems in the equitization process

Reasons	Obs.	Min.	Mean	Median	Max.	St. dev.
Firm evaluation (regulated by the State)	107	1.0	3.9	4.0	5.0	1.0
Legal constraints	107	1.0	3.3	3.0	5.0	1.0
Administration constraints	107	1.0	3.2	3.0	5.0	1.1
Unwillingness of the SOEs' managers	107	1.0	3.2	3.0	5.0	1.2
Debt settlement	107	1.0	3.8	4.0	5.0	1.1

*Source: Own surveys in 2004 and 2005*

According to Table 13, firm evaluation is the biggest constraint in the process of equitization. The firm evaluation procedure is complicated since the state wants the firm value to be accurately assessed with this procedure. Consequently, it needs ample time to do the procedure carefully.

Moreover, debt settlement is known as one of the constraints causing slowness in the equitization process. As a result of soft budget constraints, most SOEs in Vietnam have had a high debt ratio, and part of debt has become bad debt. Since the bad debt has existed in most SOEs for a long period, documents related to transactions might not be found. Therefore, it is

difficult to identify who was responsible for the bad debt. As a result, it is time-consuming to deal with the issue of debt settlement before the equitization is approved.

Furthermore, legal and administration constraints are seen as determinants that have slowed down the pace of the equitization process. However, these constraints are unlikely to significantly affect the process. Moreover, many people believe that unwillingness of the SOEs' managers can harm the equitized implementation. However, according to the results of the survey, it is not true in practice since the average ranking points is only 3.2.

#### 4.4. Ownership structure and corporate governance of the equitized firms

##### 4.4.1. Ownership structure

The ownership structure has a strong effect on corporate governance and the performance of equitized firms. Shareholders of the surveyed firms are classified into three groups, namely the state, insiders (employees) and outsiders (including domestic and foreign investors). The ownership structure of the surveyed firms is summarised in Table 14.

Table 14: Ownership structure of equitized at the first shares issue (percentage)

Ownership	Obs.	Min.	Mean	Median	Max.	St. dev.
State	126	0.0	30.7	30.0	77.6	17.3
Insiders	126	5.3	37.8	35.0	100.0	21.0
Outsiders	126	0.0	31.5	28.7	78.1	19.1
Total			100.0			

*Source: Own surveys in 2004 and 2005*

It is noteworthy that the ownership structure presented in Table 14 is based on the ownership situation at the first shares issue. According to Table 14, the state ownership ranges from zero to 76.6 percent, accounting for, on average, 30.7 percent of the aggregated shares of the surveyed firms. In addition, the state does not hold any shares in only 10 firms of the sample, but these firms are small size, their capital less than VND 5 billion. Moreover, equitized firms in which the state holds at least 30 percent of the total issued shares account for 44.4 percent of the total surveyed firms. Especially, firms where the state owns more than 50 percent of total shares made up 18.3 percent of the sample.

Table 15: The sample structure by the state's share

The State ownership	Frequency	Percentage (%)
Less than 30%	56	44.4
From 30% to 50%	47	37.3
More than 50%	23	18.3
Total	126	100.0

*Source: Own surveys in 2004 and 2005*

The second group of shareholders consist of insiders who have been employed by the firm. Employees' shares range from 5.3 to 100 percent, with an average share of 37.8 percent. Finally, shares owned by outside investors account for 31.5 percent of the aggregated shares of the surveyed firms. Especially, foreign investors have been shareholders of seven firms and their shares, on average, in these firms count for about 13.7 percent of the total issued shares.

Based on the ownership structure presented in Table 14, it can be concluded that the state still holds a remarkable share in the equitized firms, especially in large and profitability firms. The high share is not surprising because, according to the Decision 58/2002/QD-TTg issued by Prime minister on April 26 2002, the state must hold more than 50 percent of the total shares in firms that have more than VND 10 billion in capital and are profitable in three consecutive years. In these firms, it is difficult for normal outside investors to purchase a large number of shares, even any share because a number of shares that are sold to outsiders are very limited. Instead, employees of these firms, public officers related to the firms and their relatives and friends are the main shareholders of these firms.

#### 4.4.2. *Corporate governance*

Corporate governance can be defined as the system of mechanisms by which a company is directed and controlled. General issues regarding corporate governance in Vietnam are stipulated in the Enterprise Law. Specifically, the governance structure for Vietnamese equitized firms is a two-tier board system with a separate supervisory board which is similar to what has been employed in Germany, The Netherlands and some other European countries. However, the power of the supervisory board in Vietnamese equitized firms is rather limited compared to that of the supervisory board in German or Dutch companies. For instance, in Vietnam the supervisory board does not have any rights to appoint and remove members of



the board of directors, but in Germany and the Netherlands the supervisory board has full authority to take these actions.

### *The Board of directors*

By regulation, the Board of directors is elected by shareholders and does not have more than eleven members. Results of the survey report that the board of directors is made up of three to eleven members drawn from the three main groups of shareholders. On average, the board of directors has six members, in which one represents the state, three represent insiders, and two represent outside investors.

Table 16: The composition of the board of directors

	Obs.	Min.	Mean	Median	Max.	St. dev.
No. of directors representing the state	124	0	1	1	6	1
No. of directors representing insiders	124	0	3	3	9	2
No. of directors representing outsiders	124	0	2	1	6	1
Total No. of directors	124	3	6	5	11	1

*Source: Own surveys in 2004 and 2005*

Although there is only one member representing the state in the Board of directors, the position of chairperson of the Board is essentially assigned to the state's representative. In fact, among 124 equitized firms that have full information regarding the Board of directors, 90 firms (accounting for 72.6 percent of the total firms) have a chairperson of the board representing the state. As mentioned above, the state controls a large number of shares, so it is not so difficult for the state to take this position. Furthermore, 24 firms have a chairperson of the board who represents insiders (19.4 percent); the rest (only 8.0 percent of the sample) have a chairperson of the board who represents outside investors. The distribution of chairperson of the board of directors in the sample by different groups of shareholders is presented in Table 17.

Table 17: Distribution of chairperson of the directors board by different groups of shareholders

	Frequency	Percentage (%)
Chairperson of the Board representing the state	90	72.6
Chairperson of the Board representing insiders	24	19.4

Chairperson of the Board representing outsiders	10	8.0
Total	124	100.0

*Source: Own surveys in 2004 and 2005*

### *The Board of supervisors*

Similar to the board of directors, the board of supervisors is also elected and removed by shareholders. The board of supervisors of the surveyed firms has two to five members, with an average of three members. Among three members of the Board, one represents outside investors, and the rest represent insiders and the state. The composition of the Board of supervisors is shown in Table 18.

Table 18: The composition of the board of supervisors

	Obs.	Min.	Mean	Median	Max.	St. dev.
No. of supervisors representing the state	124	0	0	0	2	1
No. of supervisors representing insiders	124	0	2	2	4	1
No. of supervisors representing outsiders	124	0	1	1	3	1
Total No. of supervisors	124	2	3	3	5	0

*Source: Own surveys in 2004 and 2005*

Furthermore, the findings of the survey reveal that insiders serve as the chairperson of the supervisors Board in about half of the surveyed firms (49.2 percent). In addition, the state's representative is appointed as the chairperson of the Board in 36 equitized firms, accounting for 29.0 percent of the sample. Finally, the remaining firms (21.8 percent of the sample) have a chairperson representing outside investors. The distribution of chairperson of the supervisors Board by different groups of shareholders is shown in Table 19.

Table 19: Chairperson of the board of supervisors by different groups of shareholders

	Frequency	Percentage (%)
Chairperson of the board representing the State	36	29.0
Chairperson of the board representing insiders	61	49.2
Chairperson of the board representing outsiders	27	21.8
Total	124	100.0

*Source: Own surveys in 2004 and 2005*

### *Manager/General manager (CEO)*

According to the Enterprise Law, the board of directors appoints the manager of equitized firms who, on behalf of the Board of directors, is responsible for the management of the firm. Therefore, the ownership structure has a strong effect on this appointment. As mentioned above, the state still is a dominant shareholder in the equitized firms. Thus, very often the state takes the position of manager in equitized firms. In fact, according to the results of the survey, firms that have manager representing the state account for 67.0 percent of the sample. In addition, firms which have a manager who represents outside investors make up only 4.0 percent of the sample. Finally, the rest (29.0 percent of the sample) have a manager who represents insiders.

Table 20: Distribution of manager of surveyed firms by different groups of shareholders

	Frequency	Percentage (%)
Manager representing the State	83	67.0
Manager representing insiders	36	29.0
Manager representing outsiders	5	4.0
Total	124	100.0

*Source: Own surveys in 2004 and 2005*

In short, this section describes the sample and briefly summarizes some findings of the survey on the equitization process, the ownership structure and corporate governance of the equitized firms. The entire sample includes 147 equitized firms and 92 SOEs. Specifically, most firms in the sample are located in the southern part of Vietnam. The survey reveals that in general firms need much time to complete the process of equitization due to some problems and constraints. Among these problems and constraints, firm evaluation and debt settlement are the most dominant. Regarding ownership structure and corporate governance of the equitized firms, it is found that the state still holds a large number of shares in the equitized firms, so it continues to play a decisive role in the firms after equitization. This section gives an overall picture of the process of equitization in Vietnam, but does not make any analysis about the impact of equitization on firm performance. The following sections will deal with this issue.

