Asian Economic and Financial Review
ISSN(e): 2222-6737
ISSN(p): 2305-2147
DOI: 10.18488/journal.aefr.2019.93.353.365
Vol. 9, No. 3, 353-365

URL: www.aessweb.com

LISTING AND FIRM PERFORMANCE IN A TRANSITION ECONOMY

Nguyen Van Tan[1+]
Trinh Quoc Trung[2]

[1]*Eastern International University, Becamex Business School, Binh Duong, Vietnam*
Email: tan.nguyen@eiu.edu.vn Tel :(+84) 919 118 113
[2]*University of Economics and Law, VNU-HCM, Ho Chi Minh City, Vietnam*
Email: tqtrung@uel.edu.vn Tel: (+84) 886 457 668

(+ Corresponding author)

Article History
Received: 7 December 2018
Revised: 14 January 2019
Accepted: 18 February 2019
Published: 27 March 2019

Keywords
Listing
Equitization
Privatization
Firm performance
State-owned enterprises
IPO.

JEL Classification:
P31, G34.

ABSTRACT

This study aims to provide empirical evidence on the relationship between listing and firm performance in Vietnam. Using a data set of 48 listed and unlisted firms from Thomson Reuter's data, this research applies pre-post comparison method to evaluate the performance change for listed firms after listing. The research results show that listing on the Vietnamese stock market does not help Vietnamese firms improve their performance; in particular, there is no increase in profitability, operating efficiency and leverage. However, listing helps firms improve their sales and reduce their reinvestment rates. The research results also show that unlisted firms do not improve in firm performance if they are only traded on the Upcom stock exchange. The research results are inconsistent with relevant theories explaining why firms go public in developed countries. Vietnam's listing delay can also be explained by these results and investors should consider investing in listed firms because these firms improve their sales in the short term. The authors also suggest that the Vietnamese government create policy to encourage firms to list their stocks on the official stock market after equitization.

Contribution/ Originality: This study contributes to the existing literature by examining the relationship between listing and firm performance. This is the first study to apply the pre-post comparison method to explain the impact of listing on firm performance after privatization in a transition economy.

1. INTRODUCTION

According to Megginson and Netter (2001) privatization is known as the transferring of assets from state ownership to private ownership. Privatization is an indispensable process for states and state-owned enterprises (SOEs) because it facilitates the reallocation of the SOEs' resources through the involvement of private ownership.

China implemented "economic reform" policy in 1978 which included privatization. At the current moment, many developing countries have not fully finished their privatization or equitization programs, including China, Vietnam, Myanmar, etc. In Vietnam, the term "equitization" is used more frequently than "privatization" because equitization in Vietnam does not mean that the State sells all its assets to private investors but instead that the State must still hold a dominant share of the shares in some sectors, such as the petroleum and electricity sectors. This is done through the market economy with a multi-ownership structure embedded within socialism principles.

IPO refers to the initial public offerings. According to Ritter (1987) the initial public offering (IPO) is the first issue of stocks to public. Initial Public Offering is an activity marking an important process in the life cycle of an enterprise. Thus, the issuance of IPO has important implications in raising capital of enterprises and is one of the methods of equitization via mobilizing capital from the public for the first time. IPO is a method for firms to participate in privatization or equitization programs in several countries.

The equitization process in Vietnam is slow and can be divided into three main stages. In the first stage (from 1992-2000), 558 enterprises were equitized. In this stage, the progress was slow because there was no Law of Enterprises at that time. In the second stage (from 2001 to 2007), there were 3,021 equitized enterprises, accounting for 70.73% of the total number of equitized enterprises, especially the period within the stage from 2003-2006 (with 2,650 equitized enterprises, accounting for 62.04% of the total) which was called the "explosion" stage of equitization. It had a very high average number of equitized enterprises per year and this reflects the trend of the market economy at the time when Vietnam prepared to join the World Trade Organization (WTO).

In the third stage (from 2008 up to now), the equitization progress has been slow. The equitized enterprises from 2008 to present were mainly large SOEs and managed by different Ministries. There was a total of 4,271 equitized SOEs in September 2017 but the number of listed firms on official stock exchanges is still limited in Vietnam. This makes it difficult for enterprises to raise capital from the capital market and so the development of the Vietnamese stock market does not meet its potential and economic development goals.

Currently, Vietnam has two official stock exchanges for listed firms including the Ho Chi Minh City Stock Exchange (HSX) and the Hanoi Stock Exchange (HNX). The number of officially listed firms now includes 431 listed companies on the HSX and 378 listed companies on the HNX. Although the Vietnamese Government has many policies to encourage firms to list on official stock exchanges after IPO, the number of listed firms is still very limited.

