

Political patronage and capital structure in China

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Abstract

This paper empirically examines the determinants of capital structure using 876,353 Chinese firm-year observations during the 1998-2007 period. Consistent with the general finding in developed markets, we find that long-term debt ratios are positively related to firm size and asset tangibility but negative related to profitability and growth opportunities in China. We also find that long-term debt ratios are positively related to state ownership and legal person institutional ownership, which appears to suggest that firms with more government stake are more likely to receive long-term loans from banks. These results are not driven by time series effects and remain strong when we use alternative proxies for firm size, growth opportunities and profitability.

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1. Introduction

The choice of capital structure is a well-studied question given a large body of theoretical literature but in the meanwhile it also looks like a question that we don't know much about due to conflicting findings in the empirical literature (Myers 1984). On the theory side, many efforts are being made to resolve this question from a tax-bankruptcy trade-off perspective (Modigliani and Miller 1958, Modigliani and Miller 1963), from an informational asymmetry perspective (Myers 1984, Myers and Majluf 1984), from agency problem perspective (Jensen and Meckling 1976, Jensen 1986), and from a market-timing perspective (Baker and Wurgler 2002). Although many studies on the empirical side do lend support to those established theories, a lot more do not find consistent evidence thus the empirical literature is as indeterminate as the theoretical one. In this paper, we use a large sample of non-listed firms to examine the choice of capital structure of firms in the context of a developing country. We are not intended to test any specific theory of capital structure but to see whether the stylized facts that we have learned from studies of developed countries can be extended to emerging markets.

China is of particular interest for at least two reasons – its rapidly growing economic importance and its developing transition emerging-markets economy. First, due to the increased economic importance during the past thirty years, China has now become the second largest economy only after the US and its significance will continue to grow in the coming decade. Thus never before in the past has getting to know China been more important than now. However, in sharp contrast to the knowledge that we gain in US and other developed economies, very little is known about determinants of capital structure for firms in China and other emerging markets. Second, there is a growing literature which is focused on the implications of political connections. Evidence suggests that political connections help firms to secure favorable regulatory conditions (Agrawal and Knoeber 2001), access to resources such as bank loans (Khwaja and Mian 2005, Faccio 2006, Fraser et al. 2006) and equity markets (Francis et al. 2009), and ultimately influence firm value or corporate performance in a variety of ways (Fisman 2001, Dewenter and Malatesta 2001, Johnson and Mitton 2003, Fan et al. 2007, Tian and Estrin 2008, Boubakri et al. 2009, Ng et al. 2009, Boubakri et al. 2010, Chen et al. 2010). It seems that the influence of political connections in emerging markets is a norm rather than an exception. China has begun transforming its economy from centrally-planned to market-oriented since 1978. For historical reasons, the majority of firms and banks are state-owned or controlled which facilitates us to study on the effect of political connection. Thus it is

interesting to see whether scarce financial resources such as bank loans in China where other outside financing choices are virtually blocked are as skewed toward politically connected firms as they are in other emerging economies.

We hypothesize that Chinese firms with stronger political connections should carry more debts. We use two firm-specific variables to measure the changing level of political patronage that firms might receive – state ownership and LP institutional ownership. These two measures are defined as the proportional of shares outstanding owned by the state or other government-controlled legal entities, designed to capture the direct and indirect interest of the central government in the firm respectively. They correspond to the interest of the state in different ways thus they can capture the influence of political connection on debt ratios to some extent if political connections do matter.

The empirical results support this political patronage hypothesis. We first examine the determinant of capital structure and consider those firm characteristics following the literature. We find that long-term debt ratios are positively related to firm size and asset tangibility but negatively related to profitability and growth opportunities, consistent with the general findings in the literature. These results remain strong and reliable even when we use alternative proxies for firm size, growth opportunities and profitability. Then we add in two political variables to examine whether they can show extra explanatory power to the long-term debt ratios. We find that holding constant the other common determinants, long-term debt ratios are positively related to state ownership and LP institutional ownership, consistent with the political patronage hypothesis that long-term debt ratios for those politically favored firms tend to be higher. These findings are not driven by time series effects and obtain not only in the overall sample, but also in a variety of subsamples such as large- and medium-sized firms versus small-sized firms, state-owned firms versus non state-owned firms.

