Journal of Applied Finance & Banking, vol. 7, no. 1, 2017, 87-102
ISSN: 1792-6580 (print version), 1792-6599 (online)
Scienpress Ltd, 2017

Impacts of Macroeconomic News on Vietnamese SOEs' Performance

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Abstract

This paper examines impacts of macroeconomic news on Vietnamese state-owned enterprises' (SOEs) performance. Macroeconomic news variables are based on changes in GDP, interest rate, and inflation, respectively. We consider Vietnamese non-financial listed firms, and panel data regression is proposed. Our results show that interest rate is found to be significantly negative associated with firm performance but changes in GDP and firm performance are positively related. Additionally, due to socialist market economy reforms, we further show that SOEs are still dominant influence in firm performance. No evidence of effects of taxation on firm performance after a series of deregulation of taxation is detected. Therefore, our findings offer valuable insights on macroeconomic news and firm performance.

JEL classification numbers: D22, E31, G34, C33
Keywords: macroeconomic news, firm performance, Vietnamese SOEs, panel data regression.

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Article Info: *Received :* October 7, 2016. *Revised :* October 31, 2016.
Published online : January 5, 2017

1 Introduction

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Macroeconomic news and firm performance have much been considered in the prior studies but mixed findings. Macroeconomic environment has a strong impact on corporate sales and profits. McNamara and Duncan (1995) conclude that firm performance is a function of the prior year ROA and macroeconomic variables. In addition, the economic cycle (and in particular, macroeconomic indicators such as interest rate, unemployment rate and growth in gross domestic product) strongly affect profitability and thereby influence company performance (Brown and Ball, 1967; Machin and van Reenen, 1993; Ackert and Hunter, 1995; Robson, 1996; Hackbarth et al., 2006). In contrast, Oxelheim (2003) shows that unfavorable development of important exchange rates has a negative impact on performance. Higson et al. (2004) show that rapidly growing and rapidly declining firms are less sensitive to macroeconomic shocks than firms in the middle of the growth range. Boyd et al. (2005) find no statistically significant impact of macroeconomic news on earnings growth forecasts. Zhang et al. (2012) show that firm profits decrease after privatization but their output and operating efficiency increase.

Following Doi Moi reform in mid-1980s, Vietnam has experienced rapid growth, with steady GDP growth of 8.5% in 2007 and 5.3% in 2009 prior to 2011. Vietnamese state-owned enterprises (SOEs) with poor performance are expected to generate positive results after privatization[6] and continue to play an important role in future Vietnam's industrialization and development.[7] While the relationship between state ownership and firm performance has been widely researched, the empirical evidence has provided mixed results. Kang and Kim (2012) and Yu (2013) find corporate governance improved and the benefits of government support and political connections while Wei and Varela (2003) show state ownership has a negative effect on firm value. However, aforementioned studies do not involve in discussing the impact of macroeconomic conditions on firm performance.

This study examines the effect of the increasing importance of Vietnam in the world economy on impacts of macroeconomic news on company performance, and in particular for Vietnamese SOEs. Due to a series of deregulation of taxation in Vietnam, we also discuss relations among taxation, firm performance, and macroeconomic information. Furthermore, we use panel data regression is proposed by Himmelberg et al. (1999) and Claessens et al. (2002). Understanding implications for impacts of macroeconomic information on company performance is very important when conducting panel data regression techniques are proposed. Finally, macroeconomic news measures are the growth in GDP, interest rate, and inflation, respectively. Firm performance variables are

[6]Rondinelli and Lacono (1996) and Pham and Carlin (2008) argue that privatization could generate positive results, such as more competitive.

[7]The Vietnamese government did still believe in an important role for the SOEs in Vietnam's industrialization and development. SOEs could lead to a rapid increase in GDP growth.

used as net income over total assets (ROA), net income over equity (ROE), and earnings to total assets.

Our findings show that different macroeconomic news influence firm performance. The growth in GDP significantly positively affects ROA and interest rate significantly influences ROA and ROE. Inflation fails to influence firm performance. It suggests the different impacts of macroeconomic news on Vietnamese SOEs' performance. In addition, SOEs are an important factor in determining Vietnamese firms' performance. Firm size is also significantly and positively related to firm performance, suggesting that an increase in size leads to an increase in performance. Finally, taxation and the ratio of tangible fixed assets to total assets are not related to firm performance. Therefore, our findings have produced several stylized facts regarding the strong impact of macroeconomic factors such as interest rate movement and growth in gross domestic product (GDP) on firm performance.