In developed countries, firms do not delay listing like in China and Vietnam, so previous studies mainly focused on cross-listing such as studies by Karolyi (2006); Lel and Miller (2008); Abdallah and Ioannidis (2010); Abed and Abdallah (2019) on cross-listing increasing the managers' propensity to listen to the market in M&A deals by Abed and Abdallah (2017) or the empirical study of the relationship between cross-listing and operating performance by Charitou and Louca (2009). In general, previous studies have not focused on explaining why firms choose to list on official stock exchanges, especially in Vietnam. Empirical studies in Vietnam only focus on the firm performance of equitized SOEs after equitization, such as studies by Loc and Tran (2016); Tran *et al.* (2015); Hung *et al.* (2017); Nhan and Son (2017) or the IPO studies by Ly and Kha (2013); Tran *et al.* (2014). IPO and equitization studies have only focused on the first phase where firms go public, but they have not explained why firms have delayed listing in Vietnam.

These studies have not also used the pre-post comparison method to examine the relationship between listing and firm performance in Vietnam. The pre-post comparison method is used in studying firm performance improvement after privatization but has not been used in the listing assessment. In Vietnam, there are no empirical studies that explain why firms need to list on the official stock market after equitization and why investors are not interested in investing in IPO. Although the Vietnamese government has had some strict regulations and policies to encourage firms to list after equitization, the number of firms that are listed on the official stock market is still limited and the Vietnamese government should have stricter mechanisms to monitor the listing delay of equitized firms.

This study helps to solve these theoretical and practical gaps to explain reasons why businesses in Vietnam are stagnant to participate in listing through applying pre-post comparison method. This research also helps investors assess whether there is improvement on firm performance after listing or not. The research structure consists of 5 parts: (1) Introduction; (2) Empirical studies and hypothesis development; (3) Data and research methodology; (4) Empirical results and (5) Summary and concluding remarks.

2. EMPIRICAL STUDIES AND HYPOTHESIS DEVELOPMENT

All the relevant theories do not explain why businesses delay listing on te Vietnamese stock market, because this issue is only present in Vietnam, China and in some other transition countries. In other countries around the world, firms are listed right away after privatization or IPO. Those theories only explain why firms go public, including life cycle theories and market-timing theories. According to Ritter and Welch (2002) life-cycle theories explain the decision why firms go public and first proposed by Chemmanur and Fulghieri (1999). This author argues that firms choose to go public to take advantage of diversifying ownership structure. After going public, firms will have many owners who are shareholders with stricter supervision mechanism, from which firms operate more effectively than in previous period. In the early days of establishment, firms were often small with private ownership, but they choose to go public to raise capital for sustainable growth later. Maksimovic and Pichler (2001) argue that the higher the share price that one firm issues to the public, the more competitive that firm is. Public offering of shares also helps firms have many advantages, especially when they are the first ones in the industry going public.

Market - timing theories also claim that the decision to go public is only done at an appropriate time. Lucas and McDonald (1990) have the developed asymmetric information theory and explain that firms only go public when their value is assessed by the market and is not undervalued. According to Choe *et al.* (1993) firms avoid public when there are not many good firms going public at that time, because there maybe unintentional investors who will underestimate all of them in that period.

Thus, most of the theories only explain why firms go public in developing countries because there is no case of listing delay in these countries. Firms after equitization or IPO in Vietnam are often not listed immediately on Vietnamese stock market. This means that, investors in IPO have to wait a long time to receive initial abnormal returns when they invest in these stocks. In Vietnam, firms after equitization through IPO often do not immediately list but focus on their continuous operation until they find necessary to conduct listing to trade on the stock market. The above related theories may still be used to explain the listing status of firms in Vietnam, as these firms will begin to offer stocks extensively to the public once they are listed on the Vietnamese stock market.

Previous studies in China or developed countries have focused on cross-listing issues, or the reason firms are listed in another country instead of in the host country. Karolyi (2006) studied why firms seek opportunities to list abroad in developed countries to benefit from capital mobilization costs because of easy access to global investors. However, overseas listing also poses a high risk of globalization, agency risks, transparency issues and operating mechanisms. Lel and Miller (2008) also studied the cross-listing issue of firms in the United States, which shows that foreign businesses tend to list in the US to take advantages of the US stock market development. Abed and Abdallah (2019); Abdallah and Ioannidis (2010) also made the same assumptions that firms selected the US for cross-listing because of its developed financial market and because firms can easily get access to global investors and reduce their capital mobilization costs.

Charitou and Louca (2009) studied the performance of non-US firms that are listed on US stock exchanges using the American depository receipt (ADR) programs. The research results show that the capital-raising of cross-listed firms improves their operating performance after the listing, relative to a non-cross-listed matched sample of firms and relative to the pre-listing period. This study also applied the pre-post comparison research method through three year cross-listing windows to consider whether firm performance can be improved or not when cross listing in the US.

This study used performance measures from studies by Loughran and Ritter (1997) which include firm performance measures such as the operating return plus the depreciation on assets/sales and on operating return on assets/sales, capital expenditures to assets, total sales and total operating cash flows. In general, firm performance measures increased after cross listing, which suggests that cross listing in the US helps foreign firms improve their performance. Some empirical studies on equitization in Vietnam also have similar conclusions that going public

through equitization helps firms improve performance. Although equitization is not similar to listing, these events also show that when firms go public firm performance can be improved after equitization or IPO.