We contribute to the literature in at least two respects. First, our findings in a broader sense can be a useful extension to the existing literature which is entirely focused on the listed sector from developed and developing countries such as Rajan and Zingales (1995) and Booth et al. (2001). In addition to some common determinants such as firm size, growth opportunities, profitability and asset tangibility, we show that state ownership and LP ownership can also explain the choice of capital structure. In a narrow sense, our study adds to the understanding of capital structure choice of Chinese firms. Several studies attempt to examine established theories of capital structure using Chinese listed firms and they appear to find consistent evidence to some extent such as Huang and Song (2006), Shen et al. (2009) and Wang and

Hong (2009). We complement this strand of studies by using a sample of non-listed firms. Since public listing only goes to a very tiny proportion of Chinese firms, listed firms are overwhelmingly outnumbered so the conclusion based on these non-listed firms should be fairly general.

Second, our findings also add to the literature which is specifically focused on the implications of political connections. We do not look into firm performance as those studies do but capital structure of Chinese firms instead. We provide empirical evidence that political connections are important for firms which wish to receive bank credit allocation in China, an emerging market in which the banking industry is dominated by state-controlled banks. This finding is similar to the case of Malaysia and consistent with results of several recent studies on bank credit allocation in China such as Firth et al. (2009) and Li et al. (2008). The former reports that having the state as a minority owner helps firms to obtain bank loans while the latter shows that party membership serves the same purpose as state ownership in private firms.

The remainder of the paper is organized as follows. Section 2 outlines the empirical literature and develops the hypotheses in this study. Section 3 describes our unique data. We present empirical results in section 4 and robustness check in Section 5. Section 5 provides a concluding remarks.

2. Literature and hypotheses

We empirically examine the determinants of capital structure of Chinese non-listed firms. To this end, we are intended to answer the following two questions. The first question we examine is whether firm characteristics explaining capital structure in the developed countries show explanatory power in the Chinese context. We use multiple regression analysis to answer this question. The dependant variable, the ratio of long-term liabilities to total assets (*LTD*), is regressed on a set of variables describing firm characteristics on several respects according to the findings in the literature. We choose *LTD* over the ratio of total liabilities to total assets and the ratio of total liabilities to total equities as our major financing variable because (1) short-term liabilities include many items unrelated to bank loans such as accounts payable, wages payable and benefits payable to employee and the NBS data do not allow us to separate these items from bank borrowing directly, and (2) factors found to be relevant for long-term borrowing can be applied to the short-term borrowing. In particular, we consider the following regression:

$$LTD_{it} = \beta_0 + \beta_1 Size_{it-1} + \beta_2 Growth_{it-1} + \beta_3 Profitability_{it-1} + \beta_4 Tangible_{it-1} + \beta_5 Tax_{it-1} + \beta_6 SGA_{it-1} + \beta_7 SectorLTD_{it-1} + \varepsilon_{it-1} \quad (1)$$

Equation (1) is motivated by the general finding in the capital structure literature that debt ratios are positively related to firm size and asset tangibility while negatively related to profitability and growth opportunities¹. Large firms tend to accumulate more debts because they are more likely to be well diversified thus associated with low default risks. Profitable firms tend to have fewer debts since they face a low cost of financial distress, a more serious agency problem of free cash flows or a more valuable interest tax shield. The free cash flow problem is less pronounced for growth firms so they tend to have fewer debts to discipline management. The valuation uncertainty of tangible assets is lower than that of intangibles thus firms with a larger proportion of tangible assets tend to face lower costs of financial distress so more debts will result. The control variables also include the average tax rate (*Tax*) to measure the extent of interest tax shields, the ratio of sales, general and administration expenses to sales revenues (*SGA*) to account for the uniqueness of products or the specialized labor, sector average of debt ratios (*Sector_LTD*) to capture sector conditions.