## 5. Hypotheses and methodology

Privatization is usually seen as a means to improve the performance of the firms in question. To examine the impact of privatization on financial and operating performance of firms, many studies compare pre- and post-privatization performance measures (Megginson *et al.*, 1994, Boubakri and Cosset, 1998, D'Souza and Megginson, 2001, Harper, 2002). Because the first study published using this methodology was Megginson, Nash and Randenborgh (1994), the methodology is usually referred to as the MNR methodology (Megginson and Netter, 2001). In our study we first apply this methodology to measure the effects of equitization on firm performance in Vietnam. Some of the measures used in the MNR methodology, such as capital investment and dividends, cannot be employed in our study due to a lack of appropriate data. Moreover, some of the measures have to be adjusted to the Vietnamese situation. Specifically, we use income before tax to calculate the profitability ratios of firms instead of net income as in the MNR methodology. Similarly, we replace net income efficiency by income-before-tax efficiency. An explanation for this adjustment is that in Vietnam the equitized firms have some income-tax advantages for the first years after equitization, so to avoid a bias in measuring the impact of equitization *per se* on profitability, we have to use income before tax instead of net income.

To measure the effects of equitization on firm performance, we first calculate performance measures for every firm for the years before and after equitization. Then, the mean of each measure is computed for each firm over the pre-equitization (years -3 to -1) and post-equitization (years +1 to +3) periods. However, it is important to note that we also included firms for which we only have data for two years before and after equitization in our sample. We did that to enlarge our sample<sup>4</sup>. Because the year of equitization includes both public and private ownership phases for many firms, it is eliminated from our analyses.

It is expected that as firms move from public to private ownership, their profitability will increase. First, privatization leads managers to focus on profit goals because under private ownership, management is directly responsible to shareholders (Yarrow, 1986). Second, to the extent that privatization transfers both control rights and cash flow rights from politicians to managers, profitability increases through efficiency gains in the form of redress of the excess labor spending that politicians needed for electoral reasons (Boycko *et al.*, 1996). Similarly, after privatization firms should employ their human, financial and technological

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<sup>4</sup> We also conducted an analysis with a two-year data screen. The results were very similar to those presented in this paper.

resources more efficiently because of a greater stress on profit goals and a reduction of government subsidies (Kikeri *et al.*, 1992 and Boycko *et al.*, 1996). Moreover, it is also expected that output (sales revenues) will increase following privatization, because of better incentives, more flexible financing opportunities and greater scope for entrepreneurial initiative (Megginson *et al.*, 1994). Regarding leverage, the shift from public to private ownership can be expected to lead to a decrease in the share of debt in the capital structure since with the end of government debt guarantees the firm's cost of borrowing will increase and the firm has new access to public equity markets (Megginson *et al.* 1994). In addition, if the bankruptcy costs are significant, once government guarantees are removed the newly privatized firm should reduce its debt (Boubakri and Cosset, 2002). Furthermore, we expect that the level of employment should decline once the SOE, which is usually overstaffed, turns private and no longer receives government subsidies. Finally, once the productivity of newly-privatized firms increase as a result of privatization, employee income should improve. Table 21 presents definitions and expected changes of the performance measures investigated in this paper.

Given a general improvement in performance as a result of privatization, the literature documents that differences would arise due to differences in size, sector, ownership structure, corporate governance and capital market discipline (Comstock *et al.*, 2003; Harper, 2002; D'Souza *et al.*, 2001, Pistor and Turkewitz, 1996). Therefore, in the next step we divide our data into six sub-samples.

We first partition the firms into two groups, larger firms and smaller firms, based on their pre-equitization real sales average. Firms with pre-equitization real sales average above the median of the sample are referred to as larger firms; otherwise they belong to the second

Table 21: Performance measures: definitions and expected changes

Performance measures	Definition	Expected change
<b>1. Profitability</b>		
Income before tax on assets (IBTA)	Income before tax/total assets	Increase
Income before tax on sales (IBTS)	Income before tax/sales	Increase
Income before tax on equity (IBTE)	Income before tax/equity	Increase
<b>2. Operating Efficiency</b>		
Sales efficiency	Real sales/number of employees	Increase
Income efficiency	Income before tax/number of employees	Increase
<b>3. Output (real sales)</b>		
	Nominal sales/price index	Increase
<b>4. Leverage</b>		
	Total debt/total assets	Decrease
<b>5. Employment</b>		
	Number of employees	Decrease
<b>6. Employee income</b>		
	Annual income per employee	Increase

group of smaller firms. The literature is not unambiguous about the role of firm size in performance improvement after privatization. On the one hand, Comstock *et al.* (2003) suppose that larger firms will have greater improvements in their performance due to being better prepared for the post-privatization environment, especially in terms of facing competition<sup>5</sup>. On the other hand, Harper (2002) holds that smaller firms will show greater improvement in performance after equitization than larger firms because it would be easier for them to restructure and adjust their business. In addition to that, it could be relevant in the case of Vietnam that the residual state share in small equitized firms is usually lower than for large firms. As will be discussed later in this section, the literature suggests that the percentage of state ownership in newly-privatized firms has a negative effect on firm performance after privatization.

Next, a split is made on the basis of the sectors in which the firms operate: either trade and services or manufacturing. The underlying idea is that firms in the trade and services

<sup>5</sup> This, however, assumes that privatization is equivalent to the introduction of competition, which conceptually is incorrect. See, *e.g.*, Shirley and Walsh (2000) for a discussion in which competition and firm ownership are clearly distinguished conceptually.

sector have an easier job in improving their performance since in this sector there is less need for investment in fixed assets that may be a necessary component of the adjustment process (Harper, 2002).

The literature further documents that ownership structure plays an important role in improving firm performance following privatisation. To measure such effects, the sample firms are divided into two subgroups on the basis of the median residual state-ownership of the full sample (30 percent residual state-ownership). The reason to split the sample in this way is to generate subgroups with the same number of observations. It is expected that firms with residual state ownership less than 30 percent will show greater performance improvements than other firms. The reason underlying this expectation is that the state as a shareholder has multiple interests - economic, social and political - that can be antagonistic to the interests of private shareholders in the direction of performance improvement (see, *e.g.*, Pistor and Turkewitz, 1996).

Additionally, to examine the impact of corporate governance on firm performance we partition our sample into firms that have a chairperson of the board of directors representing the state (FCBDRS), and firms that have a chairperson of the board of directors representing private investors (FCBDRP). In Vietnam, the board of directors has the highest authority to make decisions relevant to the company, except some issues that have to be approved by shareholders at the shareholders meeting. For instance, the board of directors exerts full power in the appointment or dismissal of the general manager and senior managers. It is expected that the improvements in performance measures are greater for firms in the latter group in that the chairperson of the board representing the private sector will give priority to improving firm performance and do not have to compromise with the other interests that state representatives have to take into account.

Moreover, the data are split into two subgroups, listed and non-listed firms. Listed firms are the equitized firms that have shares traded in the Ho Chi Minh City Securities Trading Center. The corporate-governance literature suggests that stock-market listing provides important possibilities to monitor the management of firms. The fear of replacement and the linkage of compensation to performance stimulate a firm's management to maximize the firm's profit. Moreover, the listed firm could get other benefits from the listing of its shares on the stock market. First, through the stock market the firm can mobilize more capital at low cost. Second, since the firm's share price is publicly announced in many media, there are free channels for advertising the firm's image. Taking into account these factors, we expect that

listed firms have greater performance improvements than non-listed ones following equitization.

Furthermore, the sample is divided into two subgroups, namely firms located in HCMC and other firms. HCMC is the biggest city in Vietnam, and it is also the country's main economic center. With the advantages of location, it is expected that firms in HCMC have larger gains in performance measures than firms in other regions.

Although the pre-post comparison method has been applied in many studies, it has its shortcomings. Indeed, this method is unable to isolate the impact of privatization on firm performance from concurrent effects of other economic factors. To deal with this issue, the DID method is also employed in this paper. A detailed description of this method and its results are presented in Section 8.

## **6. Effect of equitization on firm performance: Results from the pre-post comparison method**

### *6.1. Results for the full sample*

In this section we present our empirical results for the full sample. The results are summarized in Table 22. It is important to note that before testing for significant changes in performance, we employ the Jarque-Bera test to examine whether the performance measures of the surveyed firms are normally distributed. The result (not reported in this study, but to be obtained on request) is that the null hypothesis that the main variables in the sample are normally distributed is rejected for most measures. Consequently, the nonparametric two-tailed Wilcoxon signed-rank test is used to test for significant changes in the median of performance measures following equitization<sup>6</sup>. The Wilcoxon signed-rank method tests the null hypothesis that the median difference in measure values between the pre and post-equitization samples is zero. This test takes into account information about the magnitude of differences within pairs and gives more weight to pairs that show large differences than to pairs that show small differences. The test statistic is based on the ranks of the absolute values of the differences between the two measures<sup>7</sup>. Moreover, we also use a proportion (binomial) test to determine whether the proportion (P) of firms with the anticipated changes is greater than what would be expected by chance, typically testing whether  $P = 0.5$ .

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<sup>6</sup> Statistically, the nonparametric Wilcoxon test is more powerful in detecting the existence of significant differences than the parametric t-test when the sample is not normally distributed.

<sup>7</sup> For a detailed description of the Wilcoxon signed-rank test, see Berenson *et al.* (1988).



