

PRIVATIZATION A SOLUTION TO THE DEVELOPMENT OF THE PRIVATE SECTOR IN HOCHIMINH CITY

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This research is to investigate impacts of privatization on the development of privatized state-owned enterprises (abbreviated as SOEs) as part of the private sector. Such development is measured by the pre- and post-privatization business performance of 63 HCMC-based SOEs, half of which were privatized in 2004. Results pointed out a substantial rise in profit, sale revenue, workforce, laborer's income, and performance of surveyed enterprises. The difference-in-differences (DID) estimator is employed to compare SOEs and privatized ones in terms of their performance in the same period; and findings illuminated that privatized SOEs perform more efficiently. Besides, regression analyses also show that factors affecting the performance include company size, state ownership, and type of business. The research also reaffirms that the governmental decision on privatization is rational, and simultaneously manifests the impact of ownership modes on the business performance. Eventually, the research results can be consulted by business administrators and policy-makers.

Keywords: privatization, SOEs, business performance, private sector

1. Introduction

As of the VCP 6th Congress in 1986, Vietnam's government has expedited the reform and restructuring for the sake of SOEs with a view to promoting the leading role of SOEs in the national economy. Since then, the privatization of SOEs is deemed as an important factor in the Vietnamese economy in its transition from a centrally-planned to a market-oriented mechanism. The reduction in the state ownership in SOEs is a strategic remedy, that is, it sheds light on extant weaknesses and drawbacks of the subsidy-based mechanism, facilitates the mobilization of capital from the private sector, encourages a proactive management and dynamic for development, and improves the business performance.

Since open-door policies came into being, Vietnam's economy has gained a lot of striking socio-economic achievements which are internationally acknowledged. All sectors grew healthily, especially the private one with the participation of privatized SOEs. Yet, the point is whether the privatization or the overall growth of national economy in the context of international integration accounts for the development of privatized SOEs. To untie this knot, the research is to compare the business performance of SOEs and privatized SOEs, and then investigate the pre- and post-privatization growth of privatized SOEs and influential factors.

2. Literature review

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Many scholars in the world have conducted researches on impacts of privatization on the business performance by comparing the pre- and post-privatization performance and financial outcome of enterprises. Comprehensively, almost researches have proven that the privatization substantially improved the financial outcome and business performance. For example, it is after privatization that income, sale revenue, labor productivity and investments reached a high; and the financial leverage sharply reduced. Yet, impacts of privatization on the rise in employments are not clear-cut. Actually, Boubakri and Cosset (1998) pointed out that a considerable number of jobs were created after the privatization, while Megginson et al. (1994), D'Souza and Megginson (1999), and D'Souza et al. (2001) found that only minute changes in employments took place after privatization. La Porta and Lopez de Silanes (1999) and Harper (2002) recognized a substantial fall in employments after privatization.

3. Hypotheses and research model

Based on theories on privatization and previous relevant findings, the research is to test the following hypotheses:

H_1 : The performance of privatized SOEs is higher than that of SOEs in the same period.

H_2 : The post-privatization performance is higher than the pre-privatization performance.

H_3 : The company size, the existence of state representative in the director board, the ratio of state-owned equity, and the industry have significant impacts on the business performance.

Research variables comprise:

- The dependent variable is the business performance which is measured by return on asset (ROA), return on equity (ROE), profit margin (PM), sale revenue (SR), workforce (WF), and laborer's average income (LI).

- The controlled variables that influence the performance of SOEs are set forth in Table 1.

The linear regression model that reflects impacts of independent variables on dependent ones will be described as follows:

$$Y = \beta_0 + \beta_1 \text{SIZE} + \beta_2 \text{OWNERSHIP} + \beta_3 \text{DIRECTOR} + \beta_4 \text{IND} + \varepsilon$$

Where, Y will respectively represent the return on asset (ROA), the return on equity (ROE), the

profit margin (PM), the sale revenue (SR), the workforce (WF), and the laborer's average income (LI).