The second question is whether political patronage documented to be prevailing in other emerging markets is also common to the borrowing of Chinese non-listed firms. There are a growing number of papers which study the implications of political connections. Evidence suggests that political connections help firms to secure favorable regulatory conditions (Agrawal and Knoeber 2001), access to resources such as bank loans (Khwaja and Mian 2005, Faccio 2006, Fraser et al. 2006) and equity markets (Francis et al. 2009), and ultimately influence firm value or corporate performance in a variety of ways (Fisman 2001, Dewenter and Malatesta 2001, Johnson and Mitton 2003, Fan et al. 2007, Tian and Estrin 2008, Boubakri et al. 2009, Ng et al. 2009, Boubakri et al. 2010, Chen et al. 2010). It is therefore interesting to find out whether political connections help firms to obtain more debts. To answer this question, we estimate the following three equations:

$$LTD_{it} = \beta_0 + \beta_1 Size_{it-1} + \beta_2 Growth_{it-1} + \beta_3 Profitability_{it-1} + \beta_4 Tangible_{it-1} + \beta_5 Tax_{it-1} + \beta_6 SGA_{it-1} + \beta_7 SectorLTD_{it-1} + \beta_8 Political_{it-1} + \varepsilon_{it-1} \quad (2)$$

¹ See, for example, Harris and Raviv (1991), Titman and Wessels (1989), Frank and Goyal (2009).

where *Political* is the additional variable to control for the proportion of state holding in the firm. If political patronage does matter in the Chinese context, the coefficients on *Political* in (2) should be positive.

3. Data

Our unique data come from the National Basic Unit Census conducted by the National Bureau of Statistics (NBS) of P.R. China. The NBS data comprise balance sheets, income statements, ownership structure, registered type of firms, industry code and geographical code among others for all SOEs and other non-state firms with sale revenues over 5 million RMB Yuan from 1998 to 2007. Most firms included in this dataset operate in the manufacturing industry, only a smaller number of firms in industries of mining and utilities.

We require that a firm must be present in at least three adjacent years so that we can calculate the one-year lagged value of firm size, asset tangibility, profitability and growth opportunities among others. We trim both the top 1% and the bottom 1% of every variable to reduce the influence of outliers. Our final sample comprises 876,353 firm-year observations during the 1998-2007 period.

Panel A in Table 1 provides summary statistics for overall sample. The political variables of our main interest are state ownership (State) and LP institutional ownership (LP), the same as or very similar in essence to those used in Wei et al. (2005), Fraser (2006), Tian and Estrin (2008), Wang et al. (2008), Ng et al. (2009), Francis et al. (2009), and Chen et al. (2010). On average, state shares and LP institutional shares account for 12% and 22% of shares outstanding respectively. State shares and LP institutional shares represent the direct and indirect holding of the state in the firm respectively. The state directly owns some 21% of shares in large and medium-sized firms, while just 10% in small-sized firms. This difference is more striking for state and non-state firms, with some 25% for the former and merely 1% for the latter. By contrast, there is no much difference in the proportion of LP institutional shares in the firms. The institutional holding in firms is within the range of somewhere between 20 to 24%. Large and medium-sized firms tend to have more growth opportunities, more tangible assets but its financial performance is weaker than small-sized ones. State firms tend to be more tangible and larger in firm size than non-state firms but the latter is stronger in financial performance and growth opportunities.

[Table 1 around here]

Panel B presents descriptive statistics by year. Inspection of Panel B reveal that while long-term debt ratios steadily drop from 8.15% in 2000 to 3.69% in 2007, the period has seen a much more dramatic fall in state ownership from 26.43% to 3.92% and a mild increase in LP institutional ownership, from 16.22% to 25.97%. We also notice that as three different proxies for firm size, total assets, sales revenues and employees give us a very different picture of firm size changing over time. Total assets do not vary much from 2000 to 2007, but sales revenues and employees seem to be increasing and decreasing respectively. Assets growth, sales growth and capital expenditure growth are three alternative measures of growth opportunities under this study. There seems to be a growing trend associated with sales growth but no clear trend for the other two. Three alternative profitability measures – EBIT, ROA, and ROE – appear to be increasing over time, and this growing pattern is most evident with EBIT.