The organization of the paper is as follows. We review related institutional background and develop our hypotheses in the next section. Section 3 discusses our sample and variable construction. Section 4 presents our main results and discussion, and Section 5 provide conclusions and political implications.

2 Institutional Background and Hypothesis Development

2.1 Vietnamese corporate context

Vietnamese company law and the corporate governance regime have significantly developed since Doi Moi (renovation) 1986 through corporate law reforms, especially in 2005 (Hai, 2006). The enterprise law in 2005 provides corporate governance structures for each company type based on the company type and the number of its shareholders where company types are state-own enterprises (SOEs) and non-state-own enterprises (non-SOEs) (Hai, 2006). Table1 reports numbers of enterprises by type of Vietnamese enterprises. As shown in the Table 1, according to the Statistical Censuses and Surveys in 2008, the Vietnam had 3,287 businesses for state-own enterprises and 196,776 businesses for non-state enterprises, compared with the year 2000, the number of 5,759 for state-own enterprises and 35,004 for non-state enterprises. It implies that up to 01 January 2009, the number of active non state own enterprises was 196,779 enterprises, accounting for 95.7% total enterprises, 5.6 times as many as that in 2000, the average annual growth rate of enterprises was 24.1%.

Table 1: Numbers of enterprises by type of Vietnamese enterprises

Year	SOEs	Non-SOEs
2000	5759	35004
2001	5355	44314
2002	5363	55237
2003	4845	64526
2004	4597	84003
2005	4086	105167
2006	3706	123392
2007	3494	147316
2008	3287	196776

2.2 Macroeconomics news in Vietnam

As a transition economy, corporate governance as known in advanced economies is a new topic in Vietnam. Vietnam joined the World Trade Organization in January 2007, which has promoted more competitive, export-driven industries. Vietnam became an official negotiating partner in the Trans-Pacific Partnership trade agreement in 2010. Therefore, understanding corporate governance mechanisms is a significant factor in upgrading its law of corporate governance and encouraging good corporate governance to support the economic development and international integration process.

As shown in the CIA World Factbook,[8] agriculture's share of economic output has continued to shrink from about 25 percent in 2000 to less than 22 percent in 2012, while industry's share increased from 36 percent to nearly 41 percent in the same period. In 2012 Vietnam's economy was valued at around $124 billion GDP. Per capita gross national income was US$550. However, state-owned enterprises account for roughly 40 percent of GDP.

Vietnam's economy is among the fastest-growing nations, with annual growth of about 7% from 2000 to 2005. Growth remained strong even in the face of the late-2000s global recession, holding at 6.8% in 2010. Moreover, taxes and other revenues in 2012 account for roughly 30.6% of GDP. Additionally, inflation rates based on consumer prices are roughly 18.7% in 2011 and 9.2% in 2012 respectively while commercial bank prime lending rates are 16.96% on 31 December 2011 and 13.6% on 31 December 2012. Nevertheless, in February 2011, the Government shifted policy away from policies aimed at achieving a high rate of economic growth, which had stoked inflation, to those aimed at stabilizing the economy, through tighter monetary and fiscal control. Therefore, it is understandable why corporate governance and macroeconomic information have not much been considered in Vietnam at this time.

[8]The website on CIA World Factbook is http://factsanddetails.com/.

2.3 Corporate taxes in Vietnam

Interest payments on debt are tax deductible expenses in Vietnam. Vietnam has implemented three important phases of tax reforms over first phase of tax reform (1990-1995), second phase of tax reform (1997-2005), and third phase of tax reform (2006-2010) as documented by Tax Policy Department of Vietnam.

As shown by Vietnam Fiscal Affair Department, tax revenue in 1996-2000 increased by 2.3 times in compared with the revenue collected in 1991-1995 and tax revenue in 2001-2005 increased by 2.0 times in compared with revenue collected in 1996-2000. Rates falling, but tax revenue has held up to 2% of GDP in 2010 from 1% of GDP in 2006.