Loc and Tran (2016) have argued that going public through equitization can help Vietnamese SOEs improve their performance using the pre-post comparison method. Tran *et al.* (2015) have used the regression method to assess the impact of equitization on firm performance in Vietnam and their research results are consistent with the study by Loc and Tran (2016) which means that the equitized SOEs perform better after equitization, especially in term of profitability. These results are consistent with the empirical results in developed countries such as in the study of Megginson *et al.* (1994).

Hung *et al.* (2017) studied the impact of equitization on firm performance in Vietnam. The authors used a with-without comparison method, but they compared firm performance between equitized enterprises and private enterprises. The research team used the Student's T-test for differences in median and median values between the two groups. The research results show that the equitized firms have higher ROE, mainly due to the use of financial leverage than private enterprises because equitized enterprises have easy access to bank loans. There is no difference between the market to book ratio and the ROA between the two groups.

Nhan and Son (2017) studied whether equitization helps SOEs to be more efficient in terms of profitability, operating efficiency, output, employment and leverage after two years of equitization or not. The authors use five firm performance measures proposed by Megginson *et al.* (1994) and they did not use two measures, including payment and capital investment due to data limitation in Vietnam. Nhan and Son (2017) also found that there is improvement in firm performance after equitization in terms of profitability and sales efficiency.

Overall, the above studies show that firms have improved their profitability and operating efficiency after going public, including cross listing, equitization or privatization. Going public also helps firms access capital markets more easily in several cases. Relevant theories also show that when firms go public, their performance can be considerably improved. The listing issue is also an official event marking the official time to go public for firms in Vietnam, so the authors propose the following general research hypothesis as follows.

General hypothesis: Enterprises have a significant improvement in performance after equitization if they are listed on the Vietnamese stock market.

Through empirical evidence and related theories, the authors propose testable predictions in Table 1 that explain the research hypothesis presented as follows.

Table-1. Firm performance measures and testable predictions.

Variable	Proxy/ measure	Testable predictions
P(1) Profitability	Return on Equity (ROE) = Net Income/ Equity	$ROS_A > ROS_B$
	Return on Assets (ROA) = Net Income / Total assets	$ROA_A > ROA_B$
	EBITDA margin = Earnings before interest, tax, depreciation and amortization (EBITDA) divided by total revenue	$EBITDAmargin_A > EBITDAmargin_B$
P(2) Operating efficiency	Asset turnover (TAS) = Sales/ Total assets	$TAS_A > TAS_B$
P(3) Output	Sales (SAL) = Total sales	$SAL_A > SAL_B$
P(4) Reinvestment	Reinvestment rate (REIN) = dividing Retained Earnings for the fiscal year by the average Common Shareholders Equity for the same period and is expressed as percentage	$REIN_A$? $REIN_B$
P(5) Leverage	Debt to equity (LV) = Debt/equity	$LEV_A < LEV_B$

Source: Megginson *et al.* (1994).

In this study, the authors calculate the mean values of all above measures for each firm in two year listing windows (before two years and after two years of listing) and the year 0 is defined as the basic year when firms conduct listing. Selecting two year listing windows helps the authors increase the sample size in this study and data of two year listing windows can be used in the different statistical tests in this study. Each variable is denoted by A

(after listing) and B (before listing), for example ROE_A and ROE_B represent the average return on equity of one firm in the pre-post listing periods.

3. DATA AND RESEARCH METHODOLOGY

In this study, the authors mainly use the pre-post comparison method to compare the changes in the post-listing performance of firms compared to the pre-listing period. Khandker *et al.* (2009) argue that the pre-post comparison method can be used to compare the results of a program for the same participant, but consider the changes in some measures and characteristics of one participant through two pre-post windows. This method is widely used because it can be applied to national programs. Megginson *et al.* (1994) were the first researchers to propose using the pre-post comparison method to measure the impact of privatization on firm performance after privatization. Megginson *et al.* (1994) use the mean values of firm performance measures to compare changes in these values. Performance measures include (1) profitability (ROE, ROA and ROS); (2) operational efficiency (sales efficiency, net income efficiency); (3) capital investment (capital expenditures to sales, capital expenditures to assets); (4) output (real sales); (5) employment (total employment); (6) financial leverage (long-term debt to equity, debt to assets); (7) payment (dividends to sales, dividend payout). Charitou and Louca (2009) also used the pre-post comparison method to evaluate performance changes of firms participating in cross-listing in the US.