4. Empirical Analysis

4.1 Correlation

We first examine the unconditional correlation between long-term debt ratios, state ownership, LP institutional ownership, and other firm characteristics. Table 2 presents the preliminary evidence on the determinants of long-term debt borrowing.

[Table 2 around here]

In this unconditional correlation analysis, long-term debt ratios do not seem to be positively correlated with these variables except for state ownership ($=0.21$), total assets ($=0.17$), employees ($=0.14$) and the sector average of LTD ($=0.31$), which suggests that state ownership, size, and the sector average are among the important determinants of long-term debt ratios. We note that three proxies for firm size, growth opportunities and profitability are highly correlated with on another so we cannot include them all in the same regression model. We do not find other variables highly correlated each other so the multicollinearity problem is not severe.

4.2 Determinants of Long-term Debt Ratios

To answer the first question whether firm characteristics explaining capital structure in the developed countries show explanatory power in the Chinese context, we estimate the equation (1). We use three alternative measures for firm size – log of total assets (*Assets*), log of sales revenues (*Sales*), and log of

employees (*Employees*). We use three alternative growth measures – assets growth (*Assets_g*), sales growth (*Sales_g*), and capital expenditure growth (*CapExp_g*). We also use three alternative profitability variables – *EBIT*, *ROA* and *ROE*. Table 3 summarizes regression results, with t-statistics in parentheses calculated using White's (1980) robust standard errors.

[Table 3 around here]

Consistent with the general findings in the literature, these regression results show that long-term debt ratios are positively related to firm size and asset tangibility, but negatively related to profitability and growth opportunities, significant at the 1% level in most cases. Those coefficients on *SGA* and sector average of debt ratios are both significantly positive but coefficients on *Tax* are not significantly different from zero, which seems to suggest that the risks associated with the uniqueness of products or specialized labor have impact on the amount of long-term loans that firms can borrow from banks, but the tax incentive does not appear to prevail in the Chinese context.

We compare three alternative size measures in Model 1-3, leaving other controls unchanged and we find that total assets seem to dominate the other two size variables in explaining long-term debt ratios. We compare three alternative growth measures in Model 1, Model 4 and 5, and we find that the growth in capital expenditures appears to be a better growth variable than the growth in total assets and the growth in sales since it comes with a better adjusted R^2 . We also compare three profitability measures in Model 5, Model 6 and Model 7 where we keep total assets as the only size variable and capital expenditure growth as the only growth variable. In terms of adjusted R^2 , we find that *ROA* seems to beat the others.

4.3 Tests for the Political Patronage Hypothesis

We have identified that total assets, the growth in capital expenditure, *ROA*, asset tangibility, *SGA*, and the sector average LTD are firm characteristics explaining the long-term debt ratios. To answer the second question whether political patronage matters in the long-term borrowing of Chinese non-listed firms, we estimate the equation (2). Under the political patronage hypothesis, we expect the coefficients on both *State* and *LP* to be positive. Results in Table 4 generally support this prediction, with t-statistics in parentheses calculated using White's (1980) robust standard errors.

[Table 4 around here]

The coefficient on *State* is positive and significant when *State* is the only political variable in Model 8. The coefficient on *LP* is positive and significant as well when *LP* is the only political variable in Model 9. When we include these two political variables and control for each other in Model 10, coefficients on *State* and *LP* are both positive and significant at the 1% level. They are both positively correlated with long-term debt ratios, consistent with the political patronage hypothesis that the amount of bank loans accumulated in the firm tends to increase in the government's direct and indirect interest in the firm. The positive relation between long-term debt ratios and state ownership (LP institutional ownership) is not driven by the other firm characteristics.

We notice that after including political variables, all capital structure variables remain strong and significant except for *SGA*. The coefficients of *SGA* become insignificant in both Model 8 and 10, which implies that the uniqueness of products or specialized labor associated with *SGA* appears to be subsumed into *State*. This result can be consistent with some major principles of economic and SOE reforms that the state sector should remain predominated in key industries and areas which have a vital bearing to the lifelines of the national economy and state security. In this sense, *State* and *SGA* are correlated to some extent.