In addition, as shown by Fiscal Affair Department of Vietnam, corporate income tax (CIT) rate was about 50% in early 1990s and 35% in late 1990s. Current CIT rate was from 25 percent to 22 percent since January 1, 2014 when average CIT rate for Asia region in 2011 was 22.78%. Therefore, tax reform has been made an important contribution to Vietnamese social economic development.

2.4 Literature review and our hypotheses

Corporate performance and failure are not completely determined by the firm's characteristics alone, being in part related to the environmental economy (macroeconomic factors). The relationships of macroeconomic conditions and firm performance are highlighted, but results are mixed. However, little research examines the determinants of Vietnamese firm performance. In this study, we would expect the heterogeneous impacts of macroeconomics conditions on firm performance. Strong relationships between them are expected. Our first hypotheses thus is:

H1: There are significant relationships between macroeconomic information and firm performance.

Fiscal policies affect a firm's after tax net cash flow, its cost of capital, and potentially the demand for its products, and survival. It further leads to percentage change in GDP. The growth of GDP could have an impact on a firm's performance. Most studies argue that percentage changes in GDP has positive effects on firm's performance while few studies show less effect of macroeconomic shocks on performance of firms (Higson et al., 2004). Thus, Hypothesis 2 can be stated as,

H2: Percentage change in GDP positively increases company performance.

Monetary policy affects all sectors of the economy, particular in banks' credit and lending policy (Turner et al., 1992; Bernanke and Gertler, 1995; Cuthbertson and Hudson, 1996). This could affect a firm's ability to access external sources of fund through the cost of debt and the availability of money and credit (Cuthbertson and Hudson, 1996; Liu and Wilson, 2002; Liu, 2004). Thus, Hypothesis 3 can be stated as,

H3: Interest rate negatively affects company performance.

When the gross domestic product (GDP) fluctuates, there are perceived inflationary pressures from the product market that might affect monetary policy. Inflation may affect corporate performance and failure (Wadhwani, 1986; Tirapat and Nittayasetwat, 1999; Sharabany, 2004). Wadhwani (1986) provides an explanation for how inflation volatility can contribute to bankruptcy. Firms already in a state of financial distress can be tipped over into bankruptcy as higher inflation and higher nominal interest rates increases the service element of debt. Also, inflation can result in the misallocation of corporate

resources (Sharabany, 2004). Thus, Hypothesis 4 can be stated as,
H4: Higher inflation lowers company performance.
Government taxation policy plays an important role on economic development, suggesting a decrease in tax rate lead to an increase in firm performance. Wu et al. (2012) argue negative relation between tax rate and firm performance, with better tax benefits for firms. Thus, Hypothesis 5 can be stated as,
H5: Taxation negatively affects company performance.
Motivated by early works on state ownership, mixed effects of state ownership on firm performance are found. SOEs are more connected with government. Megginson et al. (1994) suggest that after being privatized, former SOEs positively increase company performance while some studies argue that SOEs generally exhibit reductions in profitability and have adverse effects on firm performance (Dewenter and Malatesta, 2001; Pham and Carlin, 2008; Li et al., 2009). Thus, Hypothesis 6 can be stated as,
H6: There is a negative relation between SOEs and firm performance.
A firm's size is measured by logarithm natural of total assets, as a proxy for bankruptcy costs, supporting that a decrease in assets for a large-size firm will lead to a decrease in its performance. Empirical macro-studies that relate the macroeconomic environment to business performance in the UK note that movements in the aggregate failure rate of business establishments coincide with changes in macroeconomic performance (Robson, 1996).
Finally, the tangibility of a firm is expected to have negative relationship with firm's performance where tangibility is calculated by dividing the fixed assets to the total asset. Lower performance is resulted from high tangibility ratio because firm pays large amount of interest expense when tangibility is financed by debt. Our two hypotheses are:
H7: An increase in firm's size lowers default and increases with firm's performance.
H8: There is a negative relationship between tangibility and firm performance.