Table 22: Summary of results from tests of predictions for the full sample of all equitized firms

Measures	N	Mean (median) before	Mean (median) after	Mean (median) change	Z-Statistic for difference in medians (after – before)	Proportion of firms that performed as expected	Z-Statistic for significant of proportion change
<b>Profitability</b>							
IBTA	106	0.0947 (0.0762)	0.1227 (0.1056)	0.0280 (0.0294)	2.51 <sup>b</sup>	0.670	3.50 <sup>a</sup>
IBTS	147	0.0590 (0.0380)	0.0812 (0.0555)	0.0222 (0.0175)	3.50 <sup>a</sup>	0.796	7.18 <sup>a</sup>
IBTE	147	0.2160 (0.1816)	0.2826 (0.2350)	0.0666 (0.0534)	3.95 <sup>a</sup>	0.680	4.37 <sup>a</sup>
<b>Operating efficiency</b>							
Sales efficiency (million VND)	145	1.0140 (1.0000)	1.2811 (1.1390)	0.2671 (0.1390)	5.13 <sup>a</sup>	0.724	5.40 <sup>a</sup>
Income efficiency (million VND)	144	1.0727 (1.0000)	3.0332 (1.6344)	1.9605 (0.6344)	10.16 <sup>a</sup>	0.903	9.67 <sup>a</sup>
<b>Real sales (million VND)</b>	147	1.0001 (0.9964)	1.4274 (1.1907)	0.4273 (0.1943)	8.20 <sup>a</sup>	0.796	7.18 <sup>a</sup>
<b>Leverage</b>							
Total debts/total assets	106	0.5340 (0.5622)	0.5039 (0.5370)	-0.0301 (-0.0252)	0.96	0.538	0.78
<b>Employment</b>							
(Number of employees)	145	329 (152)	356 (147)	27 (-5)	0.60	0.386	-2.74 <sup>a</sup>
<b>Annual income per employee (million VND)</b>	121	13.8 (12.7)	19.1 (16.0)	5.3 (3.3)	3.57 <sup>a</sup>	0.868	8.09 <sup>a</sup>

<sup>a, b</sup> significant at the 1% and 5% levels respectively.

### *Profitability*

Profitability is the most important indicator to measure the performance of firms. As expected the results of our study show that all profitability ratios, to wit income before tax on assets (IBTA), income before tax on sales (IBTS), and income before tax on equity (IBTE), increase significantly after equitization. Specifically, the mean (median) IBTA increases significantly (at the 5 percent level), from 9.47 (7.62) percent in the pre-equitization period to 12.27 (10.56) percent in the post-equitization period. Furthermore, Table 22 shows that a statistically significant 67.0 percent of the full sample has positive changes in IBTA. Similarly, the mean (median) of IBTS and IBTE increases from 5.90 (3.80) percent to 8.12 (5.55) percent, and from 21.60 (18.16) to 28.26 (23.50) percent respectively. These increases are significant at the 1 percent level. These results strongly confirm that equitization in Vietnam has a positive effect on the profitability of the firms in question.

### *Efficiency*

To measure efficiency we use the inflation-adjusted sales per employee and income before tax per employee. In addition, they are normalized to equal 1.00 in year 0 (the year of equitization), so the figures for other years are expressed as a fraction of values of the efficiency measures in the year of equitization. The results of our study reveal that both efficiency measures show a significant increase (at the 1 percent level) after equitization. For instance, sales efficiency rises from an average (median) 1.01 (1.00) in the pre-equitization period to 1.28 (1.14) in the post-equitization period. Similarly, income efficiency increases from an average (median) 1.07 (1.00) during the pre-equitization period to 3.03 (1.63) after equitization. Further, our proportion tests show that sales efficiency and income efficiency increase in 72.4 and 90.3 percent of the total sample of firms respectively, both significant at the 1 percent level. These results suggest that the equitized firms use their resources with much greater efficiency after equitization.

### *Real sales*

In our study output is measured by inflation-adjusted sales (real sales). Similar to the efficiency measures, real sales are also normalized to 1.00 in year 0. Using the Wilcoxon test we find that real sales increase significantly (at the 1 percent level) following equitization. Specifically, the mean (median) real sales increases from 1.00 (1.00) during the pre-equitization period to 1.43 (1.19) after equitization. The proportion test also shows a significant increase (at the 1 percent level) in real sales level after equitization. In fact, 79.6

percent of the firms in our sample improve their real sales level in the years following equitization. This result confirms that equitization in Vietnam has a positive effect on the output of firms.

### *Leverage*

To measure the effect of equitization on the leverage of firms, we compare the pre-equitization ratio of total debt to total assets to the post-equitization ratio. Many scholars believe that leverage is reduced following privatization due to a combination of greater retained earnings and new share offerings. In the case of Vietnam we also find a decline in leverage, but it is statistically insignificant. In fact, the mean (median) leverage decreases from 53.40 percent (56.22 percent) over the pre-equitization period to 50.39 percent (53.70 percent) in the years following equitization. Our data further show that 53.80 percent of the sample firms reduce their debt ratio after equitization. However, the proportion test shows that the decline in leverage following equitization is insignificant. Clearly, the effect of equitization on leverage of firms in Vietnam is not significant. The debt ratio of equitized firms is still high following equitization, 50.39 percent on average.

### *Employment*

The literature documents that the effect of privatization on employment is ambiguous. Some researchers (Megginson *et al.*, 1994 and Boubakri and Cosset, 1998) report an increase in employment after privatization while other authors (La Porta and López-De-Silanes, 1999, and Harper, 2002) find a significant decline in the number of employees after privatization, which is in line with the theoretical model of Boycko *et al.* (1996) referred to earlier in this paper. The results obtained from this study are consistent with the findings of Megginson *et al.* (1994) and Boubakri and Cosset (1998) in that employment does not decrease significantly over the post-privatization period. Specifically, mean employment increases by 27 employees while median employment decreases by 5 employees after equitisation. However, the Wilcoxon test shows that the decrease in median employment is statistically insignificant. Contrary to this test, the proportion test reveals that the increase in employment is significant at the one percent level, with 61.4 percent of the sample firms having an increase in employment level following equitisation.

### *Employee income*

We measure the change in employee income by calculating the change in inflation-adjusted annual income per employee. The results of the study reveal that the mean (median) inflation-adjusted annual income per employee rises from VND 13.8 million (12.7 million) in the pre-equitization period to VND 19.1 million (16.0 million) in the post-equitization period, and 86.8 percent of the sample firms report to pay higher salaries to their employees. Both Wilcoxon and proportion tests show that the increase in inflation-adjusted annual income per employee is significant at the 1 percent level.

In short, the results suggest that equitization has positive effects on firm performance in Vietnam. It is found that profitability, efficiency, and sale revenues of equitized firms increase significantly after equitization. In addition, the study documents a decline in leverage (measured by total debt to total assets) of firms in the post-equitization period, although it is statistically insignificant. Remarkably, the results show no evidence of a significant decline in employment in the years following equitization. Finally, the findings confirm that equitization results in significant increase in employee income after equitization. Especially, the results go against the hypothesis that performance improvements of privatized firms are derived from the excess labour spending that is characteristic of SOEs according to the model of Boycko *et al.* (1996). A possible explanation for this result may be that employees, holding substantial portions of shares of equitized firms in the case of Vietnam, are able to prevent reductions in employment of the firms in question and even are able to achieve rises in their income. The remarkable improvements in profitability and efficiency may be explained by the incentive effect of the income rises that stimulates the employees to work more efficiently.

### *6.2. Sub-sample results*

To determine the significant changes in performance measures between sub-samples, the Mann-Whitney U test is employed. The Mann-Whitney U test is used to examine whether or not two independently drawn samples came from the same population. This test is designed to test the null hypothesis that two populations are identical against the alternative hypothesis that they differ<sup>8</sup>.

### *Larger firms versus smaller firms*

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<sup>8</sup> For a detailed description of the Mann-Whitney test, see Zuwaylif (1984).

In Table 23 we compare the performance changes of larger firms with the performance changes of smaller firms. As discussed above, the literature comes up with conflicting hypotheses regarding the role of firm size in post-privatization performance improvement. The outcome of our comparison is that for most criteria smaller firms show greater performance improvements after equitization than larger ones. Specifically, smaller firms report greater rises in IBTA, IBTS, IBTE, sales efficiency, income efficiency, and employee income. For instance, the mean (median) increase in IBTS for the smaller firms is 2.02 percentage points (1.15 percentage points) higher than the larger firms, 3.24 percent (2.93 percent) compared to 1.12 percent (1.78 percent). Similarly, the mean (median) change in IBTE for smaller firms is 9.91 percent (8.12 percent) as compared to 3.46 percent (2.85 percent) for the larger firms. The Mann-Whitney test shows that the difference in performance changes between two sub-samples is significant at the 1 percent level for IBTS and at the 10 percent level for IBTE and income efficiency. No significant difference is found for IBTA, sales efficiency and employee income.

On the other hand, an improvement in real sales of the larger firms is greater than for the smaller firms. Specifically, the mean (median) increase in real sales for the larger firms is 48.64 percent (24.12 percent) compared to 36.59 percent (16.79 percent) for the smaller firms, but the difference in the improvement between the two subgroups is insignificant. Finally, we find that there is a significant difference (at the 1 percent level) in employment change between the two subgroups. The mean (median) increase for the larger firms is 53 (43) employees while this increase is only 1 (8) employee for the smaller firms.

To sum up, for almost all criteria smaller firms show a greater performance improvement following equitization than larger ones, thereby supporting the Harper (2002) hypothesis that smaller firms are more flexible in adjusting to the new environment.

#### *Trade and services firms versus manufacturing firms*

Performance comparisons of trade and services firms to manufacturing firms are presented in Table 24. Our findings show that after equitization both subgroups report significant changes in the predicted direction for all measures, except for leverage and employment. However, for different measures the pattern is different between the two subgroups. We find higher improvements in IBTA, IBTE, real sales, sales efficiency, income efficiency, and employee income for the first subgroup. On the other hand, somewhat greater changes in IBTS, leverage and employment are reported for the manufacturing firms. However, the Mann-Whitney test

shows that the differences between the two subgroups are not statistically significant for all performance measures.

*Firms with residual state ownership less than 30 percent versus firms with the residual state ownership greater than or equal to 30 percent*

The results presented in Table 25 show that firms with residual state ownership less than 30 percent have greater performance improvements in profitability, income efficiency, employment, and employee income than firms where residual state ownership is greater than or equal to 30 percent. For instance, the mean (median) gain in IBTS for the former subgroup is 2.91 percent (1.43 percent), while this increase for the latter is only 1.16 percent (0.75 percent). Similarly, the mean (median) improvement in income efficiency for the former subgroup is 164.73 percentage points (47.72 percentage points) higher than the latter one. The Mann-Whitney test reveals that the differences in IBTS and income efficiency changes between two sub-samples are significant at the 5 percent level, but no significant difference between the two subgroups is found for IBTA, IBTE, employment level and employee income. Conversely, the latter subgroup has greater improvements in real sales, sales efficiency and leverage. The differences found are, however, not statistically significant for any of the variables.