The political patronage hypothesis holds not only in the overall sample but also two subsamples. We compare the determinants of long-term debt ratios for large firms with those for small firms. We use the standard classification code² which prevails to break down firms into large, medium and small. Large-sized enterprises must have total number of employees no less than 2000, sales revenues over 30 million RMB, and total assets valued no less than 40 million RMB; medium-sized enterprises should have at least 300 employee, 3 million RMB sales revenues and 4 million RMB total assets; the rest are classified as small-sized enterprises. After the introduction of the *zhuada fangxiao* (literally in English as 'retain the large and release the small') policy in 1994, the state started to reduce holding in medium- and small-sized enterprises which do not have a vital bearing on the lifeline of national economy and state security. Thus it is interesting to see whether the political patronage hypothesis equally holds between large- and medium-sized firms and small-sized firms. Results of Model 13 and 16 in Table 4 show that the government ownership is as important in large- and medium-sized firm as in small-sized firms. Other

² Notice on Printing and Distributing the Measures for the Statistical Classification of Large, Medium and Small-sized Enterprises (for Trial Implementation) (No. 17 [2003] of the State Statistics Bureau) promulgated by the State Statistics Bureau and Notice on Printing and Distributing the Interim Provisions on the Standards for Medium and Small-sized Enterprises (No.143 [2003] of the State Economic and Trade Commission) promulgated by the former State Economic and Trade Commission, the former State Planning Commission, the Ministry of Finance and the State Statistics Bureau.

things being equal, firms with government ownership tend to have more debts and this tendency appears to increase in the proportion of government holding in the firm. Both direct and indirect holdings matter!

The determinants of long-term debt ratios between these two types of firms are slightly different in two respects. The coefficient on *SGA* is positive and marginally significant in large- and medium-sized firms but insignificant in small firms, while the coefficient on *Tax* is not significant in small firms but negative and significant in small-sized firms. Since the *SGA* variable is intended to capture the uniqueness of firms associated with their products or specialized labors, this difference can be attributed to the fact that products or specialized labors are fairly similar across smaller firms but very different among large and medium-sized firms even after controlling for state ownership and LP institutional ownership. The tax motive appears to be different between these two subsamples. Large- and medium-sized firms characterized with more government interest can look to the state for help when they are in financial trouble so their use of debts can be at least less independent of the average tax rate. Small-sized firms should borrow from banks to reduce taxable income, minimizing the money going towards the government. The insignificant relation between *LTD* and *Tax* for large- and medium-sized firms seems to be plausible due to the soft budget constraint but the negative relation for small-sized firms does not appear to be intuitive. We will revisit this issue later.

We compare the determinants of long-term debt ratios for state firms and those for non-state firms in Table 5. Firms can be loosely grouped into the following types: domestics, domestic collectives, joint-stock cooperatives, limited-liability, shareholding, HK/Macao/Taiwan wholly-owned ventures, HK/Macao/Taiwan joint ventures, foreign joint ventures, foreign wholly-owned, domestic private, and overseas. There is a further breakdown within each type between state and non-state so we can separate firms that belong to the state from the others.

[Table 5 around here]

We make a few interesting observations here: first, while long-term debt ratios increase with state ownership in both types of firms, LP institutional ownership seems to influence the choice of long-term debt ratios in completely different ways – the coefficient on LP is negative in Model 19 for state firms but positive in Model 22 for non-state firms. This difference seems to imply that LP institutional ownership does not help state firms to obtain more long-term financing from banks at all. Rather, state firms with more LP institutional holding in the firm find it difficult to borrow; second, long-term debt ratios become negatively correlated with the average tax rate in state firms but remain unrelated to the latter in

non-state sample. This difference is quite puzzling since state firms which face the soft budget constraint should have less incentive to borrow against corporate income tax. This result just shows the opposite. We will revisit the tax issue and the uniqueness issue among others when we take account of possible time series effect in the next section.