3 Methodology and Data

3.1 Methodology

We first extend the work of McNamara and Duncan (1995) and then model that firm performance is a function of prior year performance and macroeconomic variables. The dependent variable is performance, ROA, ROE, and EBITDA-to-TA ratio where ROA and ROE are calculated as net profit divided by total assets and net profit divided by book value of equity respectively. The EBITDA-to-TA ratio represents the increment in earning is attributed to the total assets where EBITDA is operational cash flow, defined as earnings before interest and taxes adding back depreciation.
We use the panel data methodology to investigate the impact of macro and micro economic factors on a firm's performance. Our firm performance regression models are as followed.

$$Y_{it} = \beta_0 + \beta_1 Y_{i,t-1} + \beta_2 (CHGGDP)_{it} + \beta_3 INTR_{i,t-1} + \beta_4 INFL_{i,t-1} + \beta_5 ETR_{i,t-1} + \beta_6 SIZE_{i,t-1} + \beta_7 TANG_{i,t-1} + \beta_8 SOEs\ dummy + \varepsilon_{it} \quad (1)$$

where the independent variables include a proxy for macroeconomic conditions (such as percent change in GDP growth rate (*CHGGDP*), interest rate (*INTR*), inflation rate

(*INFL*), taxation (*ETR*)), firm size (*SIZE*), tangibility *(TANG)*, and *SOEs Dummy*.
The definitions of these independent variables are below. Percentage change in GDP (*CHGGDP*) is defined as the difference of percentage of GDP. One-year lagged change in the GDP, ln (GDP_t /GDP_{t-1}), where GDP is the gross domestic product. One- year lagged interest rate is $INTR_{t-1}$, where the nominal interest rate, INTR, is the interest rate on loans in the one year loan market, measured as the annualized percentage rate. One-year lagged the inflation rate is $INFL_{t-1}$,where the inflation rate, *INFL*, is a proxy of the changes in the consumer price index. Firm size variable (*SIZE*) is defined as the natural log of total assets, as a proxy for bankruptcy costs. Tangibility variable (*TANG*) is estimated by dividing the book value of fixed assets by the total assets of firms. Taxation variable (*ETR*) is calculated as total tax expenses over earnings before interest and tax, similar to Wang (2003). Finally, to control for the SOEs effect, we include *SOEs dummies* in our models, which equal one if a firm is SOEs, and zero otherwise.
Next, due to sample data combining cross sectional data and time series types[9], panel data regression model is proposed by Himmelberg et al. (1999) and Claessens et al. (2002). The error in the panel data regression model is very important in this analysis. In a fixed effects (FE) model, the error is assumed to vary non-stochastically over individual dimension or time dimension making the fixed effects model analogous to a dummy variable model in one dimension. In a random effects (RE) model, the error is assumed to vary stochastically over individual dimension or time dimension requiring special treatment of the error variance matrix. In addition, the two error components are independent from each other. Therefore, to decide which effect is preferable, we conduct a Hausman test with null hypothesis of random effects and the alternative of the fixed effect.
Diagnostic tests for models fitted comprise three stages. First, we build the null hypothesis of traditional least square method model and alternative hypothesis of fixed effect model, and the test statistic is as following.

$$F = \frac{(RRSS - URSS)/(N-1)}{URSS/(N_T - N - K)} \sim F_{N-1,N(T-1)-K} \tag{2}$$

where N is number of sample observations, K is number of variables, RRSS is square sum of residual of OLS, and URSS is unrestricted square sum of residual of LSDV. If tested result does not reject H_0, traditional least square method model is accepted. By contrary, fixed effect model is employed.
Second, we also build the null hypothesis of traditional least square method model and the alternative hypothesis of random effect model. The Lagrange multiplier (LM) test, proposed by Breusch and Pagan (1980), is used to justify appropriateness of the random effects model versus the pooled regression model. LM statistics is computed as following.

[9]Cross sectional regressions usually suffer from the problem of heteroskedasticity while time series regression must face the formidable problems of autocorrelation and structural change. As the errors display serial correlation and there was some evidence of heteroskedasticity, the model cannot be estimated using ordinary least squares.

$$LM = \frac{N*T}{2(T-1)}\left(\frac{\sum_{i=1}^{N}(\sum_{t=1}^{T} e_{it})^2}{\sum_{i=1}^{N}\sum_{t=1}^{T} e_{it}^2} - 1\right)^2 \sim x^2_{(1)} \quad (3)$$

where e_{it} is residual term of multi-regression. If tested result does not reject H_0, traditional least square method model is accepted. By contrary, random effect model is employed.
Finally, the difference between the FEM and REM estimates is examined by Hausman (1978). The null hypothesis based on the Hausman test is that FEM and REM do not differ substantially. That is, under the null hypothesis of that there is no correlation between random variable and independent variable, random effect model is employed and under the alternative hypothesis of that there is correlation between random variable and independent variable, fixed effect model is used.
The test statistic has an asymptotic (i.e., large sample) $\chi 2$ distribution with df equal to number of regressors in the model, as following.

