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Do firms with state ownership in transitional economies take more risk? Evidence from Vietnam

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ABSTRACT

Firms with government ownership in transitional economies are normally in advantageous position because they have many political and financial privileges. A question which naturally arises is that whether firms with government ownership need to take more risk to maintain competitive edge and obtain innovation. This paper sheds further light on that question by providing an investigation into the impact of government ownership on the firm's risk-taking behavior in Vietnam, a successful transitional economy. The study uses a number of econometric techniques of panel data estimation for efficient and consistent results. Overall, the paper reports that firms with higher state ownership tend to take less risk-taking activities. This finding has strong policy implications relating to the privatization strategy in transitional economies.

1. Introduction

Risk-taking behavior is an important area in business finance and management. Previous studies recognize that risk-taking activities are important for firm development and firm performance (Li and Liu 2017; Zhai et al., 2017). Further, previous papers highlight that corporate risk-taking behavior is influenced by ownership structure and corporate governance (Boubaker et al., 2016; Dong et al., 2017; Faccio et al., 2016; John et al., 2008; Nguyen 2011; Su et al., 2016), relying on the background that different types of shareholders have different objectives, risk preferences and investment horizon (Boyd and Solarino, 2016; Vo 2016). A clear understanding of corporate risk taking behavior is important for policy makers and firm managers in improving corporate governance mechanism in firms.

Both state ownership and corporate risk-taking behavior are of prime importance in transitional economies. A large proportion of the previous studies in the literature recognize that firms with state ownership in transitional economies have political and financial privileges over others. State ownership also offers policy and resource benefit (Zhou et al., 2017), which is critical for firm development. Meanwhile, firms need to take some risk to gain competitive advantage and obtain innovation. Hence, an important question which naturally arises is that whether firms with higher level of state ownership need to take extra risk to maintain competitive strength given the common access to financial and political privileges. The current paper addresses this important question by offering further insights into the link between state ownership and corporate risk-taking in Vietnam, a transitional economy.

The current paper is motivated from the extant but inconclusive literature relating to the relationship between state ownership and risk-taking behavior relying on several theoretical backgrounds. Specially, an important motivation is from the important role of large shareholder in corporate decision making process (Shleifer and Vishny, 1986). Recent evidence also suggests that ownership structure, particularly the role of states and institutions, strongly influence the technological innovation activities of firms. In this

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sense, different types of shareholders tend to behave differently with respect to risk-taking activities. Moreover, a huge volume of previous studies emphasize that ownership structure is an important driver of corporate risk taking (Boyd and Solarino, 2016; Jensen and Meckling, 1976). Previous studies also support the link between corporate culture and corporate risk taking (Hilary and Hui, 2009).

The increasing role of emerging markets offers another motivation for this study. There is a large volume of literature focusing on the context of the US and other advanced markets worldwide, however, little attention has been paid to this issue in transitional economies (Khaw et al., 2016). Recent evidence suggests that greater state ownership is associated with higher risk taking in emerging markets (Zhu and Yang, 2016). More importantly, the role of state ownership in firms in most of transitional economies tends to be more pronounced because state ownership is commonly associated with many political and financial privileges. It is clear that state ownership in emerging economies enables firms to have access to resources, however, firms with higher state ownership tend to be less efficient in using those resources to generate innovation (Zhou et al., 2017).

In addition, the interesting nature of Vietnam provides an important setting to study the link between state ownership and risk-taking behavior. Vietnam is a growing emerging country which successfully transforms from the centrally planned into market oriented economy. These transformations are the results of a wave of economic reforms starting from the 1986 Doi Moi comprehensive economic reform. Two important aspects of these reforms are the promotion of private sector and the privatization of large state-owned firms. These continuous reform efforts result in significant economic successes in the last two decades.

Even though Vietnamese government has made strong efforts, the reform process is still far from over. This historical background explains the fact that Vietnamese firms are largely dominated by residual state ownership and other state-owned firms. In addition, the investor protection standards remain weak and financial markets are still at the early stage of development. These unique institutional characteristics provide a natural framework to analyze the role of government shareholders on risk-taking behavior in Vietnamese firms.

As discussed above, the extant research literature remains inconclusive about the effect of state ownership on corporate risk-taking behavior. On the one hand, many papers assert that state ownership is negatively related to risk-taking activities. A common explanation for this proposition is that firms with large state ownership always in an advantageous position because they naturally have access to political and financial privileges. As a result, state owned firms do not have incentives to take risks because they have strong market advantages. This is supported by the argument that state ownership tends to be detrimental to innovative activities even though firms with higher state ownership have abundant resources for R&D activities (Zhou et al., 2017).