5. Robustness Tests: Time Series Effects

It is plausible our findings, including the positive relation between state ownership and long-term debt ratios and the puzzling negative relation between the average tax rate and long-term debt ratios, can be driven by time series effect, given that China's macroeconomic factors such as unemployment rates, interest rates, and other global economic events differ from year to year during the sample period from 1998-2007. To ensure that our results are not driven by any time series pattern, we follow the Fama-MacBeth procedure (Fama and MacBeth 1973) to re-estimate the coefficients on *State* and *LP* among others. Specifically, we first regress long-term debt ratios on firm characteristics for every year and then compute the time series average and standard deviation of coefficients for each and every variable.

[Table 6 around here]

Table 6 provides regression results when we take account of time series effects. Overall the coefficients on *State* and *LP* are positive and significant, which is common to results reported in Table 5. The positive relation between state ownership and long-term debt ratios is strong for all types of firms except non-state ones. The relation is particularly important for small-sized firms but less pronounced for non-state firms. The positive relation between LP institutional ownership and long-term debt ratios is evident in all types of firms except state ones.

Further insights obtains when controlling for time series effects. First, compared with results in Table 4 and 5, total assets, asset tangibility and the sector average continue to show strong power in explaining long-term debt ratios. However, the negative relation between long-term debt ratios and profitability and growth opportunities disappear. They are more likely to be driven by the time series effect thus do not seem to be reliable predictors. Second, the tax motive is not likely to hold given all the coefficients on *Tax* is not significant which suggest that Chinese firms usually apply for bank loans for reasons other than tax concerns. Third, the limited explanatory power of *SGA* that shows up in Table 4

and Table 5, associated with large and medium-sized firms can be driven by some macroeconomic factors which change over time and happen to coincide with the uniqueness of products or specialized labors. After we control for time series effects, the coefficient on SGA is no longer significant in any subsample. Finally, the sector average of long-term debt ratios appears to be a very reliable predictor since it survives from all tests in Table 3-6.

6. Conclusion

We study capital structure for a sample of 867,353 Chinese firm-year observations over the 1998-2007 period. The long-term debt ratio tends to be higher for larger state-owned firms which are less profitable. Both the long-term debt ratios and firm characteristics seem to change over time. There is a tendency for the long-term debt ratio to steadily decrease from 8.15% in 2000 to 3.69% in 2007, for state ownership to dramatically drop from 26.43% in 2000 to 3.92% in 2007, for LP institutional ownership to increase from 16.22% in 2000 to 25.97% in 2007. We investigate the determinant of long-term debt ratios of Chinese non-listed firms and empirically examine the political patronage hypothesis which holds that state ownership help firms to receive more long-term loans from banks in a country where the banking industry is dominated by state-controlled banks.

To test for this hypothesis, we first examine the determinants of long-term debt ratios following the literature. We find that firm size, growth opportunities, profitability, asset tangibility, the sector average of long-term debt ratio are related to long-term debt ratios. Results also suggest that total assets is a better proxy for firm size than sales revenues and the number of employees, that the growth in capital expenditure outperforms the growth in total assets and the growth in sales revenues, that ROA seems to be better than EBIT and ROE in predicting long-term debt ratios.

We then consider two political variables to proxy for the government ownership stake in the firm – state ownership and LP institutional ownership. The former captures the direct interest while the latter reflects the indirect interest of the state in the firm. When we relate these two political variables to the long-term debt ratios and control for other common determinants, we find that the long-term debt ratios tend to be higher for firms with more government ownership stake, consistent with the political patronage hypothesis. This positive relation not only holds in the overall subsample but also persists in large- and medium-sized firm, small-sized firms, state firms and non-state firms. This result remains

strong even when we take into account the time series effects. After adjusting for potential time series effects following the Fama-Macbeth procedure, only firm size, asset tangibility, and the sector average survive as well as two political variables. Profitability and growth opportunities do not appear to matter in the long-term borrowing in China.