$$H = \frac{\left(\hat{\beta}_{fixed} - \hat{\beta}_{random}\right)^2}{Var(\hat{\beta}_{fixed}) - Var(\hat{\beta}_{random})} \sim x^2_{(k)} \quad (4)$$

where, $\hat{\beta}_{fixed}$ is the estimator of fixed effect, $\hat{\beta}_{random}$ is the estimator of random effect. If the computed chi-square value exceeds the critical chi-square value for given df (=k) and the level of significance, we conclude that REM is not appropriate because the random error term are probably correlated with one or more regressors. In this case, FEM is preferred to REM. On the other hand, if the computed chi-square value does not exceed the critical chi-square value for given df (=k) and the level of significance, we conclude that FEM is not appropriate. In this case, REM is preferred to FEM. In other words, if we reject H_0, fixed effect model is accepted. Conversely, random effect model is employed.

3.2 Data

Our quarterly sample data from 2007 to 2011 are obtained from financial statements of Vietnamese firms listed at the Ho Chi Minh City Stock Exchange (HOSE). For some selecting criteria, we only choose listed firms with complete quarterly financial statements information from 2007 to 2011. In addition, we exclude all of the financial institutions and banks. Only 79 companies are available in 5 years, with 1,580 firm observations.

4 Results and Discussions

4.1 Results

Table 2 represents summary statistics for macroeconomic news and company performance, with mean, median, max, min, standard deviation, and unit root test. This table reports that percentage change in GDP (*CHGGDP*) is the mean of 6.2%, with the

range of 8% and 3%. It implies that Vietnam has experienced rapid and fast growth. The mean of interest rate is 13.42% with the range of 20% and 10% while the average of inflation rate is 13.59% with the max of 27.73% and the min of 2.56%, suggesting that rapid growth in Vietnam accompanies hyperinflation and high interest rate is supposed to prevent from a rapid rise in prices that seriously damages a country's economy. Average value for taxation is 6%. In addition, average values for ROA and ROE are 2.472% and 4.192%, with corresponding to the range of 23.9% and -71% as well as 39.8% and -162.3% respectively. The ratio of EBITDA over TA is the mean of 2.261%. Next, the mean of size is 5.1800 while the mean of Tangibility is 29.19%. Finally, our results show LLC t-statistics are significant at the 1% level, rejecting null hypothesis of a unit root of Levin et al. (2002) (LLC). We conclude that all of the variables do not have a unit root.

Table 2: Summary statistics

Variables	**Mean**	**Median**	**Std. dev.**	**Max**	**Min**	**Unit Root Test**
CHGGDP	6.20%	6.20%	1.34%	8.00%	3.00%	-8.43***
INTR	13.42%	12.74%	3.00%	20.00%	10.00%	-22.21***
INFL	13.59%	10.75%	7.19%	27.73%	2.56%	-33.50***
ETR	6.00%	1.60%	13.34%	43.00%	0.00%	-6.28***
ROA	2.47%	2.10%	3.69%	23.90%	-71.00%	-10.73***
ROE	4.19%	4.00%	7.49%	39.80%	-162.3%	-12.25***
EBITDA/TA	2.26%	1.80%	1.81%	19.00%	-24.00%	18.95***
SIZE	5.18	5.14	0.55	7.00	4.00	-5.18***
TANG	29.19%	25.05%	19.79%	93.80%	0.70%	-4.79***

Note: Macroeconomic news variables are percentage change in GDP (*CHNGDP*), interest rate (*INTR*), inflation (*INFL*), Taxation (*ETR*). Performance variables are the *ROA*, *ROE*, *EBITDA/ TA*. Controlling variables are firm size (*SIZE*), Tangibility (*TANG*). *ROA* and *ROE* are calculated as net profit divided by total assets and net profit divided by book value of equity respectively. *EBITDA/TA* represents the increment in earning is attributed to total assets where *EBITDA* is operational cash flow, defined as earnings before interest and taxes adding back depreciation. Taxation variable (*ETR*) is calculated as total tax expenses over earnings before interest and tax. Additionally, size variable (*SIZE*) is defined as the natural log of total assets in our model to control for economics of scale or the size effect, as a proxy for bankruptcy costs. Tangibility variable (*TANG*) is estimated by dividing the book value of fixed assets by the total assets of firms. Unit Root Test (LLC Test) is to test null hypothesis of a unit root of Levin et al. (2002) (LLC). *, **, and *** represent significant at the 0.10, 0.05, and 0.01 level respectively.

