Equitisation and stock-market development

Loc, T.D.

Part IV:

Conclusions and Recommendations

Chapter 10

Conclusions and Recommendations for Further Research

10.1. Introduction

This dissertation focuses on two important issues in Vietnam, namely the process of equitisation and stock-market development. This chapter aims at summarizing the main findings of the study and indicating some limitations of the thesis that could lead to interesting topics for further research. The rest of this chapter is structured as follows. Section 10.2 draws conclusions on the basis of the findings of the study. Section 10.3 proposes some topics for further research based on the limitations of the dissertation's results.

10.2. Conclusions

10.2.1. The process of equitisation in Vietnam

As a part of the State-Owned Enterprise Reform Programme, in the context of general economic reform, the Vietnamese government launched an equitisation programme in 1992. The programme is divided into two stages, a pilot stage (from 1992 to 1996) and an expansion stage from 1996 onwards. It is observed that most SOEs selected for equitisation are small and medium-sized. "Strategic" SOEs have not been included in the programme. Remarkably, the state and insiders (employees and managers) hold a substantial portion of the shares in the equitised firms. This characteristic makes the Vietnamese equitisation different from privatisation in the usual western sense.

Regarding the impact of equitisation on firm performance in Vietnam, it is found that profitability (measured by income before tax on assets, income before tax on sales, and income before tax on equity), efficiency (measured by real sales efficiency and income efficiency), real sales, and employee income significantly increase following equitization. These findings are in line with growing empirical evidence that firms become more profitable and efficient following privatisation. In the case of Vietnam, the performance improvement is, however, remarkable since the equitisation process is such that the state retains a considerable portion of the shares of equitised firms and employees of the firms acquire a substantial portion of the shares, whereas in the literature the performance improvement of privatisation often is ascribed to control by outside shareholders (see, *e.g.*, Earle and Estrin, 1996).

Furthermore, consistent with the results of Megginson et al. (1994), Boubakri & Cosset (1998), and D'Souza & Megginson (1999), the study reports an increase in employment for the equitised firms after equitisation, although the increase is not statistically significant. This finding is at odds with the model of Boycko *et al.* (1996) where the positive effect of privatisation on firm performance hinges on the redress of excess labour spending. An explanation for the absence of a negative employment effect of equitisation in Vietnam may be that employees hold substantial portions of the shares of equitised firms and consequently are able to influence firms' decision-making in the sphere of employment and wages. It is remarkable, however, that the employment and employee-income effects of equitisation do not seem to lead to negative effects in terms of profitability and efficiency of equitised firms, which could indicate that the rise in employees' income after privatisation has positive incentive effects in the sense of stimulating improvement in labour productivity.

Given the empirical evidence of performance gains after equitisation, the thesis proceeds to identify the sources of these improvements. The cross-sectional regression results show significant negative effects of firm size on the change of the profitability and efficiency measures, thus supporting the hypothesis that smaller firms may be more flexible in the necessary adjustment process after privatisation. On the other hand, firm size appears to have a significant positive impact on employment change of equitised firms in the Vietnamese case. Next, ownership and corporate governance are uncovered as key determinants of the performance improvements of firms after equitisation. Indeed, the empirical results document a significant negative relationship between state ownership and the change in before-tax income on sales, and between state ownership and the change in income efficiency. Similarly, the regression analyses reveal that firms that have a chairperson of the board of directors who represents the state experience a significantly lower increase in real sales, sales efficiency, income efficiency, and employment compared to firms having a chairperson of the board of directors from the private sector. Contrary to the predictions, the results show a significant negative effect of stock-market listing on profitability changes and income efficiency improvement. However, being listed has a significant positive impact on real sales and sales efficiency.

Overall, the empirical results suggest that equitisation in Vietnam works in the sense of improving firm performance in terms of most performance measures. Apart from equitisation, performance improvements could, however, be attributable to other determinants of firm performance, such as macroeconomic developments. Through application of the "difference-in-difference" (DID) method the study has tried to correct for this possible bias. The outcomes of the DID analysis suggest that the performance improvements of equitised firms, especially those in terms of the profitability of the firms in question, after having been corrected for the impact of other determinants, still can be associated with equitisation.

10.2.2. The development of the stock market in Vietnam

Along with the equitisation programme, a stock market was opened in Vietnam on July 28, 2000. With great government effort the market has grown in terms of the number of listed companies and market capitalisation during its operation period. However, the market is still rather thin. Initially, trading sessions were conducted on Mondays, Wednesdays and Fridays, but as from March 1, 2002, the market trades daily, with two order-matching sessions. It is important to note here that foreign investors (institutions and individuals) have been allowed to trade on the market through securities companies. However, their ownership (aggregate ownership of all foreign investors) in a listed firm is limited, with a maximum of 30 percent of the firm's equity.