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Table 1: Descriptive statistics

This table provides summary statistics on variables used in this study. *State* is the proportional of state shares in the firm held by state organs or government agencies; *LP* is the proportion of LP shares in the firm by the domestic and overseas institutions, firms or other entities with legal person status; *LTD* is the proportion of long-term debts in total assets; *Assets* is the logarithm of total assets; *Sales* is the logarithm of sales revenues; *Employees* is the logarithm of total number of employees; *Assets_g* is the growth in total assets; *Sales_g* is the growth in sales revenues; *CapExp_g* is the growth in capital expenditure; *EBIT* is earnings before interests and taxes; *ROA* is net incomes on total assets; *ROE* is net incomes on total equities; *Tangible* is the proportion of tangible assets in total assets; *Tax* is the average tax rate, estimated using income tax payable over earnings before income tax; *SGA* is the proportion of Sales, General and Administration Expenses on sales revenues; *SectorLTD* is the sector average of long-term debt ratios.

Panel A

	Full ()		Large ()		Small ()		State ()		Non-stat ()	
	Mean	St.dev.	Mean	St.dev.	Mean	St.dev.	Mean	St.dev.	Mean	St.dev.
<i>State</i>	0.1159	0.3067	0.2109	0.3812	0.1000	0.2894	0.2539	0.4203	0.0121	0.0844
<i>LP</i>	0.2188	0.3809	0.2395	0.3796	0.2153	0.3811	0.2364	0.3951	0.2037	0.3683
<i>LTD</i>	0.0522	0.1080	0.0842	0.1238	0.0469	0.1042	0.0752	0.1253	0.0349	0.0890
<i>Assets</i>	4.3088	0.6324	5.1664	0.5212	4.1657	0.5274	4.3703	0.7017	4.2632	0.5717
<i>Sales</i>	4.3846	0.5975	5.0802	0.5388	4.2686	0.5234	4.3223	0.6986	4.4318	0.5046
<i>Employees</i>	2.1592	0.4958	2.8487	0.4039	2.0441	0.4086	2.2310	0.5445	2.1054	0.4490
<i>Assets_g</i>	0.0591	0.1880	0.0683	0.1635	0.0576	0.1918	0.0442	0.1756	0.0705	0.1960
<i>Sales_g</i>	0.0768	0.2324	0.0888	0.2081	0.0748	0.2362	0.0565	0.2342	0.0922	0.2298
<i>CapExp_g</i>	-0.0087	1.0594	-0.0075	0.3145	-0.0089	1.1371	-0.0046	1.2661	-0.0118	0.8794
<i>EBIT</i>	0.0920	0.2256	0.0634	0.1155	0.0968	0.2388	0.0783	0.1979	0.1023	0.2435
<i>ROA</i>	0.0655	0.1946	0.0405	0.1058	0.0697	0.2054	0.0515	0.1786	0.0760	0.2047
<i>ROE</i>	0.1593	0.8359	0.0908	0.3908	0.1708	0.8882	0.1276	0.8681	0.1832	0.8112
<i>Tangible</i>	0.3432	0.8342	0.3578	0.2590	0.3407	0.8949	0.3596	1.2467	0.3308	0.2402
<i>Tax</i>	0.1622	1.6549	0.1844	2.4308	0.1585	1.4865	0.1834	2.3125	0.1464	0.8990
<i>SGA</i>	0.1210	0.7335	0.1309	0.3385	0.1193	0.7801	0.1617	1.0848	0.0903	0.2273
<i>SectorLTD</i>	0.0552	0.0350	0.0646	0.0421	0.0537	0.0334	0.0700	0.0412	0.0441	0.0241

Table 1: Descriptive statistics (continued)

This table provides summary statistics on variables used in this study. *State* is the proportional of state shares in the firm held by state organs or government agencies; *LP* is the proportion of LP shares in the firm by the domestic and overseas institutions, firms or other entities with legal person status; *LTD* is the proportion of long-term debts in total assets; *Assets* is the logarithm of total assets; *Sales* is the logarithm of sales revenues; *Employees* is the logarithm of total number of employees; *Assets_g* is the growth in total assets; *Sales_g* is the growth in sales revenues; *CapExp_g* is the growth in capital expenditure; *EBIT* is earnings before interests and taxes; *ROA* is net incomes on total assets; *ROE* is net incomes on total equities; *Tangible* is the proportion of tangible assets in total assets; *Tax* is the average tax rate, estimated using income tax payable over earnings before income tax; *SGA* is the proportion of Sales, General and Administration Expenses on sales revenues; *SectorLTD* is the sector average of long-term debt ratios.