Table 1: Definition of controlled variables

Variables	Signs	Descriptions
Company size	SIZE	It is the logarithm of average sale revenue.
Ratio of state – owned equity	OWNER-SHIP	It represents the ratio of state-owned equity at the point of privatization.
Director board	DIRECTOR	It is a dummy variable and equal to 1 if the director represents the state holdings, and zero otherwise.
Industry	IND	It is a dummy variable and equal to 1 in case of trading/service companies, and zero otherwise

4. Research methodology

- DID technique was firstly employed for policy researches by Ashenfelter and Card in 1985 and has been well-known since then. The basic premise of DID is to examine a certain feature/criterion of two group of samples at two different periods of time. That is, a group is exposed to changes induced by a particular treatment/event in the second period but not the first one; and another group will not in both periods. This is the first difference between two groups. The second difference will be worked out when conducting this treatment/event. Then, these two differences will be taken into account. To be more specific, in this research, the two samples include SOEs and privatized SOEs in HCMC which will be examined at two different point of time (i.e. before and after privatization). The treatment/event here will be superseded with privatization.

- The Wilcoxon paired signed-rank test is employed once an observed variable is influenced and changed by exogenous factors. Accordingly, the variable is divided into two samples, viz. before being influenced and after being influenced. This is a non-parametric test, and thus samples need not abide by the normal distribution. Yet there is a significant assumption that only one factor affects the sample at a certain point of time. In case the turbulence takes place, this test will be re-

jected. This test is utilized to define whether or not there is a difference in the pre- and post-privatization performance of SOEs (i.e. Hypothesis 2). To remove effects of inflation when carrying out the test, the inflation rate is subtracted from values of relevant variables (profit, sale revenue, and laborer's income). Variables expressed in percentages do not need such subtraction. The Wilcoxon paired signed-rank test is conducted as per following steps:

Step 1: Setting the null hypothesis (H_0): the median of two samples is equivalent.

$$H_0: \text{Median}_{\text{after influenced}} = \text{Median}_{\text{before influenced}}$$

$$H_a: \text{Median}_{\text{after influenced}} > \text{Median}_{\text{before influenced}}$$

Step 2: The significant level is set at 5% ($\alpha = 0,05$).

Step 3: Setting criteria to nullify H_0 : p-value $\leq 0,05$.

Step 4: Calculation of p-value. In case of one-side test: p-value = Asymp. Sig. (2-tailed) / 2

In case of two-side test: p-value = Asymp. Sig. (2-tailed)

Step 5: Comparing the p-value with the set criterion in step 3

Step 6: Conclusion

With p-value $\leq 0,05$, H_0 is nullified; or in other words, the median of two samples are not equivalent.

Another non-parametric test is the Mann-Whitney test which is employed to compare two data groups of independent samples. It can be utilized in lieu of the t-test when normal assumptions or the homogeneity of variances are unattainable. Like other non-parametric tests, Mann-Whitney test uses ranks of samples so as to run statistical calculations. This test is employed to define whether or not there is a difference in the pre- and post-privatization performance of SOEs; and thereby draw conclusions that the high performance of privatized SOEs is not due to the overall developmental trend of the market. The Mann-Whitney test is conducted as follows:

Step 1: Setting the null hypothesis (H_0): the median of two samples is equivalent.

$$H_0: \text{Median}_{\text{privatized SOEs}} = \text{Median}_{\text{SOEs}}$$

$$H_a: \text{Median}_{\text{privatized SOEs}} > \text{Median}_{\text{SOEs}}$$

Step 2: The significant level is set at 5% ($\alpha = 0,05$)

Step 3: Setting criteria to nullify H_0 : p-value $\leq 0,05$

Step 4: Calculation of p-value

In case of one-side test: p-value = Asymp. Sig. (2-tailed) / 2

In case of two-side test: p-value = Asymp. Sig. (2-tailed)

Step 5: Comparing the p-value with the set criterion in step 3

Step 6: Conclusion

With p-value $\leq 0,05$, H_0 is nullified; or in other words, the median of two samples are not equivalent.

5. Data collation

Numerical data are collated from financial statements submitted to the HCMC Tax Bureau in the period 2001-2007 when there was not impact of the global financial crisis on the business performance. The sample size is 63 HCMC-based SOEs and 31 of which were privatized in 2004.