The second part of the thesis is mainly devoted to investigating weak-form market efficiency for the Vietnamese stock market. The empirical findings derived from the autocorrelation tests for the observed returns conclusively reject the null hypothesis of the existence of a random walk for the market index and four out of the five selected individual stocks. When the corrected returns for thin trading are used, the random walk hypothesis is still rejected for the market index and four out of the five selected individual stocks, but the extent of rejection is less pronounced. Moreover, the results obtained from the runs test fail to support the null hypothesis of the existence of a random walk for both daily and weekly observed returns of the market index and all selected individual stocks (except weekly returns for the Hai Phong Paper Joint-Stock Company). However, when the corrected returns are used, the empirical results given by this test cannot reject the null hypothesis for the daily returns of the Hai Phong Paper Joint-Stock Company and the Long An Food

Processing Export Company and weekly returns for the Refrigeration Electrical Engineering Company and the Long An Food Processing Export Company. Furthermorer, the Lo and MacKinley variance-ratio tests under both homoscedasticity and heteroscedasticity assumptions for both observed and corrected returns provide empirical evidence to reject the random walk hypothesis for the market index and all selected individual stocks. In general, it can be concluded that the Vietnamese stock market is inefficient in the weak form.

Given the empirical evidence that the stock market is weak-form inefficient, it is believed that anomalies in stock returns could be existent in the market. Therefore, the last part of the dissertation examines whether the day-of-the-week and overreaction effects, two important patterns of such anomalies, are present in the Vietnamese stock market. Generally, the study finds that a day-of-the-week effect is existent in the market. Specifically, a negative Tuesday effect on market returns is observed in the GARCH (1,1) model. Moreover, the results derived from the GARCH (1,1) with day-of-the week dummy variables to be added in the conditional variance equation indicate that negative Tuesday and Thursday effects are present in the market. However, the empirical results reject the hypothesis of a day-of-the-week effect on stock market volatility for the Vietnamese stock market.

Finally, it is found that short-run overreaction is not present in the Vietnamese stock market. Conversely, it is observed that stock prices seem to show a delayed reaction to information. The finding is in contrast with most empirical results that have been documented in the literature.

10.3. Limitations of the dissertation and suggestions for further research

Although this thesis has broadened our understanding of the process of equitisation, especially the impact of equitisation on firm performance, and of stock-market development in Vietnam, 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 equitisation on firm performance. As described in Chapter 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 fairly small and mainly located in the south of Vietnam. These characteristics of the sample may detract from the validity and reliability of the results.

Second, this dissertation measures the effects of equitisation on firm performance by using the pre-post comparison method and the DID technique with equitised firms and SOEs serving as treatment and control group, respectively. Although the empirical findings obtained from these methods consistently indicate that equitisation has positive effects on firm performance, further study could focus on comparing the performance of equitised firms to the performance of fully private firms in order to provide further evidence on the impact of equitisation on firm performance in Vietnam.

Third, 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 endogenity 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.

Fourth, the literature has documented that ownership structure and corporate governance have significant effects on the performance of privatised firms. This thesis 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 equitisation. 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 equitised firms, and management turnover could affect firm performance in Vietnam. These issues would be a fertile area for further research.

Fifth, one of the important conclusions derived from the thesis is that the Vietnamese stock market is not efficient in the weak form for the whole period from July 28, 2000 to December 31, 2004. However, the thesis does not examine the evolution of the market over time. It is usually hypothesised that the degree of stock-market inefficiency would increase through time. Therefore, further studies could also focus on this issue in order to complete the picture of the market in terms of informational efficiency. An approach which can be use to deal with the issue, employed by Emerson (1997), Zalewsha-Mitura and Hall (1999), and Rockinger and Urga (2000), is a multi-factor model with time-varying coefficients and generalised auto-regressive conditional heteroscedastic (GARCH) errors.

Sixth, to test for weak-form market efficiency of the Vietnamese stock market, the thesis employs a set of techniques and both observed and corrected returns for thin (infrequent) trading. However, the dissertation does not take into account the issue of price limits, which would cause bias inference about market efficiency. The price limits confine the observed prices within a certain range on the basis of the previous day's closing price, so they could make stock prices less volatile. Moreover, price limits may induce autocorrelation in observed stock prices where independence of successive price changes may be present if price changes are unlimited. For example, if an increase in stock prices is limited, and good news arrives at a certain day, it is not fully reflected in observed prices and stock prices would continue to increase on the following day. Studies on this issue could result in interesting and relevant results.

Seventh, the study concludes that a day-of-the-week effect (a negative Tuesday effect) is present in the Vietnamese stock market. However, the thesis has not provided any explanations for this anomaly. Therefore, investigating the source of the day-of-the-week effect could be an interesting topic for further study.

Eighth, this dissertation provides evidence to reject the null hypothesis of stock-price overreaction for the Vietnamese stock market. However, the tests on this issue have the limitation that the period studied is rather short (about three years), and the sample of observed stocks is small. This interesting topic should be reexamined in the future as the market has matured.

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