*Firms that have a chairperson of the board of directors representing the state (FCBDRS) versus firms that have a chairperson of the board of directors representing private investors (FCBDRP)*

Our results, shown in Table 26, indicate that improvements in almost all performance measures are in line with expectations in that they are greater for the FCBDRP as compared to the FCBDRS. First, FCBDRP yield greater changes in profitability following equitization. Indeed, the mean (median) increase in IBTE for the FCBDRP is 10.30 percent (14.06 percent) as opposed to 3.38 percent (3.52 percent) for the FCBDRS. Importantly, the difference in IBTE changes between two sub-samples is significant at the 5 percent level. Secondly, our findings also confirm that FCBDRP trigger higher improvements in income efficiency, employee's income although the differences between two subgroups are statistically insignificant. However, it is found that the former subgroup has higher improvements in real sales, sales efficiency and leverage than the latter subgroup. Specifically, mean (median) real sales increase for the FCBDRS is 41.95 percent (15.23 percent) while this increase is only 38.75 percent (27.31 percent) for the FCBDRS. Additionally, the mean (median) sales

efficiency increase for the former subgroup is 23.83 percent (11.31 percent) against 19.86 percent (11.74 percent) for the former one. Surprisingly, the mean (median) leverage of the FCBDRS decreases following equitization (4.39 percentage points in mean and 4.87 percentage points in median) while the mean (median) leverage of the FCBDRP increases by 0.56 percentage points (1.32 percentage points) percent after equitization. The Mann-Whitney test reports that the difference in real sales between the two subgroups is significant at the 10 percent level), but no significant difference between the two subgroups is found for sales efficiency and leverage.

#### *Listed versus non-listed firms*

Table 27 presents comparisons of performance changes between listed and non-listed firms. As expected, we find higher increases in real sales, sales efficiency, and employment for listed firms as compared to non-listed firms. In fact, the mean (median) real sales and sale efficiency of listed firms increases by 60.73 percentage points (39.77 percentage points) and 38.86 percentage points (33.13 percentage points) following equitization compared to an improvement of 40.13 percentage points (15.46 percentage points) and 25.09 percentage points (9.33 percentage points) for the non-listed firms, respectively. Moreover, Table 27 shows an average (median) increase of 58 employees (137 employees) for the listed firms opposed to 23 employees (1 employee) for the non-listed ones. The differences are significant at the 10 percent level for real sales and sales efficiency and 5 percent level for employment. Furthermore, we also find a greater decrease in leverage for the listed firms than for non-listed firms, but the difference is statistically insignificant.

Contrary to the predictions our findings indicate that non-listed firms have higher profitability improvements than listed firms. For instance, the mean (median) improvement in IBTA and IBTS for non-listed firms is 3.61 percentage points (2.61 percentage points) and 2.47 percentage points (1.96 percentage points) compared to -1.15 percentage points (1.62 percentage points) and 0.40 percentage points (0.67 percentage points) for listed firms respectively. In addition, the mean (median) IBTE of the non-listed firms increases by 8.60 percentage points (5.52 percentage points) while the mean (median) IBTE of listed firms decreases by 7.18 percentage points (4.90 percentage points) following equitization. Using the Mann-Whitney test we find that the differences between the two sub-samples are significant at the 1 percent level for IBTS and IBTE, and at the 5 percent level for IBTA. Our results also show that non-listed firms have a higher income efficiency improvement than listed firms, but the difference in the measure changes between these subgroups is statistically insignificant.

Table 23: Comparison of post-equitization performance changes for larger and smaller firms

Measures	N	Mean (median) before	Mean (median) after	Mean (median) change	Z-Statistic for difference in medians (after – before)	Z-Statistic for difference in medians between sub-samples
<b>IBTA</b>						
Larger firms	57	0.0962 (0.0722)	0.1217 (0.0990)	0.0255 (0.0268)	1.76 <sup>c</sup>	0.68
Smaller firms	49	0.0930 (0.0811)	0.1239 (0.1109)	0.0309 (0.0298)	1.89 <sup>c</sup>	
<b>IBTS</b>						
Larger firms	74	0.0459 (0.0298)	0.0581 (0.0476)	0.0122 (0.0178)	2.08 <sup>b</sup>	3.36 <sup>a</sup>
Smaller firms	73	0.0722 (0.0440)	0.1046 (0.0733)	0.0324 (0.0293)	3.16 <sup>a</sup>	
<b>IBTE</b>						
Larger firms	74	0.2489 (0.2048)	0.2835 (0.2333)	0.0346 (0.0285)	1.74 <sup>c</sup>	1.90 <sup>c</sup>
Smaller firms	73	0.1826 (0.1538)	0.2817 (0.2350)	0.0991 (0.0812)	3.65 <sup>a</sup>	
<b>Sales efficiency</b>						
Larger firms	72	1.0215 (1.0000)	1.2277 (1.1308)	0.2062 (0.1308)	3.81 <sup>a</sup>	1.15
Smaller firms	73	1.0067 (1.0000)	1.3338 (1.1502)	0.3271 (0.1502)	3.46 <sup>a</sup>	
<b>Income efficiency</b>						
Larger firms	72	0.9982 (0.9915)	2.5552 (1.3717)	1.5570 (0.3802)	6.15 <sup>a</sup>	1.75 <sup>c</sup>
Smaller firms	73	1.1314 (1.0000)	3.4631 (1.8789)	2.3317 (0.8789)	7.27 <sup>a</sup>	
<b>Real sales</b>						
Larger firms	74	1.0093 (0.9922)	1.4957 (1.2334)	0.4864 (0.2412)	7.07 <sup>a</sup>	0.63
Smaller firms	73	0.9923 (0.9999)	1.3582 (1.1678)	0.3659 (0.1679)	4.48 <sup>a</sup>	
<b>Total debts/total assets</b>						
Larger firms	57	0.5866 (0.6154)	0.5392 (0.5916)	-0.0474 (-0.0238)	1.13	1.30
Smaller firms	49	0.4729 (0.4897)	0.4627 (0.4742)	-0.0102 (-0.0155)	0.21	
<b>Number of employees</b>						
Larger firms	72	545 (307)	598 (350)	53 (43)	0.81	3.61 <sup>a</sup>
Smaller firms	73	117 (87)	118 (95)	1 (8)	0.27	
<b>Annual income per employee (million VND)</b>						
Larger firms	54	15.4 (14.4)	20.2 (16.7)	4.8 (2.3)	2.56 <sup>b</sup>	0.08
Smaller firms	67	12.5 (10.1)	18.2 (13.1)	5.7 (3.0)	2.73 <sup>a</sup>	

<sup>a</sup>, <sup>b</sup>, <sup>c</sup> Significant at the 1%, 5%, and 10% levels, respectively.



Table 24: Comparison of performance changes following equitization for trade and services firms and manufacturing firms

Measures	N	Mean (median) before	Mean (median) after	Mean (median) change	Z-Statistic for difference in medians (after – before)	Z-Statistic for difference in medians between subsamples
<b>IBTA</b>						
Trade and services firms	54	0.0789 (0.0720)	0.1078 (0.0807)	0.0289 (0.0087)	1.62	0.67
Manufacturing firms	52	0.1112 (0.0826)	0.1382 (0.1251)	0.0270 (0.0425)	2.02 <sup>b</sup>	
<b>IBTS</b>						
Trade and services firms	67	0.0618 (0.0285)	0.0807 (0.0526)	0.0189 (0.0241)	2.03 <sup>b</sup>	1.47
Manufacturing firms	80	0.0566 (0.0391)	0.0816 (0.0606)	0.0250 (0.0215)	3.09 <sup>a</sup>	
<b>IBTE</b>						
Trade and services firms	67	0.1875 (0.1771)	0.2569 (0.2242)	0.0694 (0.0471)	2.81 <sup>a</sup>	0.30
Manufacturing firms	80	0.2397 (0.1816)	0.3042 (0.2595)	0.0645 (0.1134)	2.76 <sup>a</sup>	
<b>Sales efficiency</b>						
Trade and services firms	65	0.9964 (0.9930)	1.2722 (1.1409)	0.2758 (0.1479)	3.14 <sup>a</sup>	0.46
Manufacturing firms	80	1.0283 (1.0000)	1.2883 (1.1308)	0.2600 (0.1308)	4.18 <sup>a</sup>	
<b>Income efficiency</b>						
Trade and services firms	65	1.1049 (0.9794)	3.1141 (1.4849)	2.0092 (0.5055)	6.58 <sup>a</sup>	0.94
Manufacturing firms	80	1.0331 (1.0000)	2.9295 (1.7748)	1.8964 (0.7748)	7.45 <sup>a</sup>	
<b>Real sales</b>						
Trade and services firms	67	0.9737 (0.9779)	1.4255 (1.1441)	0.4518 (0.1662)	5.58 <sup>a</sup>	0.31
Manufacturing firms	80	1.0236 (1.0000)	1.4290 (1.2483)	0.4054 (0.2483)	6.03 <sup>a</sup>	
<b>Total debts/total assets</b>						
Trade and services firms	61	0.4895 (0.5450)	0.5162 (0.5496)	0.0267 (0.0046)	0.41	0.85
Manufacturing firms	63	0.4245 (0.4894)	0.4811 (0.5272)	0.0566 (0.0378)	0.82	
<b>Number of employees</b>						
Trade and services firms	65	212 (87)	229 (100)	17 (13)	0.54	0.70
Manufacturing firms	80	424 (199)	459 (222)	35 (23)	0.50	
<b>Annual income per employee (million VND)</b>						
Trade and services firms	58	15.4 (13.2)	22.5 (17.7)	7.1 (4.5)	2.53 <sup>b</sup>	0.94
Manufacturing firms	63	12.4 (12.0)	15.9 (15.1)	3.5 (3.1)	2.65 <sup>a</sup>	

<sup>a</sup>, <sup>b</sup>, <sup>c</sup> Significant at the 1%, 5%, and 10% levels, respectively.