Table 3 reports the correlations matrices of variables. We report the correlation between macroeconomic news and company performance. Macroeconomic news variables are percentage change in GDP (*CHNGDP*), interest rate (*INTR*), inflation (*INFL*), Taxation (*ETR*). Performance variables are the *ROA*, *ROE*, *EBITDA-to-TA ratio*. Controlling

variables are firm size (*SIZE*) and tangibility (*TANG*).
We find that the *CHGDGP* variable significantly and positively associates with company performance variables for *ROA*, *ROE*, and the ratio of *EBITDA* over *TA*. In addition, *INTR* and *INFL* measures are negatively and significantly related to *ROA* and *ROE* respectively. Moreover, there is positive and significant relation between *ETR* and *ROA*. Finally, *Size* variable is positive related to firm performance while *TANG* variable is negatively and significantly related to *ROA* and *ROE*. Thus, there are significant relationships between macroeconomic news and firm performance. Therefore at 5% significance level, we can often accept the H1, suggesting that significant relationships between macroeconomic information and firm performance.

Table 3: Correlation matrices

	ROA	***ROE***	***(EBITDA/TA)***
CHGGDP	0.106**	0.114**	0.031
	(0.000)	(0.000)	(0.226)
INTR	-0.083**	-0.075**	0.022
	(0.001)	(0.004)	(0.394)
INFL	-0.132**	-0.129**	-0.010
	(0.000)	(0.000)	(0.692)
ETR	0.073**	0.047	0.005
	(0.005)	(0.068)	(0.836)
SIZE	0.158**	0.241**	0.106**
	(0.000)	(0.000)	(0.000)
TANG	-0.073**	-0.057*	-0.009
	(0.005)	(0.027)	(0.716)

Note: Definitions of variables are defined at the note of Table1. Numbers in parentheses are p-values. * , **, and *** represent significant at the 0.10, 0.05, and 0.01 level respectively.

Table 4 documents diagnostic tests for fitted models with F test, LM test, and Hausman test. The F test determines whether either the null hypothesis of traditional least square method model or alternative hypothesis of fixed effect model (FEM) is accepted. The LM test determines whether either the null hypothesis of traditional least square method model or the alternative hypothesis of random effect model (REM). The Hausman test examines the difference between the FEM and REM. REM is used under the null hypothesis of no correlation between random variable and independent variable while FEM is used under the alternative hypothesis of correlation between random variable and independent variable.
Table 4 shows that in the F test, models for ROA, ROE, and EBITDA/TA are fitted by FEM, suggesting that null hypotheses of traditional least square method model are rejected. In the LM test, models for ROA, ROE, and EBITDA/TA are fitted by REM, suggesting that null hypotheses of traditional least square method model are rejected.

Finally, Hausman test shows that there is the correlation between random variable and independent variable for models for ROA, ROE, and EBITDA-to-TA ratio. It implies that FEM is used. Therefore, in the Diagnostic tests for fitted models, FEMs for ROA, ROE, and EBITDA/TA are employed.

Table 4: Diagnostic tests for fitted models

	ROA	**ROE**	**EBITDA/TA**
F test	41.77***	25.36***	160.03***
	(0.000)	(0.000)	(0.000)
LM test	12.37***	9.94***	12.48***
	(0.000)	(0.000)	(0.000)
Hausman test	334.14***	202.92***	1280.25***
	(0.000)	(0.000)	(0.000)
Regression	FE	FE	FE

Note: The statistics are the p-value. *, **, and *** represent significant at the 0.10, 0.05, and 0.01 level respectively.

Table 5 shows the firm performance regression results to verify the association between macroeconomic information and firm performance. We employ panel data regression with fixed effect model (FE) to examine the macroeconomic information and firm performance.