The authors use two year listing windows to calculate the mean values of firm performance measures. If we call Y_{ij} is performance measure i for firm j during the two year listing windows, then the formula can be as follows.

$$Y_{ijB} = \frac{(Y_{ij(t-2)} + Y_{ij(t-1)})}{2}$$

$$Y_{ijA} = \frac{(Y_{ij(t+1)} + Y_{ij(t+2)})}{2}$$

Where Y_{ijB} is the mean value of performance measure i for firm j before listing and Y_{ijA} is the mean value of performance measure i for firm j after listing. For example, when the authors use ROE as one performance measure for profitability, then the formula can be as follows.

$$ROA_{jB} = \frac{(ROA_{j(t-2)} + ROA_{i(t-1)})}{2}$$

$$ROA_{jA} = \frac{(ROA_{j(t+1)} + ROA_{j(t+2)})}{2}$$

Where ROA_{jB} is the mean value of ROA for firm j before listing and ROA_{jA} is the mean value of ROA for firm j after listing. The authors use year "t=0" as the listing year. After calculating all the mean values of firm performance measures, the authors can use the pre-post comparison method through testing changes in the mean values and the median values of firm performance measures and proportion of enterprises adopting changes.

For the pre-post comparison method, the authors also use different techniques for comparing changes in the mean values (t statistic), changes in the median values and proportion of enterprises adopting changes in these values (Mann–Whitney U test). The t-test is used in this study because of the sample size characteristics. For the Mann–Whitney U test, the authors performed some steps as follows:

Step 1. Set up the hypotheses and determine the level of significance.

Step 2. Select the appropriate test statistic.

$$U_1 = n_1 n_2 + \frac{n_1(n_1+1)}{2} - R_1 \text{ and } U_2 = n_1 n_2 + \frac{n_2(n_2+1)}{2} - R_2$$

Where R_1 and R_2 are the sums of the ranks in groups one and two, respectively.

Step 3. Set up the decision rule.

Step 4. Compute the test statistic.

Step 5. Conclusion.

The data used in this study includes firm performance information from the statistical results of Thomson Reuters data sets to ensure data quality and reliability. The data set includes 48 enterprises issuing initial public offerings in the period of 2005-2007 (in which 40 enterprises officially were listed on Ho Chi Minh City Stock Exchange and Hanoi Stock Exchange, and eight unlisted firms that only trade on Upcom). In particular, the authors select the majority of state-owned enterprises to equitize through the issuance of IPO.

The Upcom Stock Exchange is fully known as the unlisted public company stock exchange and it is also the name of the stock trading market for unlisted public firms monitored by Hanoi Stock Exchange. The current goods on the Upcom stock exchange are mainly stocks and convertible bonds from public companies that are not listed on the Stock Exchange.

4. EMPIRICAL RESULTS

First, the authors performed descriptive statistics describing the information of the listed and unlisted firms. For the listed firms, the number of firms participating in an equitization program or IPO in 2005, 2006 and 2007 were fifteen, eighteen and seven firms respectively. 31 firms were listed on the HOSE and only 9 firms on the HNX.

For the unlisted firms, the number of firms that went public in 2005, 2006 and 2007 were one, four and three firms respectively. The authors did not use many unlisted firms in this study due to data limitation as unlisted firms often do not report operating data before trading on the Upcom stock exchange.

Table-2. Descriptive statistics.

Variable	Obs	Mean	Std. Dev.	Min	Max
For listed firms					
AssetsEQUI	80	1,021,275	1,184,802	56,038	5,738,548
listdelay	80	1.325	1.659	0	7
For unlisted firms					
AssetsEQUI	16	323,400.1	198,594	139,102	681,745
tradedelay	16	5.25	1.770	4	9

Note: The unit of assets is in millions VND.

The descriptive statistical results from Table 2 show that the firms participating in equitization or IPO have a relatively high average of total assets, indicating that most firms conducting IPO are state-owned enterprises with large scale operations in multi-industry environments. It is noteworthy that these firms have very long listing delays, with the average listed time at 1.3 years, and there are some firms with a delay of up to seven years to list on official stock exchanges. For the unlisted firms , the average number of years traded on Upcom is also very long, averaging 5.25 years and up to 9 years for trading on Upcom. This reflects the fact that firms after equitization do not immediately list but delay listing in Vietnam, which leads to the small number of firms listed on the two official stock exchanges (HNX and HSX) and difficulties in accessing the capital of firms as well as the slow development of Vietnamese stock market today.

When applying the pre-post comparison method, the authors compared the mean values of firm performance in two year listing windows. For the unlisted firms, the authors also used this method but considered the trading year

on Upcom to consider changes in firm performance. To consider this change, the authors used a t-test to test the change in the mean and the Mann-Whitney U test (also known as the Wilcoxon rank-sum test). The change in the median value and the proportion of SOEs that change in the median value of performance measures after listing and trading was also considered. After using STATA software version 14.2, the authors had some statistical results for each case as follows:

Table-3. Performance changes of all listed firms.