Table 25: Comparison of performance changes following equitization for firms with residual state ownership less than 30 percent and the other firms

Measures	N	Mean (median) before	Mean (median) after	Mean (median) change	Z-Statistic for difference in medians (after – before)	Z-Statistic for difference in medians between sub-samples
<b>IBTA</b>						
State ownership < 30%	59	0.0873 (0.0716)	0.1249 (0.1118)	0.0376 (0.0402)	2.34 <sup>b</sup>	0.62
State ownership ≥ 30%	47	0.1041 (0.0852)	0.1200 (0.0990)	0.0159 (0.0138)	1.04	
<b>IBTS</b>						
State ownership < 30%	73	0.0515 (0.0380)	0.0806 (0.0523)	0.0291 (0.0143)	2.95 <sup>a</sup>	2.10 <sup>b</sup>
State ownership ≥ 30%	53	0.0717 (0.0481)	0.0833 (0.0556)	0.0116 (0.0075)	1.23	
<b>IBTE</b>						
State ownership < 30%	73	0.2014 (0.1632)	0.2746 (0.2587)	0.0732 (0.0955)	3.12 <sup>a</sup>	1.59
State ownership ≥ 30%	53	0.2372 (0.1961)	0.2572 (0.2070)	0.0200 (0.0109)	1.22	
<b>Sales efficiency</b>						
State ownership < 30%	73	1.0397 (1.0000)	1.1239 (1.1133)	0.0842 (0.1133)	2.00 <sup>b</sup>	1.31
State ownership ≥ 30%	51	0.9831 (0.9903)	1.2619 (1.1154)	0.2788 (0.1251)	3.58 <sup>a</sup>	
<b>Income efficiency</b>						
State ownership < 30%	73	1.1248 (1.0000)	3.9949 (1.9111)	2.3662 (0.9111)	6.65 <sup>a</sup>	2.18 <sup>b</sup>
State ownership ≥ 30%	51	1.0070 (0.9887)	1.7259 (1.4226)	0.7189 (0.4339)	6.09 <sup>a</sup>	
<b>Real sales</b>						
State ownership < 30%	73	1.0274 (0.9939)	1.3936 (1.1907)	0.3662 (0.1968)	5.23 <sup>a</sup>	0.49
State ownership ≥ 30%	53	0.9646 (0.9831)	1.4347 (1.1481)	0.4701 (0.1650)	5.11 <sup>a</sup>	
<b>Total debts/total assets</b>						
State ownership < 30%	71	0.4583 (0.5250)	0.5285 (0.5826)	0.0702 (0.0576)	1.21	0.79
State ownership ≥ 30%	53	0.4541 (0.5237)	0.4631 (0.5047)	0.0090 (-0.0190)	0.02	
<b>Number of employees</b>						
State ownership < 30%	73	411 (132)	459 (168)	48 (36)	0.61	1.55
State ownership ≥ 30%	51	210 (161)	220 (134)	10 (-27)	0.19	
<b>Annual income per employee (million VND)</b>						
State ownership < 30%	58	14.4 (13.4)	21.0 (17.0)	6.6 (3.6)	2.60 <sup>a</sup>	0.60
State ownership ≥ 30%	42	15.0 (12.2)	20.2 (16.7)	5.2 (4.5)	2.73 <sup>a</sup>	

<sup>a, b</sup> Significant at the 1% and 5% levels, respectively.

Table 26: Comparison of performance changes following equitization for FCBDRS and FCBDRP

Measures	N	Mean (median) before	Mean (median) after	Mean (median) change	Z-Statistic for difference in medians (after – before)	Z-Statistic for difference in medians between sub-samples
<b>IBTA</b>						
FCBDRS	77	0.0960 (0.0726)	0.1127 (0.1013)	0.0167 (0.0287)	2.03 <sup>b</sup>	1.43
FCBDRP	27	0.0932 (0.0764)	0.1559 (0.1380)	0.0627 (0.0616)	1.61	
<b>IBTS</b>						
FCBDRS	90	0.0646 (0.0396)	0.0831 (0.0556)	0.0185 (0.0160)	2.45 <sup>b</sup>	0.81
FCBDRP	34	0.0475 (0.0390)	0.0794 (0.0519)	0.0319 (0.0129)	1.81 <sup>c</sup>	
<b>IBTE</b>						
FCBDRS	90	0.2230 (0.1831)	0.2568 (0.2183)	0.0338 (0.0352)	2.31 <sup>b</sup>	2.10 <sup>b</sup>
FCBDRP	34	0.1923 (0.1633)	0.2953 (0.3039)	0.1030 (0.1406)	2.58 <sup>a</sup>	
<b>Sales efficiency</b>						
FCBDRS	89	1.0226 (1.0000)	1.2609 (1.1133)	0.2383 (0.1133)	3.30 <sup>a</sup>	0.35
FCBDRP	33	0.9964 (0.9980)	1.1950 (1.1154)	0.1986 (0.1174)	1.59	
<b>Income efficiency</b>						
FCBDRS	89	1.0199 (0.9887)	2.4867 (1.4828)	1.4668 (0.4941)	8.17 <sup>a</sup>	0.73
FCBDRP	33	1.2329 (1.0000)	4.7160 (2.1917)	3.4831 (1.1917)	3.43 <sup>a</sup>	
<b>Real sales</b>						
FCBDRS	90	1.0143 (0.9886)	1.4338 (1.1409)	0.4195 (0.1523)	5.25 <sup>a</sup>	1.66 <sup>c</sup>
FCBDRP	34	0.9615 (0.9864)	1.3490 (1.2595)	0.3875 (0.2731)	5.33 <sup>a</sup>	
<b>Total debts/total assets</b>						
FCBDRS	77	0.5473 (0.5879)	0.5034 (0.5392)	-0.0439 (-0.0487)	1.28	1.29
FCBDRP	27	0.4803 (0.5026)	0.4859 (0.5158)	0.0056 (0.0132)	0.12	
<b>Number of employees</b>						
FCBDRS	89	308 (152)	333 (147)	25 (-5)	0.40	1.50
FCBDRP	33	286 (107)	341 (126)	55 (19)	0.72	
<b>Annual income per employee (million VND)</b>						
FCBDRS	73	15.0 (12.9)	19.6 (16.8)	4.6 (3.9)	3.06 <sup>a</sup>	0.46
FCBDRP	27	13.7 (14.6)	23.7 (17.3)	10.0 (2.7)	2.06 <sup>b</sup>	

<sup>a</sup>, <sup>b</sup>, <sup>c</sup> Significant at the 1%, 5%, and 10% levels, respectively.

Table 27: Comparison of performance changes following equitization for listed firms and non-listed firms

Measures	N	Mean (median) before	Mean (median) after	Mean (median) change	Z-Statistic for difference in medians (after – before)	Z-Statistic for difference in medians between subsamples
<b>IBTA</b>						
Listed firms	18	0.1380 (0.1067)	0.1265 (0.1229)	-0.0115 (0.0162)	0.24	2.23 <sup>b</sup>
Non-listed firms	88	0.0859 (0.0716)	0.1220 (0.0977)	0.0361 (0.0261)	2.63 <sup>a</sup>	
<b>IBTS</b>						
Listed firms	18	0.0963 (0.0659)	0.1003 (0.0726)	0.0040 (0.0067)	0.11	2.92 <sup>a</sup>
Non-listed firms	129	0.0538 (0.0330)	0.0785 (0.0526)	0.0247 (0.0196)	3.69 <sup>a</sup>	
<b>IBTE</b>						
Listed firms	18	0.3234 (0.3033)	0.2516 (0.2543)	-0.0718 (-0.0490)	0.74	3.29 <sup>a</sup>
Non-listed firms	129	0.2010 (0.1742)	0.2870 (0.2294)	0.0860 (0.0552)	4.28 <sup>a</sup>	
<b>Sales efficiency</b>						
Listed firms	17	1.0587 (1.0000)	1.4473 (1.3313)	0.3886 (0.3313)	3.38 <sup>a</sup>	1.71 <sup>c</sup>
Non-listed firms	128	1.0081 (1.0000)	1.2590 (1.0933)	0.2509 (0.0933)	4.24 <sup>a</sup>	
<b>Income efficiency</b>						
Listed firms	17	0.9944 (1.0000)	1.6679 (1.4226)	0.6735 (0.4226)	2.93 <sup>a</sup>	1.83 <sup>b</sup>
Non-listed firms	128	1.0747 (1.0000)	3.1908 (1.6521)	2.1161 (0.6521)	9.54 <sup>a</sup>	
<b>Real sales</b>						
Listed firms	18	1.0521 (1.0000)	1.6594 (1.3977)	0.6073 (0.3977)	4.57 <sup>a</sup>	1.72 <sup>c</sup>
Non-listed firms	129	0.9937 (0.9942)	1.3950 (1.1488)	0.4013 (0.1546)	7.12 <sup>a</sup>	
<b>Total debts/total assets</b>						
Listed firms	18	0.5156 (0.5306)	0.4711 (0.5392)	-0.0445 (0.0086)	0.36	0.26
Non-listed firms	88	0.5378 (0.5740)	0.5106 (0.5370)	-0.0272 (-0.0370)	0.75	
<b>Number of employees</b>						
Listed firms	17	850 (518)	908 (655)	58 (137)	0.38	2.41 <sup>b</sup>
Non-listed firms	128	260 (126)	283 (127)	23 (1)	0.44	

<sup>a, b, c</sup> Significant at the 1%, 5%, and 10% levels, respectively.