Our findings suggest positive and significant coefficients for one-period lagged firm performance, such as *ROA*, *ROE*, *EBITDA-to-TA* ratio variables to determine the properties of earning persistence. Our findings are consistent Abarbanell and Bushee (1997), Frankel and Litov (2009), and Dichev and Tang (2009). In addition, *CHGGDP* variable is only positively associated with *ROA*. It implies that an increase of 1 percent in *CHGGDP* leading to an increase in *ROA* by 1.1%. *CHGGDP* positively increases with *ROA*. Therefore at 5% significance level, we cannot reject the H2. Our findings are consistent with the argument of Higson et al. (2004), with positive effects of percentage changes in GDP on firm's performance.

Interest rate variable is negatively and significantly related to *ROA* and *ROE* measures. It implies that interest rate decreases with firm performance. An increase in interest rate dampens firm structure, and then lowers the firm performance. Therefore at 5% significance level, we cannot reject the H3. Possible reason is that due to high fluctuation of interest rate, firms need to collect money from the bank so Vietnamese firms need to pay the large amount of interest expense, lead to the decrease in firm performance. However, inflation variable fails to detect impacts on firm performance, suggesting no relation between inflation and firm performance. Therefore at 5% significance level, we can reject the H4.

Similar results are also found when the relation between *ETR* and firm performance is examined. It implies that taxation (*ETN*) is insignificantly related to *ROA*, *ROE*, and the ratio of EBITDA to TA. Therefore at 5% significance level, we can reject the H5. In other words, we cannot conclude that tax reform has been made an important contribution to Vietnamese firm performance.

Finally, we turn to further observe the relation between controlling variables and firm performance. Our findings show positive and significant coefficients of *SIZE* on firm

performance but insignificant coefficients of tangibility on firm performance are shown. Fama and French (1995) show that there are size factors in earnings, suggesting size factors help explain earnings. Our findings are consistent with Fama and French (1995). Thus at 5% significance level, we cannot reject the H7, but we reject H8. Next, SOEs dummy is the positive and significant impacts on *ROA* and *ROE*. Therefore at 5% significance level, we cannot reject the H6. Moreover, FE models provide higher adjusted R-squared values for *ROA* and *ROE* about 8% and for the ratio of EBITDA over TA about 40%.

To sum, firms react differently to macroeconomic news, suggesting the heterogeneous impact of macroeconomic information on Vietnamese SOEs' performance. Our findings are consistent with Cenesizoglu (2011).

Table 5: Firm performance regression results

$Y_{it} = \beta_0 + \beta_1 Y_{i,t-1} + \beta_2 CHGGDP_{it} + \beta_3 INTR_{i,t-1} + \beta_4 INFL_{i,t-1} + \beta_5 ETR_{i,t-1} + \beta_6 SIZE_{i,t-1} + \beta_7 TANG_{i,t-1} + \beta_8 SOEs\ dummy + \varepsilon_{it}$

Variable	*ROA*	*ROE*	*EBITDA/TA*
Constant	-0.020	-0.0580	0.005
	(-0.94)	(-1.21)	(0.64)
Lag Y	0.106***	0.0709**	0.2245***
	(3.22)	(2.09)	(8.72)
CHGGDP	0.011**	0.0137	0.0024
	(1.96)	(-1.21)	(1.14)
INTR	-0.0023***	-0.0045***	-0.0001
	(-5.03)	(-4.43)	(-1.00)
INFL	0.00026	0.00019	0.00004
	(1.28)	(0.43)	(0.65)
ETR	-0.0004	-0.0005	0.00002
	(-0.74)	(-0.39)	(0.09)
SIZE	0.0142***	0.030***	0.0028*
	(3.24)	(3.18)	(1.84)
TANG	-0.0122	-0.0106	-0.00195
	(-1.16)	(-0.46)	(-0.50)
SOEs	0.0052***	0.0077*	0.0009
	(2.80)	(1.96)	(1.29)
Adj R^2	0.0836	0.0805	0.4081

Notes:

Definitions of variables are defined at the note of Table1. * , **, and *** represent significant at the 0.10, 0.05, and 0.01 level respectively. Numbers in parentheses are asymptotic t-values.