On the other hand, another strand of research suggests a positive relationship between the level of state ownership and corporate risk-taking activities. The argument to support this point is that firms with large state ownership are confident that they will receive government assistance if they are under financial distress (Wang et al., 2008). In addition, firms with higher state ownership have stronger bank connections and thereby demonstrate a higher degree of corporate risk taking because they have more resources to take more risky projects (Zhai et al., 2017). Increased competition also encourages state-owned firms to undertake risky projects to obtain competitive advantage resulting in a positive relation between state ownership and corporate risk taking activities. Many papers provide empirical evidence to support these arguments, for example Farag and Mallin (2016). Moreover, recent investigation by Uddin (2016) suggests a non-linear U-shaped relation between state ownership and risk-taking in the United Arab Emirates.

The paper documents some interesting findings. Notably, the result from this paper shows that firms with larger state ownership are associated with less risk-taking activities. There are two important issues arising from these results. Firstly, it is well-documented in the literature that firms should undertake a certain level of risk to obtain technological catch-up and innovation to achieve performance and competitive advantage. The result of a negative relationship between state-ownership and risk-taking activities suggests that firms with higher state ownership do not have the incentive to take risk on technological development for competitive advantage. This might be because firms with higher state ownership have financial and political advantage over other firms so that they do not have the incentive to take extra risk for innovation.

Secondly, previous studies also document that firms with lower corporate risk-taking activities are associated with higher agency problems. For example, Su et al. (2017) argue that in order to uphold private benefits, firms tend to reduce corporate risk-taking activities. In this respect, the result of a negative relationship between state ownership and risk-taking behavior indicates that firms with higher state ownership might be associated with higher agency problems. This has clear and relevant implications in the context of a transitional economy. More specially, the finding highlights the importance of privatization process to reduce the state holdings in firms for better corporate governance and lower agency problems.

The current paper makes two important contributions to the current literature. Firstly, this paper adds to the current literature an analysis of risk taking behavior of state owned firms in the context of a transitional economy. This is important since most of previous studies tend to focus on the advanced markets context while this study provides an assessment of the role of state ownership on corporate risk-taking behavior utilizing the unique institutional settings of the Vietnamese transitional economy where state-owned firms are still dominants. Secondly, this study highlights the importance of corporate ownership structure on corporate behavior. More specially, by showing a negative link between state ownership and corporate risk-taking behavior, I stress the important role of the internal corporate governance mechanism embedded in ownership structure. This contribution is critical in the context of a transitional economy which is normally characterised by weak institutions.

The remainder of the paper is outlined as follows. Section two delineates data and methodology to analyze the link between state ownership and corporate risk taking behavior. Section three shows the results and discussion of results. Section four concludes the paper.

2. Data and research methodology

2.1. Data

Data are collected from the Vietstock database. This is the most comprehensive and reliable financial data provider in Vietnam. The data sample covers most of firms listed on the Ho Chi Minh City stock exchange for the period from 2007 to 2015. I only include non-financial firms which are listed and remain listed for the period.

2.2. Model

To be consistent with previous research, I formulate the model to estimate the impact of state ownership on corporate risk-taking behavior as follows:

$$RiskTaking_{it} = \propto + \beta 1 * State_{it} + \gamma * Control_{it} + \varepsilon_{it}$$

where:

RiskTaking is the dependent variable measuring risk taking behavior. Similar to a number of previous studies (Barry et al., 2011; Boubakri et al., 2013; Faccio et al., 2011, 2016; Ferris et al., 2017; Ferris et al. forthcoming; John et al., 2008; Vo, 2016), I employ two modified Z-score measures. More specially, these two inverse risk indicators (RT1 & RT2) are respectively calculated as follows:

$$RT1_{it} = \frac{ROA_{it}}{6_{ROAi}} \text{ and } RT2_{it} = \frac{ROE_{it}}{6_{ROEi}}$$

where ROA_{it} and $ROE_{it}$are the return on assets and the return on equity respectively; 6_{ROAi} and 6_{ROEi} are the standard deviation of the return on assets and the standard deviation of the return on equity for firm i in the sample. These indicators are relevant in the context of Vietnam since they reflect the variability of corporate income. These measures are also consistent with the argument that firms are expected to have more volatile returns on investments if they invest in riskier projects and engage in riskier operation (Acharya et al., 2011; John et al., 2008; Mishra, 2011).