Table 28: Comparison of performance changes following equitization for firms located in Ho Chi Minh City (HCMC) and others firms

Measures	N	Mean (median) before	Mean (median) after	Mean (median) change	Z-Statistic for difference in medians (after – before)	Z-Statistic for difference in medians between subsamples
<b>IBTA</b>						
Firms located in HCMC	56	0.0983 (0.0741)	0.1239 (0.1114)	0.0256 (0.0373)	1.95 <sup>c</sup>	0.48
Other firms	50	0.0908 (0.0807)	0.1213 (0.1002)	0.0305 (0.0195)	1.55	
<b>IBTS</b>						
Firms located in HCMC	76	0.0558 (0.0366)	0.0815 (0.0527)	0.0257 (0.0161)	2.87 <sup>a</sup>	2.10 <sup>b</sup>
Other firms	71	0.0623 (0.0393)	0.0809 (0.0604)	0.0186 (0.0211)	2.11 <sup>b</sup>	
<b>IBTE</b>						
Firms located in HCMC	76	0.2308 (0.1743)	0.2795 (0.2294)	0.0487 (0.0551)	2.39 <sup>b</sup>	0.31
Other firms	71	0.2001 (0.1872)	0.2859 (0.2500)	0.0858 (0.0628)	3.18 <sup>a</sup>	
<b>Sales efficiency</b>						
Firms located in HCMC	75	1.0182 (1.0000)	1.2675 (1.0940)	0.2493 (0.0940)	2.56 <sup>b</sup>	0.90
Other firms	70	1.0096 (1.0000)	1.2957 (1.1572)	0.2861 (0.1572)	4.67 <sup>a</sup>	
<b>Income efficiency</b>						
Firms located in HCMC	75	1.0025 (0.9887)	3.1770 (1.7097)	2.1745 (0.7210)	7.77 <sup>a</sup>	1.26
Other firms	70	1.1325 (1.0000)	2.8358 (1.4870)	1.7033 (0.4870)	6.47 <sup>a</sup>	
<b>Real sales</b>						
Firms located in HCMC	76	1.0174 (0.9942)	1.5050 (1.1471)	0.4876 (0.1529)	5.15 <sup>a</sup>	0.55
Other firms	71	0.9831 (1.0000)	1.3443 (1.2462)	0.3612 (0.2462)	6.45 <sup>a</sup>	
<b>Total debts/total assets</b>						
Firms located in HCMC	56	0.5563 (0.5868)	0.4962 (0.5596)	-0.0601 (-0.0272)	1.38	1.66 <sup>c</sup>
Other firms	50	0.5090 (0.5450)	0.5124 (0.5264)	0.0034 (-0.0186)	0.04	
<b>Number of employees</b>						
Firms located in HCMC	75	406 (200)	447 (214)	41 (14)	0.43	1.18
Other firms	70	247 (119)	259 (126)	12 (7)	0.35	
<b>Annual income per employee (million VND)</b>						
Firms located in HCMC	63	14.8 (13.7)	19.3 (16.8)	4.5 (3.1)	2.97 <sup>a</sup>	1.24
Other firms	58	12.7 (10.0)	18.8 (13.0)	6.1 (3.0)	2.25 <sup>b</sup>	

<sup>a</sup>, <sup>b</sup>, <sup>c</sup> Significant at the 1%, 5%, and 10% levels, respectively.

In general, the results indicate that listed firms show greater improvements in real sales, sales efficiency, leverage, and employment compared to non-listed firms. However, gains in profitability measures are lower for listed firms than for non-listed ones. A possible explanation for the differences is that by exploiting the benefits from the listing, listed firms substantially expand their business. The business expansion results in substantial increases in real sales and employment. The profit margin of listed firms is almost unchanged after equitisation while the total assets of the firms increase considerably due to business expansion. These factors cause the decrease in IBTA of listed firms following equitisation. In addition, the average leverage of listed firms falls in years following equitisation while their total assets increase. These changes lead to an increase in the equity of listed firms. Similar to IBTA, the increase in equity explains the decline in IBTE of listed firms after equitisation.

#### *Firms located in HCMC versus the other firms*

Comparisons of performance improvements between firms located in HCMC and the other firms are shown in Table 28. As can be readily seen from the Table, only performance changes in IBTS and leverage are statistically significant difference between two groups. Specifically, contrary to the prediction a significantly lower improvement in the median IBTS is reported for the group of firms in HCMC. In addition, firms located in HCMC have a significantly lower reduction in the median leverage than the other firms.

### **7. The sources of performance changes: Cross-sectional regression results**

To validate the nonparametric tests and to examine what determines differences in effects of equitization, a cross-sectional regression is used to measure the sources of performance changes after equitization. In our regression equations the dependent variables represent the percentage changes in income before tax on assets (PIBTA), income before tax on sales (PIBTS), income before tax on equity (PIBTE), real sales (PRS), sales efficiency (PSE) and income efficiency (PIE) following equitization. To explain the changes in performance measures (dependent variables), size (log of pre-equitization real sales average), residual state ownership, background of the chairperson of the board of directors, stock-market listing of firms and location of firms are used as independent variables. Definitions of explanatory variables used in the regression analyses are shown in Table 29.

The equation used for each performance measure is:

$$Y_i = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

where  $Y_i$  represents the percentage change in a given performance measure. The results of the regression analyses from the equation are shown in Table 30.

Table 29: Definitions of explanatory variables used and expected sign in regression analyses

Variable	Definition	Expected sign
Size ( $X_1$ )	Log of pre-equitization real sales average	Negative
State ownership ( $X_2$ )	Percent of shares owned by the state at the time of the first share issue	Negative
Chairperson of the board of directors (CBD) ( $X_3$ )	Dummy variable equal to 1 if the chairperson of the board of directors represents the state, 0 otherwise	Negative
Listed firms ( $X_4$ )	Dummy variable equal to 1 if a firm is listed on the stock exchange, 0 otherwise	Positive
HCMC ( $X_5$ )	Dummy variable equal to 1 if a firm is located in HCMC, 0 otherwise	Positive

Table 30: Cross-sectional regression results

	PIBTA	PIBTS	PIBTE	PRS	PSE	PIE
Constant	0.1015 (3.02) <sup>a</sup>	0.0972 (6.24) <sup>a</sup>	0.2495 (2.87) <sup>a</sup>	0.1426 (0.59)	0.3196 (1.35)	5.2644 (5.28) <sup>a</sup>
Size	-0.0070 (-2.24) <sup>b</sup>	-0.0080 (-5.47) <sup>a</sup>	-0.0156 (-1.87) <sup>c</sup>	-0.0041 (-0.17)	-0.0407 (-1.75) <sup>c</sup>	-0.2725 (-3.14) <sup>a</sup>
State ownership	0.0001 (0.32)	-0.0001 (-1.03)	-0.0003 (-0.42)	0.0039 (1.84) <sup>c</sup>	0.0063 (2.85) <sup>a</sup>	-0.0269 (-3.03) <sup>a</sup>
CBD	-0.0195 (-1.93) <sup>c</sup>	-0.0005 (-0.11)	-0.0366 (-1.36)	-0.0578 (-0.75)	-0.0068 (-0.09)	-0.5710 (-1.84) <sup>c</sup>
Listed firms	-0.0255 (-2.15) <sup>b</sup>	-0.0165 (-2.98) <sup>a</sup>	-0.0883 (-2.57) <sup>b</sup>	0.3179 (3.35) <sup>a</sup>	0.3223 (3.33) <sup>a</sup>	-0.4160 (-1.27)
HCMC	0.0140 (1.55)	0.0166 (2.87) <sup>a</sup>	0.0141 (0.57)	0.0827 (1.21)	0.0677 (0.98)	0.1984 (0.79)
Observations	86	110	110	103	107	86
Adjusted R <sup>2</sup>	0.119	0.355	0.095	0.088	0.129	0.234
F-statistic	3.30 <sup>a</sup>	3.87 <sup>a</sup>	3.30 <sup>a</sup>	2.96 <sup>b</sup>	4.14 <sup>a</sup>	6.20 <sup>a</sup>

<sup>a, b, c</sup> Significant at the 1%, 5%, and 10% level, respectively  
*t*-values in parenthesis (they are based on White Heteroskedasticity-Consistent Standard Errors & Covariances)

### *Profitability*

Consistent with the results of Harper (2002) for the Czech Republic the regression analyses show a significant negative relationship between profitability changes (PIBTA, PIBTS, and PIBTE) and firm size. Moreover, according to Table 30, corporate governance appears as a determinant to explain profitability changes of firms following equitization. Specifically, our results indicate that the chairperson of the board of directors representing the state has a significant negative effect on PIBTA. Surprisingly, results obtained from regression analyses reveal that state ownership does not have any statistically significant effects on the profitability measures. Contrary to expected signs regression analyses show a significant negative relationship between listing on the stock exchange and all profitability measures. The possible explanation for the negative impact of listing is presented in the previous section. Finally, it is found from Table 30 that the dummy variable for equitized firms in HCMC has a positive impact on PIBTS at the 1 percent significance level.

Overall, in line with the predictions regression results reveal a significant negative effect of firm size and corporate governance ( $X_1$ , and  $X_3$ ) on the profitability improvements of equitized firms. In addition, a significantly greater improvement in PIBTS is reported for equitized firms in HCMC compared to ones in the other regions. Unexpectedly, the regression analysis provide evidence that listing on the stock exchange have a significant negative impact on profitability improvements of equitized firms following equitization.

### *Real sales*

As predicted, we find a significant positive impact of listing on real sales change following equitization. Indeed, according to results presented in Table 30, listed firms experience a 31.79 percentage points greater increase in real sales than non-listed firms. The result could mirror the effect hypothesized above that listed firms exploit the benefits from the listing through enlarging their business and market share. These benefits lead to a higher growth rate of sales compared to non-listed firms. Contrary to predictions, our results show a significant positive relationship between real sales improvements and state ownership. Specifically, a 1 percent increase in state ownership results in a 0.80 percent increase in real sale following equitization. Finally, findings from Table 30 indicate that firm size, the chairperson of the board of directors represents the state and firms located in HCMC are not determinants to explain improvements in real sales of firms after equitization.