6. Research results

The research results are set forth in Tables 2, 3 and 4 below.

Table 3: Wilcoxon paired signed-rank test for indicators of business performance

Indicator	Sign of values	N	Mean ranks
$\text{ROA}_{\text{post-privatization}} - \text{ROA}_{\text{pre-privatization}}$	-	3	6.67
	+	28	17.00
	Equal	0	
$\text{ROE}_{\text{post-privatization}} - \text{ROE}_{\text{pre-privatization}}$	-	8	12.00
	+	23	17.39
	Equal	0	
$\text{PM}_{\text{post-privatization}} - \text{PM}_{\text{pre-privatization}}$	-	5	11.60
	+	26	16.85
	Equal	0	
	+	30	16.10
	Equal	0	
	+	28	17.29
$\text{SR}_{\text{post-privatization}} - \text{SR}_{\text{pre-privatization}}$	Equal	0	
	-	3	14.67
	+	28	16.14
$\text{WF}_{\text{post-privatization}} - \text{WF}_{\text{pre-privatization}}$	Equal	0	
	-	12	13.62
	+	19	17.50
$\text{LI}_{\text{post-privatization}} - \text{LI}_{\text{pre-privatization}}$	Equal	0	
	-	7	13.71
	+	24	16.67
	Equal	0	
	+	14	13.21
Equal	0		

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Table 2: Descriptive stat for indicators of business performance

Indicator	Unit	Before privatization		After privatization		Asymp. Sig. (2-tailed)
		Median	Standard deviation	Median	Standard deviation	
ROA	%	4.94	5.09	20.14	36.29	0.000
ROE	%	27.80	62.04	33.01	28.06	0.003
PM	%	5.97	5.86	12.94	13.37	0.000
SR	Million VND	269,394	439,966	445,062	925,055	0.000
WF	Person	136	121	155	158	0.098
LI	Million VND	2.64	1.13	2.98	1.18	0.000

In sum, in order to answer to the Hypothesis 2, the Wilcoxon paired signed-rank test was run and produced a statistically significant p-value. Therefore, it is possible to conclude that the privatization has profound impacts on the business performance. The results also point out the difference in the pre- and post-privatization performance of SOEs.

In order to test the hypothesis 1, the Mann-Whitney test is employed with a view to evaluating whether the difference in the performance of SOEs and privatized ones is statistically significant or not. However, to quantify the difference, it is needed to re-run the Wilcoxon paired signed-rank test for the pre- and post-privatization performance of SOEs. The value when the two differences are subtracted from each other represents the difference generated by the privatization process.

Due to the fact that surveyed enterprises are all based in HCMC and operate in the same period of time, factors of time and macroeconomic administration affecting the performance of two groups of enterprises have been left out. The results are set forth in Table 4 and 5.

Table 4: Differences in the performance of SOEs and privatized ones

	ROA	ROE	PM	SR	WF	LI
Asymp. Sig. (2-tailed)	0,00	0,00	0,06	0,91	0,00	0,00

Table 5: Mann-Whitney test for the differences in rank of SOEs and privatized ones

Indi-cators	Types of en-terprises	N	Mean ranks	Total mean ranks
ROA	SOEs	192	163.96	31,481
	Privatized SOEs	186	215.86	40,150
	Total	378		
ROE	SOEs	192	154.49	29,663
	Privatized SOEs	186	225.63	41,968
	Total	378		
PM	SOEs	192	179.07	34,381
	Privatized SOEs	186	200.27	37,250
	Total	378		
SR	SOEs	192	188.91	36,271
	Privatized SOEs	186	190.11	35,360
	Total	378		
WF	SOEs	192	214.81	41,244
	Privatized SOEs	186	163.37	30,387
	Total	378		
LI	SOEs	192	162.33	31,167.5
	Privatized SOEs	186	217.55	40,463.5
	Total	378		