4.2 Further Discussions

Table 6 reports the Vietnamese macroeconomic information during sample period according to Vietnam General Statistical reports. Compared to other nations in Asian, Vietnam has experienced rapid growth with steady GDP growth of 8.5% in 2007 and 5.3% in 2009 prior to 2011. There is varied interest rate due to hyperinflation in late 2007 and early 2008. It leads to tighten monetary policies of the Central Bank to increase the

deposit interest rates, exceeding 15% in July 2008. Subsequently, interest rate climbs the high of 17% in 2011 while the inflation is 18.70%. It implies increasing difficulty on debt financing for Vietnamese firms from the Government banks.

Table 6: Macroeconomic information during 2007-2011

Year	2007	2008	2009	2010	2011
CHGDGP(%)	8.50	6.30	5.30	6.80	5.90
INFL(%)	8.30	23.10	7.10	8.90	18.70
INTR(%)	11.20	15.80	10.10	13.10	17.00

Figure 1 plots ratios of number in SOEs and non-SOEs to total number respectively. The higher ratio of non-SOEs to total number than SOEs is found in this Figure1. As shown by Table4, SOEs have positive effects on firm performance. In addition, most Vietnamese private firms cannot access to long term debt financing but SOEs can access. Thus, Vietnamese state-owned enterprises (SOEs) with poor performance are expected to generate positive results after privatization and continue to play an important role in future Vietnam's industrialization and development.

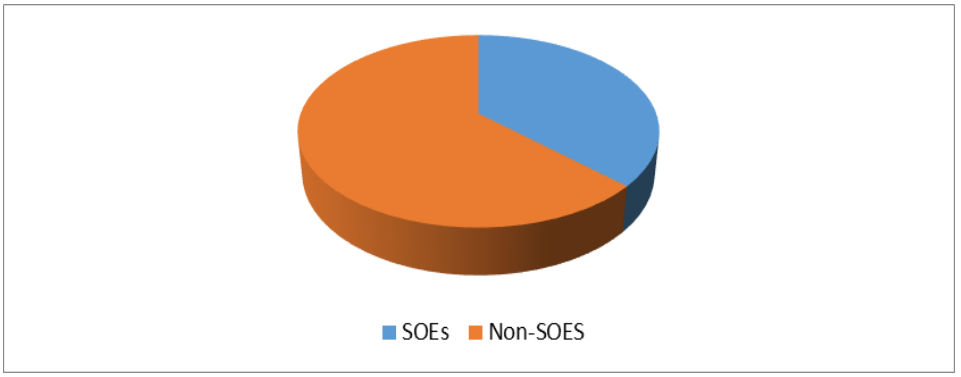

Figure 1: Plots of ratios of SOEs and non-SOEs

5 Conclusions and Policy Implications

This study examines relationships between macroeconomic news, firm performance, and Vietnamese state-owned enterprises (SOEs). Macroeconomic conditions are considered by changes in GDP, interest rate, and inflation respectively. We consider Vietnamese non-financial listed firms and panel data regression is proposed.

Our results show that interest rate is found to be significantly negative associated with firm performance but changes in GDP and firm performance are positively related. It suggests the heterogeneous impact of macroeconomic information on Vietnamese SOEs' performance. Additionally, due to socialist market economy reforms, we further show that SOEs are dominant influence in firm performance. We find no effects of taxation on firm performance after a series of deregulation of taxation. Next, we find a significant and

positive relationship between firm size and firm performance while no effect of the ratio of tangible fixed assets to total assets on firm performance. Therefore, our findings have produced several stylized facts regarding the strong impact of macroeconomic factors such as interest rate movement and growth in GDP on firm performance.

Several important policy implications emerge from our empirical results of macroeconomic news and firm performance of Vietnamese SOEs. First, interest rate is found to be significantly negative associated with firm performance but changes in GDP and firm performance are positively related. It suggests the heterogeneous impact of macroeconomic information on Vietnamese SOEs' performance. Targeting interest rates and changes in GDP may be feasible and desirable. Second, SOEs are more dominant influence in ROA and ROE, suggesting that SOEs improve firm performance. Fourth, Reforms of corporate governance improve relations of macroeconomic information and firm performances. Moreover, tax reform will be further advanced to make an important contribution to Vietnamese firm performance. Finally, this study fills a gap on empirical studies and we consider both macroeconomic and microeconomic variables rather than macroeconomic variables. Another important gap is that there are a few studies that used macro and micro economic variables to determine firm performance but their time period is very short. Therefore, our findings would shed more valuable insights on macroeconomic news and firm performances.

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