### *Efficiency*

First, the regression results for sales efficiency are discussed. The regression for this performance measure reveals a significant negative effect of firm size on the improvement in sales efficiency in the post-equitization period. In addition, we find that listed firms experience a significantly higher increase in sales efficiency than non-listed firms. Indeed, listed firms experience a 32.23 percentage points greater increase in sales efficiency than non-listed firms. Similar to the real sales measure, the regression results show that state ownership has a significantly positive impact on sales efficiency, and the chairperson of the board of directors represents the state and firms located in HCMC also have insignificant effects on improvements in sales efficiency of firms following equitization.

Beside the sales efficiency regression, we also conducted an income efficiency regression. It turns out that firm size has a significant negative impact on the change in income efficiency. Moreover, our results confirm the prediction that state ownership has a negative effect on firm performance, including income efficiency. Specifically, a 1 percent increase in state ownership causes a 0.03 percentage points decrease in income efficiency. This relationship is statistically significant at the 1 percent level. Furthermore, the regression results show a significantly lower increase in income efficiency for FCBDRS as compared to FCBDRP. In fact, FCBDRS have a 57.10 percentage points lower improvement in income efficiency than FCBDRP. Finally, we find no statistically significant relationship between listing on the stock exchange and income efficiency changes, and location of firms and income efficiency improvements after equitization.

Generally, our data indicate that firm size, residual state ownership, corporate governance and listing on the stock exchange are the major determinants of post-equitization efficiency improvements. Specifically, the results reveal that firm size has significant negative effects on both efficiency measures. Moreover, the regression results show a significant negative relationship between state ownership and income efficiency, but a significant positive relationship between state ownership and sales efficiency. In addition, it is found that stock-exchange listing has a significant positive effect on sales efficiency. Finally, it turns out that the chairperson of the board of directors representing the state has a significant negative relationship with income efficiency, but insignificant negative relationship with sales efficiency.

## 8. Effect of equitization on firm performance: Results from the DID method

The DID method is an approach that is developed to overcome the shortcomings of the pre-post comparison method, which ignores the concurrent impact of other determinants when measuring the impact of equitization on firm performance<sup>9</sup>. The main advantage of the DID method is that it helps to examine the impact of a policy or policy program by comparing the difference in given measures of a treatment group over time - from before the policy was implemented until after its implementation - to the difference in the measures of the control group for the same periods.

In this study the treatment group is formed by the equitized firms while the control group contains SOEs. Since most of the equitized firms in the sample were completely equitized in the year 2000 or 2001, the DID method is only applied to these groups. Moreover, due to insufficient data on the SOEs, only IBTA, IBTS, IBTE, real sales and the ratio of total debts to total assets are used as measures. Because of data limitations the differences in these measures, for both the treatment and the control group, are calculated on the basis of only one year before and after equitization. Following the DID method, first the difference in the performance measures between before and after equitization is computed for all individual firms in the treatment and control groups. Second, the mean (median) of the difference is separately calculated for the treatment and control groups. Then, the impact of equitization on firm performance is examined as the difference between the differences in the performance measures for the two groups. Finally, to test for statistical significance of the difference in the performance measures between the treatment and control group, the non-parametric Mann-Whitney test is applied. Results of the DID method are shown in Tables 31 and 32.

Table 31 presents results of the DID method for the group of former SOEs equitized in the year 2000. As can be seen from the table, all profitability measures of the equitized firms increase significantly (after taking into account the difference in differences) following equitization. Specifically, the mean (median) gains in IBTA and IBTS are 3.71 percentage points (3.91 percentage points) and 5.65 percentage points (2.39 percentage points) respectively. Similarly, the mean (median) increase in IBTE is 8.79 percentage points (8.06 percentage points). Statistically, all improvements in profitability measures are significant at the 1 percent level. Moreover, Table 31 reveals that the mean (median) real sales of equitized firms increase by 21.77 percentage points (0.45 percentage points) after equitization. The

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<sup>9</sup> For a detailed description of the DID method and a comparison between the DID and the pre-post comparison method, see Wooldridge (2002)

increase in the median real sales is statistically significant at the 10 percent level. Finally, as expected results of the DID method show that the leverage of equitized firms significantly decreases (at the 5 percent level) following equitization. Specifically, the mean (median) leverage is reduced by 15.19 percentage points (12.43 percentage points) after equitization.

Similarly, results from the DID approach for the group of SOEs equitized in the year 2001, presented in Table 32, indicate that profitability measures of equitized firms have statistically significant gains at the 1 percent level, after adjusting for other effects, following equitization. Indeed, the mean (median) improvements in IBTA and IBTS are 7.78 percentage points (5.95 percentage points) and 4.04 percentage points (1.49 percentage points), respectively. In addition, the median IBTE increases by 6.14 percentage points although the mean decreases by 7.83 percentage points following equitization. Finally, in line with expectation it is found that the median real sales of the equitized firms increases while the median leverage decreases after equitization. However, these performance changes are statistically insignificant.

In conclusion, the results of the DID approach are mostly consistent with the results of the pre-post comparison method reported in Section 6. Indeed, it is evidenced that the equitization has a significantly positive effect on profitability measures and real sales of equitized firms after equitization. However, regarding the leverage measure results from the employed methods are somewhat different. Specifically, the results of the pre-post comparison method show a statistically insignificant decrease in median leverage while those of the DID method show a significant decrease (for the first group of equitized firms).

## **9. Summary and conclusions**

This study examines the effects of equitization, the Vietnamese version of privatization, on firm performance in Vietnam by using data of 147 equitized firms and 92 SOEs. Applying the methodology of Megginson, Nash and Randenborgh (1994), the study documents a significant increase in profitability, operating efficiency, real sales, and employee income of firms following equitization. Moreover, we find an increase in employment and a decrease in leverage for the equitized firms following equitization, although the increases are not statistically significant.

Regarding the sources of the performance improvements of firms after equitization, the empirical findings derived from cross-sectional regression indicate that the size of firms (measured by log of pre-equitization real sales average) has significant negative effects on

Table 31: Summary of results from the DID test for the group of SOEs equitized in the year of 2000

Measures	Control group (SOEs)			Treatment group (equitized firms)			Mean (median) change between two groups	Z-Statistic for difference in medians between two groups		
	N*	Mean (median) for the year of 1999	Mean (median) for the year of 2001	Mean (median) change	N*	Mean (median) pre-equitization (1999)			Mean (median) post-equitization (2001)	Mean (median) change
<b>Profitability</b>										
IBTA	66	0.0837 (0.0465)	0.0674 (0.0317)	-0.0163 (-0.0148)	48	0.0855 (0.0678)	0.1063 (0.0921)	0.0208 (0.0243)	0.0371 (0.0391)	3.79 <sup>a</sup>
IBTS	67	0.0906 (0.0280)	0.0455 (0.0204)	-0.0451 (-0.0076)	69	0.0550 (0.0373)	0.0665 (0.0536)	0.0114 (0.0163)	0.0565 (0.0239)	4.41 <sup>a</sup>
IBTE	66	0.1753 (0.1178)	0.1397 (0.0839)	-0.0356 (-0.0339)	69	0.2117 (0.1790)	0.2640 (0.2257)	0.0523 (0.0467)	0.0879 (0.0806)	3.66 <sup>a</sup>
<b>Real sales (million VND)</b>	67	0.9532 (0.9026)	1.0382 (1.0231)	0.0850 (0.1205)	69	0.9904 (1.0000)	1.2931 (1.1250)	0.3027 (0.1250)	0.2177 (0.0045)	1.68 <sup>c</sup>
<b>Leverage</b> (Total debts/total assets)	66	0.5256 (0.5224)	0.6497 (0.5829)	0.1241 (0.0605)	48	0.5543 (0.5701)	0.5265 (0.5063)	-0.0278 (-0.0638)	-0.1519 (-0.1243)	2.09 <sup>b</sup>

<sup>a, b, c</sup>: Significant at the 1%, 5% and 10% levels respectively

\* N: Number of observations

Table 32: Summary of results from the DID test for the group of SOEs equitized in the year of 2001

Measures	Control group (SOEs)			Treatment group (equitized firms)			Mean (median) change between two groups	Z-Statistic for difference in medians between two groups		
	N*	Mean (median) for the year of 2000	Mean (median) for the year of 2002	Mean (median) change	N*	Mean (median) pre-equitization (2000)			Mean (median) post-equitization (2002)	Mean (median) change
<b>Profitability</b>										
IBTA	62	0.1149 (0.0589)	0.0671 (0.0312)	-0.0478 (-0.0277)	35	0.0803 (0.0732)	0.1103 (0.1050)	0.0300 (0.0318)	0.0778 (0.0595)	3.71 <sup>a</sup>
IBTS	68	0.0576 (0.0276)	0.0425 (0.0199)	-0.0151 (-0.0077)	40	0.0594 (0.0516)	0.0847 (0.0588)	0.0253 (0.0072)	0.0404 (0.0149)	3.79 <sup>a</sup>
IBTE	60	0.2382 (0.1029)	0.3649 (0.0785)	0.1267 (-0.0244)	40	0.1812 (0.1761)	0.2296 (0.2131)	0.0484 (0.0370)	-0.0783 (0.0614)	2.59 <sup>a</sup>
<b>Real sales (million VND)</b>	68	0.8825 (0.8757)	1.2802 (1.1103)	0.3977 (0.2346)	40	1.0074 (1.0000)	1.2657 (1.2476)	0.2583 (0.2476)	-0.1394 (0.0130)	0.52
<b>Leverage (Total debts/total assets)</b>	61	0.6410 (0.5290)	0.5625 (0.5450)	-0.0785 (0.0160)	35	0.5553 (0.6051)	0.5693 (0.5927)	0.0140 (-0.0124)	0.0925 (-0.0284)	0.33

<sup>a</sup> Significant at the 1% level

changes in the profitability and efficiency measures. In addition, the results reveal that ownership and corporate governance are also determinants of the performance improvements of firms after equitization. Specifically, the findings show a significant positive relationship between state ownership and the changes in real sales and sales efficiency, but a significant negative relationship between state ownership and the improvement in income efficiency. Similarly, the regression analyses point out that firms which have a chairperson of the board of directors who represents the state experience a significantly lower increase in IBTA and income efficiency compared to firms having a chairperson of the board of directors from the private sector. Moreover, the results show a significant negative effect of stock-market listing on profitability changes. However, being listed has a significant positive impact on real sales and sales efficiency improvements. Finally, it is found that firms located in HCMC have a greater improvement in IBTS compared with firms located in the other part of Vietnam.