Table 6: Summation of differences in the pre- and post-privatization performance

	Privatized SOEs			SOEs		
	Before privatization	After privatization	Differences	Before privatization	After privatization	Differences
ROA	4.95	20.14	15.19	6.52	7.29	0.77
ROE	27.80	33.01	5.21	9.23	12.29	3.06
PM	5.97	12.94	6.97	6.30	8.51	2.21
SR	269,394	445,062	175,667	325,118	285,850	-39,268
WF	135.7	154.6	18.9	220.8	226.3	5.5
LI	2.6	2.98	0.38	1.97	2.42	0.45

By means of the above-mentioned results, it is possible to conclude that:

Firstly, the performance of privatized SOEs is higher than that of SOEs. Based on the difference, the privatization process, if macroeconomic factors are excluded, has generated a rise of 14.43% for ROA, 2.16% for ROE, and 4.76% for the profit margin.

Secondly, for privatized SOEs, the sale revenue also increases but does not carry any statistical significance; the workforce increases 13.41 persons and has a statistical significance; and the laborer's income falls by VND0.07 million as compared to that of SOEs.

Table 7: P-values and sign of beta coefficients in regression equations

Ob-served variables	ROA	ROE	PM	SR	WF	LI
SIZE	0.06	0.8	0.54	0.01	0.44	0.45
	-	-	-	+	-	-
OWNER-SHIP	0.14	0.18	0.49	0.70	0.68	0.13
	-	-	-	+	-	+
DIREC-TOR	0.97	0.28	0.96	0.64	0.95	0.34
	+	+	+	+	-	-
IND	0.54	0.45	0.31	0.19	0.69	0.01
	-	+	+	-	-	+

The effect of company size on ROA and the sale revenue is statistically significant at 1% and 5% respectively. The influence of OWNERSHIP on ROA is statistically significant with the negative coefficient; or in other words, the larger the state

ownership, the smaller the ROA. In addition, the variable DIRECTOR does not have any statistically significant relationship with the business performance; that is, the effect of the state representative in privatized SOEs is quite humble. Finally, the variable IDN has impacts on the laborer's income. Those who work for trading and service companies will be paid higher than those in other industries.

7. Conclusion and implications

This study has proven impacts of privatization on the performance of SOEs in Vietnam. It is apparent that the profit, sale revenue, and laborer's income are substantially improved after privatization. These findings have consolidated empirical results which surmise that an enterprise will perform more efficiently after privatization. For the case of Vietnam SOEs, although state representatives and in-company staff still hold the majority of stocks and shares after privatization, their business performance has been dramatically improved. Whilst, some other research has shown that the substantial improvement in the business performance is mostly related to the majority holding of out-companies shareholders (see Earle & Estrin, 1996).

The research advocates the findings by Megginson et al. (1994), Boubakri & Cosset (1998), and D'Souza & Megginson (1999), which point out that there is a rise, although quite humble and not statistically significant, in employments in privatized SOEs. Such the findings stand in the total

contrast to those by Boycko et al. (1996) which suppose that the positive impact of privatization on the business performance primarily derives from the efficient and rational employment and the avoidance of redundancy. The rise in employment in Vietnam's privatized SOEs may be due to the expansion of business scope which is reflected on the increase in sale revenue and the substantial rise in laborer's income. Thus, it is possible to affirm that the privatization has dramatically improved the performance of SOEs, which dates back to the positive impacts of private ownership in SOEs.

Besides, the regression results figure out a negative impact of the company size on ROA; and thus support the hypothesis, that is, small-size SOEs will be more flexible in post-privatization restructuring with a view to generating more return on assets. Yet, the company size has a positive effect on the sale revenue of Vietnam's privatized SOEs and it is the most important factor affecting the performance of privatized SOEs. Lastly, the larger the state holdings, the smaller the ROA.

Eventually, the privatization of SOEs is an inevitable process and cannot be detached from the development of the private sector in Vietnam economy. This process has substantially improved the performance of privatized SOEs. Yet, it is suggested that the state holdings should be gradually

deduced, or the government had better not invest in small and medium-sized enterprises or those not belonging to key industries. Furthermore, in order to promote the sustainable economic growth on the basis of improvements in business performance, the government and competent authorities should expedite the privatization process which has become sluggish thus far■

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