In this setting, since these indicators are inverse measures of risk-taking. Thereby, it is important to note that a higher value of these indicators suggests a lower level of risk-taking activities. This measures are common proxies for risk-taking in the extant literature (Chen et al., 2015).

- $STATE_{it}$ is the variable representing state ownership in firm, which is the percentage of state holdings in a firm at the end of the year.

- $Control_{it}$ is a set of control variables which are potentially explaining corporate risk-taking behavior. Particularly, the control variables include:

+ Firm size ($SIZE_{it}$), which is measured as the logarithm of the total assets at the end of the year.
+ Firm fixed assets (FIXED), which is measured as the ratio of total fixed assets to total assets.
+ Firm cash holdings (CASH), measured as the ratio of cash and cash equivalents to the total assets at year end.
+ and firm age (AGE), which is measured as the logarithm of one plus the number of years that firms listed on the exchange.

2.3. Descriptive statistics

Table 1 presents the descriptive statistics of the variables employed in the paper.

2.4. Correlation coefficients matrix

Table 2 presents correlation coefficients matrix between variables used in the paper. At initial glance, it is observed that the coefficients between state ownership variable and the two inverse measures of risk-taking are positive suggesting that higher state ownership in firms is associated with lower level of risk-taking behavior. Moreover, the table also indicates a positive link between the two inverse risk measures with firm size, fixed assets and level of cash holdings while reports a negative link between those and firm age.

Table 1
Descriptive Statistics.

	Mean	Median	Maximum	Minimum	Observations
RT1	2.1820	1.3425	48.7164	−55.1082	1849
RT2	2.2242	1.2109	166.2322	−85.7490	1844
STATE	11.0883	0.0000	96.7200	0.0000	2003
SIZE	11.6675	11.6015	14.1865	9.9457	1846
FIXED	0.2640	0.2174	0.9698	< 0.0001	2003
CASH	0.1017	0.0632	1.3560	0.0001	2003
AGE	1.5200	1.6094	2.8332	0.0000	2003

Table 2
Correlation coefficients matrix.

	RT1	RT2	STATE	SIZE	FIXED	CASH	AGE
RT1	1						
RT2	0.308	1					
STATE	0.082	0.054	1				
SIZE	0.223	0.131	−0.004	1			
FIXED	0.004	0.022	0.067	−0.014	1		
CASH	0.250	0.114	0.036	0.127	−0.126	1	
AGE	−0.104	−0.111	−0.012	0.017	−0.057	0.052	1

3. Results and discussion of results

In order to validate the initial finding from Table 2, I conduct multivariate regressions to explore the link between state ownership and corporate risk activities. Table 3 reports the regression results using different panel data estimation techniques. The use of both ordinary least squares and fixed effects provides a more consistent result since fixed effects analysis allows us to control for individual firm effects.

The results are interesting. Of particular note is that in most of the regressions, the estimated coefficients for state ownership variable are positive and significant. Since the higher value of the dependent variables suggest a lower value of risk-taking, I therefore conclude that firms with higher state ownership are significantly associated with less risk-taking activities. The finding of a negative link between the level of state ownership and the degree of risk-taking behavior is consistent with the result of some recent papers, for example, Khaw et al. (2016) and Boubakri et al. (2016) which suggest that increased state ownership reduces risk-taking.

The finding of a negative link between state ownership and risk-taking has opposite inferences. On the one hand, the lower level of risk taking activities in firms with higher level of state ownership might offer some assurance for investors and other related stakeholders. Many investors have preference for firms which do not pursue aggressive and risky investment strategy.

One the other hand, it is previously reported that firms with higher state ownership enjoy lower cost of financing and higher market valuation (Attig et al., 2009; Attig et al., 2008). The finding from this study tends to support the argument that firms with state ownership tends to enjoy political and financial advantages so that they do not have incentives to engage in risk-taking activities to gain competitive advantages. Further, a lower level of risk-taking activity gives rise to potential agency problems where firms tend to uphold private benefits. If firms follow conservative investment strategies and do not invest in risky innovative investment projects, they are slower than other firms in terms of building technological capability and competitiveness.

The estimates presented in the Table 3 also postulate important insights into the risk-taking behavior of Vietnamese firms. Firstly, the paper documents a negative link between firm age and risk measures. This finding highlights that well-established Vietnamese listed firms tend to pursue more risk-taking activities. Secondly, the study finds that the estimated coefficients for cash holdings are positive and significant and this implies that firms with more cash are associated with less risk-taking.