Variable	N	Mean before (Median)	Mean after (Median)	Mean change (Median)	t-Test for Difference in Means (Before–After)	Mann whitney test (z) for Difference in Medians (Before–After)	Proportion of firms that changed
(P1) Profitability							
ROE	40	0.243 (0.237)	0.193 (0.167)	0.050 (0.07)	1.259 (0.211)	0.861 (0.389)	0.556
ROA	40	0.111 (0.077)	0.103 (0.082)	.008 (-0.0045)	0.345 (0.731)	0.217 (0.829)	0.514
EBITDAmargin	40	0.208 (0.14)	0.179 (0.137)	0.029 (0.003)	0.594 (0.554)	0.370 (0.711)	0.524
(P2) Operating efficiency							
Asset turnover	40	1.784 (1.055)	1.699 (1.102)	.084 (-0.047)	0.188 (0.851)	0.005 (0.996)	0.500
P(3) Output							
Sales	40	831,562.4 (551,278.8)	1,713,794 (1,040,653)	-882,231.7 (-489,377.2)	-2.4487** (0.018)	-2.396** (0.016)	0.344
P(4) Reinvestment							
Reinvestment rate	40	0.205 (0.172)	0.089 (0.075)	0.115 (0.096)	3.385*** (0.001)	2.978*** (0.003)	0.693
P(5) Leverage							
Debt/equity	40	1.118 (0.615)	0.997 (0.805)	0.120 (-0.19)	0.434 (0.665)	-0.144 (0.885)	0.491

Notes: *,*,*** denote significant levels at 10%, 5% and 1%.
The unit of sales is in millions VND and other units are in %.

Table 3 explains performance changes of all listed firms using pre-post comparison method. The results of the t-test on the difference in the average values (pre-post windows) and the Mann Whitney tests on the median differences (pre-post windows) show that listing on the two stock exchanges HOSE and HNX does not help listed companies significantly improve their performance in general, and this is reflected in the average and median values of profitability, operating efficiency and leverage after listing. However, the research results show that post-listed firms have improved their output (sales), specifically the average value of sales increased by 882,231.7 VND million (34.4% of firms adopted changes), while the median value of sales increased by 489,377.2 VND million (69.3% of firms adopted changes). The reinvestment rate of post-listed firms also decreased: its average value decreased by 0.115 and its median value decreased by 0.096.

Thus, firms tend to gain advantages after going public. Firms can actually access the capital market easily through an investor's investment and develop their market share with a new strategy and potential customers. According to Ritter and Welch (2002) although firms have certain costs in going public, there are a lot of benefits to offset these costs. However, going public through listing can only help firms improve their sales in Vietnam and this should be one issue that managers and owners should consider clearly in choosing whether to list their firm stocks on the official market or not.

The firms can expand their scale of production to access new markets after listing, so their sales can be increased while there is a tendency for them to reduce the reinvestment rate due to the higher dividend payouts for

shareholders. The results of this study have many differences compared to the previous studies of Charitou and Louca (2009) especially with related theories such as business life cycle theories, market-timing theories.

In developed countries, IPO and listing issues are always done at the same time, but listing delays are very common in Vietnam and China. The results of the study also show that firms do not want to list after equitization or IPO because they actually only improve their sales after listing, while there is no evidence that there is an improvement in profitability and operating efficiency and the ability to reinvest is reduced. Loughran and Ritter (1997) have argued that firms can improve their sales after privatization and privatization can be considered as an event like listing. Loc and Tran (2016) have argued that going public through equitization can help Vietnamese SOEs improve their performance, including sales and profitability. Megginson *et al.* (1994) have argued that firms can have many advantages in doing so.

Table-4. Performance changes of listed firms on HNX.

Variable	N	Mean before (Median)	Mean after (Median)	Mean change (Median)	t-Test for Difference in Means (Before–After)	Mann whitney test (z) for Difference in Medians (Before–After)	Proportion of firms that changed
(P1) Profitability							
ROE	9	0.295 (0.247)	0.274 (0.292)	0.021 (-0.045)	0.227 (0.824)	-0.044 (0.965)	0.494
ROA	9	0.089 (0.062)	0.089 (0.066)	0.0005 (-0.004)	0.012 (0.991)	-0.397 (0.691)	0.444
EBITDAmargin	9	0.279 (0.141)	0.169 (0.178)	0.110 (-0.037)	0.87 (0.405)	0.044 (0.965)	(0.506)
(P2) Operating efficiency							
Asset turnover	9	1.579 (1.02)	1.407 (1.2)	.172 (-0.18)	0.269 (0.791)	-0.044 (0.965)	0.494
P(3) Output							
Sales	9	1,074,733 (761,662)	1,955,997 (1,128,318)	-881,263.7 (-366,656)	-0.840 (0.418)	-0.927 (0.354)	0.370
P(4) Reinvestment							
Reinvestment rate	9	0.237 (0.132)	0.163 (0.138)	0.074 (-0.006)	0.776 (0.451)	0.221 (0.825)	0.531
P(5) Leverage							
Debt/equity	9	2.247 (0.96)	1.242 (1.13)	1.005 (-0.17)	1.192 (0.260	0.486 (0.627)	0.568

Notes: *,**,*** denote significant levels at 10%, 5% and 1%;
The unit of sales is in millions VND and other units are in %.

When considering only the firms listed on HNX described in Table 4, there is no improvement in terms of profitability, operating efficiency, output, reinvestment rate and leverage. This is important information for investors who intend to invest in stocks listed on HNX compared to HSX. This information show that firms listed on HNX cannot improve their performance after listing. Table 5 examined performance changes of firms listed on HSX as follows.