Based on the empirical results obtained from the pre-post comparison, it can be concluded that equitization in Vietnam has positive effects on firm performance. However, this method suffers from the shortcoming that it ignores the concurrent impact of other determinants when measuring the impact of equitization on firm performance. To overcome this shortcoming, the DID method is employed in this study. The outcomes of the DID analysis confirm that the performance improvements of equitized firms are indeed associated with equitization.

Although the research has broadened our understanding of the process of equitization, especially the impact of equitization on firm performance, it still has some limitations which should be addressed in further research.

First, a limitation is concerned with weaknesses in the data that are used to measure the impact of equitization on firm performance. As described in Section 5, some public officers who have worked for Local SOEs Reform Boards and researchers of the Ho Chi Minh City (HCMC) Institute for Economic Research were selected to serve as interviewers of the survey. The selection of such interviewers may cause biases in the data. In addition, the sample firms are mainly located in the south of Vietnam. These characteristics of the sample may detract from the validity and reliability of the results.

Second, this study measures the effects of equitization on firm performance by using the pre-post comparison method and the DID technique with equitized firms and SOEs serving as treatment and control group, respectively. Although the empirical findings obtained from these methods consistently indicate that equitization has positive effects on firm performance, further study could focus on comparing the performance of equitized firms to the performance

of fully private firms in order to provide further evidence on the impact of equitization on firm performance in Vietnam.

Third, the literature has documented that ownership structure and corporate governance have significant effects on the performance of privatized firms. This study examines the impact of state ownership, the background of the chairperson of the board of directors, and the background of the chairperson of the board of supervisors, on performance improvements of firms following equitization. Apart from these factors, other aspects of ownership and corporate governance, such as different types of inside ownership (inside workers and inside managers), ownership concentration, involvements of foreign investors in equitized firms, and management turnover could affect firm performance in Vietnam. These issues would be a fertile area for further research.

Finally, the study reports that performance improvements of equitised firms are associated with equitisation. However, this finding could suffer from shortcomings of the methodologies used. Specifically, the process of equitisation may be endogenous in that only “good” firms are selected to be equitised. This would, however, not seem plausible in light of the finding that equitised firms, which we now would have to take to be “good” firms, systematically succeed in still improving their performance. This endogenous bias might, however, affect the DID analysis, where the difference between the treatment and control group would not be firm ownership, as we presume, but being “good” (equitised) or “bad” firms (SOEs that are not selected to be equitised). Further research would be needed to correct for this possible bias.

Although the rather long list of limitations might suggest otherwise, we still think that our positive results concerning the impact of equitization on firm performance are robust enough to justify a policy recommendation to the government of Vietnam to continue and even speed-up the program of equitization of state-owned enterprises.

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## Appendix A: A form of questionnaire used for equitized firms

Name of Firm: .....

Headquarter address: .....

Telephone: ..... Fax: .....

Interviewee: .....

Position of interviewee: .....

Interviewee's telephone: .....

Interviewer: .....

Date of interview: .....

Questionnaire code: .....

**1. The equitisation process**

1.1. The name of the firm before equitisation:

.....

And when was it originally established? .....

1.2. Which of the following categories best describes the firm before equitisation?

- 1. Centrally-controlled SOE
- 2. Locally-controlled SOE
- 3. Member of a state corporation or a large SOE
- 4. Other: .....

1.3. What is the main business of firm?

- 1. Foods processing
- 2. Mechanical and electrical engineering
- 3. Chemicals and pharmaceuticals
- 4. Textile and sewing industry
- 5. Service and trade
- 6. Utility industry (water and electricity supply, telecommunication)
- 7. Other: .....

1.4. Where is the headquarters of the firm?

- 1. The Mekong River Delta
- 2. Ho Chi Minh City
- 3. The North part of Vietnam
- 4. The Central part of Vietnam

1.5. Duration of equitisation process: ..... months

1.6. The date on which the firm started operation as an equitised firm: .....

1.7. Charter capital (registered capital): .....

1.8. What are the main reasons that you decided to equitize your firm (give a scale from 1 to 5)?

Reasons	Scale				
	Not important			Very important	
1. Tax advantages	1	2	3	4	5
2. Improving firm performance	1	2	3	4	5
3. Mobilizing more capital with low cost	1	2	3	4	5
4. Obligated from the government	1	2	3	4	5
5. Other: .....	1	2	3	4	5
.....					

1.9. Do you think that the process of equitisation has been slow?

- 1. Yes
- 2. No

1.10. If yes, what are the main constraints and problems often encountered in the equitisation process of Vietnamese enterprises that you think it is the causes of the slowness in the equitisation process? (Please indicate the range of importance from given answers)

Constraints and problems	Scale				
	Not important		Very important		
1. Method of assets valuation (regulated by the State)	1	2	3	4	5
2. Legal constraints	1	2	3	4	5
3. Administration constraints (complicated procedures, many steps in the equitisation process)	1	2	3	4	5
4. Lack of equitisation experts	1	2	3	4	5
5. Unwillingness of the SOEs' directors	1	2	3	4	5
6. Welfare of employees after equitisation	1	2	3	4	5
7. Debt settlement	1	2	3	4	5
8. Others (please specify): .....	1	2	3	4	5
.....					

## 2. Corporate governance

2.1. What is the ownership structure of the firm at the first shares issue?

1. State: ..... %

Insiders:

2. Managers: ..... %

3. Workers: ..... %

Outsiders:

4. Domestic individual investors: ..... %

5. Domestic institutional investors: ..... %

6. Foreign investors: ..... %

7. Others (explain .....): ..... %

2.2. Up to now, have the ownership structure changed?

1. Yes

2. No

3. N/A

2.3. If yes, what is ownership structure now?

1. The state: ..... %

Insiders:

2. Managers: ..... %

3. Workers: ..... %

Outsiders:

4. Domestic individual investors: ..... %

5. Domestic institutional investors: ..... %

6. Foreign investors: ..... %

7. Others (explain .....): ..... %

2.4. What is the composition of the board of management (directors)?

1. No. of persons representing the state: .....

2. No. of persons representing insiders: .....

3. No. of persons representing outside shareholders: .....

Total No. of Directors: .....

2.5. Whom does the chairperson of the board represent for?

1. The State
2. Insiders
3. Outsiders

2.6. What is the composition of the board of supervisors?

1. No. of persons representing insiders: .....
2. No. of persons representing outsiders: .....
- Total No. of supervisors: .....

2.7. Whom does the chairperson of the board represent for?

1. Insiders
2. Outsiders

2.8. Whom does the general director (CEO) represent for?

1. The state
2. Insiders
3. Outsiders

### 3. Employment

3.1. How many full-time employees were in this enterprise three years before and after equitisation?

	Pre-equitisation			Post-equitisation				
	-3	-2	-1	+1	+2	+3	+4	+5
Total employees								

3.2. Have you fired any employees since equitisation?

1. Yes
2. No

3.3. If yes, how many? .....  
and what kinds of employee are fired?

1. Trained employees
2. Untrained employees
3. Both

3.4. Have you hired any new full-time employees since equitisation?

1. Yes
2. No

3.5. If yes, how many? .....  
and what kinds of employee are hired?

1. Trained employees
2. Untrained employees
3. Both

#### 4. Finance

Please complete the following table:

In VND million

	Pre-equitisation			Post-equitisation				
	-3	-2	-1	+1	+2	+3	+4	+5
Sales Revenues								
Total production costs (Cost of goods sold)								
Wage costs								
Income before tax								
Net income								
<b>Total assets</b>								
- Total current assets								
- Total fixed assets								
<b>Total liabilities and equity</b>								
<i>Liabilities</i>								
- Short term debts								
- Long term debts								
- Other liabilities								
<i>Equity</i>								



## Appendix B: A form of questionnaire used for SOEs

Name of Firm: .....  
Headquarter address: .....  
Telephone: ..... Fax: .....  
Interviewee: .....  
Position of interviewee: .....  
Interviewee's telephone: .....  
Interviewer: .....  
Date of interview: .....  
Questionnaire code: .....

1. What is the main business of the firm?

1. Foods processing
2. Mechanical and electrical engineering
3. Chemicals and pharmaceuticals
4. Textile and sewing industry
5. Service and trade
6. Utility industry (water and electricity supply, telecommunication)
7. Other: .....

2. Where is the headquarters of the firm?

1. The Mekong River Delta
2. Ho Chi Minh City
3. The North part of Vietnam
4. The Central part of Vietnam

3. How many full-time employees have been in the firm?

	1998	1999	2000	2001	2002	2003
Total employees						

4. Please complete the following table

In VND million

	1998	1999	2000	2001	2002	2003
Net sales Revenues						
Total production costs (cost of goods sold)						
Wage costs						
Income before Tax						
Net Income						
<b>Total assets</b>						
Total Current Assets						
Total Fixed Assets						
<b>Total Liabilities and Equity</b>						
Total Liabilities						
Short Term Debts						
Long Term Debts						
Other Liabilities						
<i>Equity</i>						