The results has relevant implications for shareholders in corporate monitoring practice to avoid agency problems and improve corporate performance. Particularly, firms should impart internal governance mechanism and control policy to address the agency problems. This issue is more contentious in transitional economies where shareholder protection and creditor right are weak.

Table 3
Regression Results.

Variable	Dependent Variable is RT1				Dependent Variable is RT2			
	Panel Least Squared		Panel Fixed Effects		Panel Least Squared		Panel Fixed Effects	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
C	−11.2809	0.0000	−25.9325	0.0000	−14.6419	0.0001	−30.8074	0.0024
STATE	0.0131***	0.0018	0.0014	0.8138	0.0193**	0.0458	0.0261*	0.0818
SIZE	1.1715***	0.0000	2.5743***	0.0000	1.5737***	0.0000	3.1604***	0.0003
FIXED	0.4440	0.2726	−1.2254*	0.0932	1.0627	0.2531	−0.0234	0.9899
CASH	7.6820***	0.0000	2.1546*	0.0586	7.6874***	0.0000	4.6555	0.1049
AGE	−0.7927***	0.0000	−1.1407***	0.0000	−1.7469***	0.0000	−2.8528***	0.0000
R- quared	0.1211		0.3762		0.0440		0.1872	
Adjusted R-Squared	0.1185		0.2497		0.0412		0.0220	
F-Statistics	46.7749		2.9733		15.5958		1.1332	
Prob F-statistics	0.0000		0.0000		0.0000		0.0801	
Obs	1703		1703		1700		1700	

Note: the symbols *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

4. Conclusion

Both state ownership in firms and corporate risk-taking activities in transitional economies are interesting topics on their own merit. Investigating this nexus in transitional economies is even more important because these countries are characterised by weak institutions and high uncertainty (Luo et al., 2017). Further, the privatization of state-owned firms and ownership restructuring are pivotal economic reforms to promote economic growth in transitional economies. Particularly, ownership restructuring is recognized as an important mechanism to strengthen accountability and create incentives for corporate governance. More importantly, it is argued that risk avoidance decreases because risk-sharing opportunity is more available in a developed financial markets (Acemoglu and Zilibotti, 1997; Ferris et al., forthcoming). Thus, a clear understanding of the impact of ownership structure on corporate activities is critical for the design and implementation of policy in transitional economies.

This paper offers further insight into the link between state ownership and risk-taking behavior in an important transitional economy, Vietnam. The paper uses a comprehensive and detailed data set of accounting and market data for firms listed on the Ho Chi Minh City stock exchange for the period 2007–2015. Employing a number of estimation techniques for panel data, the paper consistently finds that firms with higher level of state ownership tend to take less risk in their operational strategies. This implies that firms with large state ownership tend to enjoy political and financial privileges and do not have strong incentives to take risk in their strategies.

This paper has strong policy implications in the context of transitional economies where investor protection is normally weaker than in the developed countries. More specially, risk-taking activities by firms in weak investor protection countries may reflect potential expropriation (John et al., 2008). Further, Acharya et al. (2011) also state that firms reduce risk taking activities in a country with a strong creditor right. However, it is important to note that risk-taking is vital for the development of a firm (Faccio et al., 2011) because risk-taking allows firms to achieve competitive edge and innovation.

Other studies argue that a strong motivation for firms to reduce corporate risk taking activities is to safeguard private benefits (Su et al., 2017). Hence, it is necessary to create a stronger investor protection environment for firms to undertake extra risks to gain competitive advantages. Chen et al. (2014) uses the transaction cost and agency theories embedded in an emerging market context to suggest that ownership structure provides an important mechanism by which firms can assemble and direct resources necessary for innovation. In addition, controlling for managerial compensation scheme could induce firm managers to take more risk by adopting and implementing more risky policy choices (Bolton et al., 2015; Coles et al., 2006).

This study is also relevant for policy makers in the privatization process of state owned firms in transitional economies. In particular, the results support the previous argument that in transitional countries where privatization is an important strategy to create a level-playing field for all firms, especially small and medium private firms. Further, the policy makers in these transitional countries may encourage corporate ownership structure which favor multiple large shareholders instead of a dominant shareholder (Mishra, 2011). However, it is posited that risk-taking activities are important for firm to obtain sustainable value creation (Wright et al., 1996; Zhai et al., 2017). More importantly, the paper is also important for policy makers in the sense that risk-taking activities in the form of technological development and innovation are important because technological capacity strongly explains financial performance and firm growth (Choi et al., 2012). This should be in tandem with the crafting of policy to improve the quality of risk management mechanisms and disclosure by firms (Akbar et al., 2017).

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