Table-5. Performance changes of listed firms on HSX.

Variable	N	Mean before (Median)	Mean after (Median)	Mean change (Median)	t-Test for Difference in Means (Before–After)	Mann whitney test (z) for Difference in Medians (Before–After)	Proportion of firms that changed
(P1) Profitability							
ROE	31	0.228 (0.232)	0.169 (0.158)	0.058 (0.074)	1.357 (0.180)	1.154 (0.248)	0.585
ROA	31	.117 (.106)	.1071452 (.084)	0.0105 (0.022)	0.368 (0.714)	0.563 (0.573)	0.542
EBITD Amargin	31	0.187 (0.137)	0.183 (0.109)	0.005 (0.028)	0.097 (0.922)	0.436 (0.662)	0.532
(P2) Operating efficiency							
Asset turnover	31	1.843 (1.06)	1.785 (1.045)	0.058 (0.015)	0.107 (0.915)	0.077 (0.938)	0.506
P(3) Output							
Sales	31	760,964.5 (517,646.5)	1,643,477 (1,008,538)	-882,512.7 (-490,891.5)	-2.437** 0.019	-2.133** (0.033)	0.342
P(4) Reinvestment							
Reinvestment rate	31	0.195 (0.18)	0.068 (0.071)	0127 (0.109)	3.735*** (0.0004)	3.245*** (0.001)	0.740
P(5) Leverage							
Debt/equity	31	0.790 (0.545)	0.926 (0.715)	-0.136 (-0.17)	-0.567 (0.572)	-0.359 (0.719)	0.473

Notes: *,**,*** denote significant levels at 10%, 5% and 1%;
The unit of sales is in millions VND and other units are in %.

For the firms listed on HSX, there is improvement in output (real sales) after listing, specifically there is an increase of 882,512.7 VND million in the mean value and of 490,891.5 VND million in the median value (34.2% of firms adopted changes). The reinvestment rate of the firms listed on HSX also changes with the mean value of 0127 and median value of 0.109 (74% of firms adopted changes). There is also no evidence to show that the firms can improve profitability, operating efficiency and leverage in this case. The results also explain why firms cannot improve their performance in terms of profitability, operating efficiency and leverage in general. These results are inconsistent with business life cycle theories, market-timing theories because listing is considered an event to fully mark a firm's turning point in going public but firm performance cannot be improved much by doing so, except for sales. These results are also consistent with the research results by Charitou and Louca (2009) and Loc and Tran (2016).

Thus, the authors mostly rejected the original hypothesis because the listed firms cannot improve profitability and operating efficiency, except for improving sales and reducing the reinvestment rate. The research results show that firm owners are not interested in listing after equitization because listing does not help their firms improve firm performance in general. The results also explain why firms may have long listing delay dates after equitization in Vietnam. Firms need to prepare transparency reports and a lot of reports or registration procedures when they list on official stock market and they cannot improve their performance so much after listing in the short term. The authors also tested the changes in firm performance of the unlisted firms that only traded on Upcom (unofficial stock exchange).

Table-6. Performance changes of unlisted firms (traded firms on Upcom).

Variable	N	Mean before (Median)	Mean after (Median)	Mean change (Median)	t-Test for Difference in Means (Before–After)	Mann whitney test (z) for Difference in Medians (Before–After)	Proportion of firms that changed
(P1) Profitability							
ROE	8	.108 (.104)	.119 (.167)	-.010 (-0.064)	-0.105 (0.917)	-0.210 (0.833)	0.469
ROA	8	.078 (.063)	.066 (.076)	.0117 (-0.014)	0.176 (0.863)	0.000 (1.000)	0.500
EBITDAmargin	8	.099 (.064)	-.097 (.064)	.197 (-0.0005)	0.869 (0.411)	0.210 (0.834)	0.531
(P2) Operating efficiency							
Asset turnover	8	1.459 (1.205)	1.561 (1.65)	-.101 (-0.445)	-0.178 (0.861)	-0.315 (0.753)	0.453
P(3) Output							
Sales	8	496,281.9 (223,295.8)	581,014.8 (352,345.3)	-84,732.94 (-129,049.5)	-0.275 (0.787)	-0.105 (0.916)	0.484
P(4) Reinvestment							
Reinvestment rate	8	.070 (.065)	.022 (.042)	.048	0.604 (0.557)	0.998 (0.318)	0.648
P(5) Leverage							
Debt/equity	8	1.056 (.41)	1.085 (.725)	-.029 (-0.315)	-0.041 (0.968)	-0.162 (0.871)	0.477

Notes: *,*,*** denote significant levels at 10%, 5% and 1%;
The unit of sales is in millions VND and other units are in %.

The research results from Table 6 show that unlisted firms cannot improve their performance in terms of profitability, operating efficiency, output, reinvestment rate and leverage. This result is quite similar to those put forward in related theories such as business life cycle theories and market-timing theories. Chemmanur and Fulghieri (1999) argue that going public helps firms improve firm performance, but unlisted firms are not listed on official stock exchanges in Vietnam after equitization, so they cannot offer their stocks to many investors and their performance also cannot be improved. The listing process helps investors have opportunities to consult and invest in listed stocks, helping firms increase their capital mobilization capacity and improve their monitoring and management mechanisms within listed firms.

Firms only traded on the Upcom stock exchange have stocks that are not known by many investors, so their capital mobilization process has certain difficulties. Additionally, the Vietnamese government has not had a strict management mechanism on the information transparency of unlisted firms on the Upcom market, so investors still have limited information when investing in stocks traded on Upcom.

However, firm performance cannot be improved much after listing, except in sales. Previous empirical studies by Ritter and Welch (2002); Chemmanur and Fulghieri (1999) and Loughran and Ritter (1997) have concluded that going public can help firms improve their performance, especially in profitability and operating efficiency in developed countries. Loc and Tran (2016) and Tran *et al.* (2015) have also suggested that Vietnamese SOEs should go public through equitization to improve their performance, including profitability and operating efficiency. However, the research results are inconsistent with results from these studies.

Listing is one form of going public but firms have to prepare a lot of procedures or reports before and after listing while facing a competitive environment, and their performance cannot be improved by much. Considering two-year listing windows is also one reason why firm performance measures cannot be changed by much after listing. Managers or owners of Vietnamese firms also need time to restructure their ownership, set up their clear

goals and operation systems to adapt to new challenges after listing. There may be large changes in firm performance if their firms are tracked over the long term.

Thus, the research results have explained why firms in Vietnam have delayed listing. The listed companies also could not improve their performance if they were listed on the official stock market in the short term. Some firms that have delayed listing include the Vietnam Electric Cable Joint Stock Company (seven years of listing delay), the Thu Duc Electro-mechanical Joint Stock Company (five years of listing delay) and the Central Metal Vietnam metal corporation (five years of listing delay).

Although the Vietnamese stock market has been established since 2000, the number of officially listed firms is still very limited, including 431 listed companies on the HSX and 378 listed companies on the HNX. The market capitalization value of the Vietnamese stock market was estimated at only 1,904 VND trillion in 2016. This shows that the problem of listing delays has led to the underdevelopment of the Vietnamese stock market as firms that are not listed are familiar with small operating activities but do not have long-term operation strategies. Firm owners do not see any benefits from listing, but they have to prepare many procedures or reports before and after listing in Vietnam.

5. SUMMARY AND CONCLUDING REMARKS

Similar to the study by Charitou and Louca (2009) this study uses the pre-post comparison method to test the changes in the performance measures of listed and unlisted firms in Vietnam. This study plays a significant role in the application of the pre-post comparison method in Vietnam to explain the reasons why Vietnamese firms delay listing after equitization. The results of the study are inconsistent with the study by Charitou and Louca (2009) and related theories when they believe that firms can improve their firm performance when they go public. Ritter and Welch (2002); Chemmanur and Fulghieri (1999) and Loughran and Ritter (1997) have also concluded that firms can improve their performance in terms of profitability and operating efficiency after going public. Previous studies globally have not focused on listing delay because in developing countries firms are usually all listed after IPO occurs and this differs in Vietnam and China.

Research results show that listed companies only can improve their post-listing sales and reduce their re-investment rate, but that there is no evidence for firm improvement in terms of profitability, operating efficiency and leverage. This result explains why firms do not need to urgently participate in listing although the Government of Vietnam has issued clear regulations on listing time for firms after equitization. Firms are willing to pay fines to extend their listing time instead of actively participating in the official stock market. However, if firms do not participate in listing and only trade on Upcom, their performance may not be improved compared to pre-listing period. This result also shows that listing at least helps firms improve their sales, better than unlisted firms. The study also recommends that the Government should have stricter regulations to encourage firms to list after equitization in order to develop the future stock market. The current regulations are not strong enough because firms are willing to pay fines to delay listing, which leads to the fact that Vietnam stock market has not developed strongly even though it has been operating for more than twenty years.

The Vietnamese Government also needs to encourage firms to list on the official stock exchanges (HSX and HNX) using supportive policies and to eliminate unnecessary procedures. The study also recommends that investors need to consider investing in listed companies in the short term because firms only improve their sales in the short term, while there is no evidence for firm performance improvement in general. In particular, investors should consider carefully when investing in the stocks of unlisted firms after equitization because these firms cannot improve their performance after trading on Upcom in the short term. Firms listed on HSX can improve their sales and investors should clearly consider which stocks to invest in because firms listed on HNX cannot improve their sales and other measures of firm performance.

Although relevant theories explain why firms go public and this helps firms improve their firm performance these theories have not thoroughly explained the reasons as to why firms delay listing on official stock exchanges, especially in countries like Vietnam and China. This study also proposes further research in considering other methods to assess the performance changes of listed companies in relation to unlisted enterprises to verify these research results.

Funding: This paper is funded by Eastern International University, Becamex Business School, Binh Duong, Vietnam.
Competing Interests: The authors declare that they have no competing interests.
Contributors/Acknowledgement: Both authors contributed equally to the conception and design of the study.

REFERENCES

Abdallah, A.A.-N. and C. Ioannidis, 2010. Why do firms cross-list? International evidence from the US market. The Quarterly Review of Economics and Finance, 50(2): 202-213.Available at: https://doi.org/10.1016/j.qref.2009.09.009.

Abed, A. and W. Abdallah, 2017. Does cross-listing increase managers' propensity to listen to the market in M & A deals? Journal of Corporate Finance, 46: 97-120.Available at: https://doi.org/10.1016/j.jcorpfin.2017.06.016.

Abed, A. and W. Abdallah, 2019. Does cross-listing in the US improve investment efficiency? Evidence from UK firms. The Quarterly Review of Economics and Finance.Available at: https://doi.org/10.1016/j.qref.2018.12.005.

Charitou, A. and C. Louca, 2009. Cross-listing and operating performance: Evidence from exchange-listed American depositary receipts. Journal of Business Finance & Accounting, 36(1-2): 99-129.Available at: https://doi.org/10.1111/j.1468-5957.2009.02123.x.

Chemmanur, T.J. and P. Fulghieri, 1999. A theory of the going-public decision. The Review of Financial Studies, 12(2): 249-279.Available at: https://doi.org/10.1093/rfs/12.2.249.

Choe, H., R.W. Masulis and V.K. Nanda, 1993. Common stock offerings across the business cycle: Theory and evidence. Journal of Empirical Finance, 1(1): 3-31.Available at: https://doi.org/10.1016/0927-5398(93)90003-a.

Hung, D.N., N.D. Thien and N.T. Liem, 2017. The impact of equitization on firm performance: The case of Vietnam. International Research Journal of Finance and Economics, 12(164): 68-74.

Karolyi, G.A., 2006. The world of cross-listings and cross-listings of the world: Challenging conventional wisdom. Review of Finance, 10(1): 99-152.Available at: https://doi.org/10.1007/s10679-006-6980-8

Khandker, S.B., G. Koolwal and H. Samad, 2009. Handbook on impact evaluation: Quantitative methods and practices. Washington DC: The World Bank.

Lel, U. and D.P. Miller, 2008. International cross-listing, firm performance, and top management turnover: A test of the bonding hypothesis. The Journal of Finance, 63(4): 1897-1937.Available at: https://doi.org/10.1111/j.1540-6261.2008.01377.x.

Loc, T.D. and N.M. Tran, 2016. Impact of equitization on performance of enterprises in Vietnam. Journal of Economic Development, 23(3): 36-56.Available at: https://doi.org/10.24311/jed/2016.23.3.02.

Loughran, T. and J.R. Ritter, 1997. The operating performance of firms conducting seasoned equity offerings. The Journal of Finance, 52(5): 1823-1850.Available at: https://doi.org/10.1111/j.1540-6261.1997.tb02743.x.

Lucas, D.J. and R.L. McDonald, 1990. Equity issues and stock price dynamics. The Journal of Finance, 45(4): 1019-1043.Available at: https://doi.org/10.1111/j.1540-6261.1990.tb02425.x.

Ly, T.T.H. and D. Kha, 2013. Evidence of underpricing of initial public offerings in Vietnam. Journal of Economic Development, 217: 74-91.Available at: https://doi.org/10.24311/jed/2013.217.05.

Maksimovic, V. and P. Pichler, 2001. Technological innovation and initial public offerings. The Review of Financial Studies, 14(2): 459-494.

Megginson, W.L., R.C. Nash and M. Van Randenborgh, 1994. The financial and operating performance of newly privatized firms: An international empirical analysis. The Journal of Finance, 49(2): 403-452.Available at: https://doi.org/10.2307/2329158.

Megginson, W.L. and J.M. Netter, 2001. From state to market: A survey of empirical studies on privatization. Journal of Economic Literature, 39(2): 321-389.Available at: https://doi.org/10.1257/jel.39.2.321.

Nhan, N.T. and T.H. Son, 2017. Equitization and operating and financial performance: Empirical evidence from Vietnamese companies. International Research Journal of Finance and Economics, 12(164): 75-84.

Ritter, J.R., 1987. The costs of going public. Journal of Financial Economics, 19(2): 269-281.

Ritter, J.R. and I. Welch, 2002. A review of IPO activity, pricing, and allocations. The Journal of Finance, 57(4): 1795-1828.Available at: https://doi.org/10.1111/1540-6261.00478.

Tran, N.M., W. Nonneman and A. Jorissen, 2015. Privatization of Vietnamese firms and its effects on firm performance. Asian Economic and Financial Review, 5(2): 202-217.Available at: https://doi.org/10.18488/journal.aefr/2015.5.2/102.2.202.217.

Tran, T.H.L., D.C. Le and T.P.T. Hoang, 2014. The underpricing and long-run underperformance of initial public offerings: evidence from Vietnam. International Journal of Business and Emerging Markets, 7(1): 3-24.