Panel B: Descriptive Statistics by Year

	Full	2000	2001	2002	2003	2004	2005	2006	2007
<i>State</i>	0.1159	0.2643	0.2391	0.1985	0.1478	0.1141	0.0855	0.0558	0.0392
<i>PL</i>	0.2188	0.1622	0.1726	0.1803	0.2051	0.2090	0.2266	0.2402	0.2597
<i>LTD</i>	0.0522	0.0815	0.0756	0.0690	0.0612	0.0524	0.0465	0.0388	0.0369
<i>Assets</i>	4.3088	4.2738	4.2964	4.3024	4.2952	4.3466	4.3245	4.2902	4.3259
<i>Sales</i>	4.3846	4.1952	4.2348	4.2652	4.3110	4.3904	4.4358	4.4443	4.5082
<i>Employees</i>	2.1592	2.2487	2.2336	2.2203	2.1954	2.1941	2.1671	2.0998	2.0891
<i>Assets_g</i>	0.0591	0.0322	0.0313	0.0309	0.0441	0.0631	0.0444	0.0940	0.0732
<i>Sales_g</i>	0.0768	0.0263	0.0441	0.0288	0.0541	0.0824	0.0896	0.1064	0.1011
<i>CapExp_g</i>	-0.0087	-0.0080	-0.0027	0.0075	-0.0070	-0.0148	0.0080	-0.0257	-0.0104
<i>EBIT</i>	0.0920	0.0734	0.0728	0.0717	0.0777	0.0767	0.0912	0.1051	0.1169
<i>ROA</i>	0.0655	0.0452	0.0472	0.0474	0.0522	0.0535	0.0637	0.0780	0.0890
<i>ROE</i>	0.1593	0.1126	0.1111	0.1118	0.1289	0.1310	0.1435	0.1923	0.2211
<i>Tangible</i>	0.3432	0.3645	0.3611	0.3677	0.3494	0.3361	0.3464	0.3309	0.3280
<i>Tax</i>	0.1622	0.1672	0.1671	0.1641	0.1702	0.1667	0.1676	0.1512	0.1587
<i>SGA</i>	0.1210	0.1691	0.1627	0.1633	0.1371	0.1229	0.1090	0.0979	0.0896
<i>SectorLTD</i>	0.0552	0.0836	0.0784	0.0731	0.0645	0.0581	0.0505	0.0416	0.0381

Table 2: Correlation Matrix

This table provides correlation coefficients among variables used in this study. *State* is the proportional of state shares in the firm held by state organs or government agencies; *LP* is the proportion of LP shares in the firm by the domestic and overseas institutions, firms or other entities with legal person status; *LTD* is the proportion of long-term debts in total assets; *Assets* is the logarithm of total assets; *Sales* is the logarithm of sales revenues; *Employees* is the logarithm of total number of employees; *Assets_g* is the growth in total assets; *Sales_g* is the growth in sales revenues; *CapExp_g* is the growth in capital expenditure; *EBIT* is earnings before interests and taxes; *ROA* is net incomes on total assets; *ROE* is net incomes on total equities; *Tangible* is the proportion of tangible assets in total assets; *Tax* is the average tax rate, estimated using income tax payable over earnings before income tax; *SGA* is the proportion of Sales, General and Administration Expenses on sales revenues; *SectorLTD* is the sector average of long-term debt ratios.

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
State	(1)	1.00	-0.20	0.21	0.11	-0.17	0.12	-0.07	-0.08	0.00	-0.12	-0.12	-0.08	0.04	0.00	0.08	0.44
LP	(2)	-0.20	1.00	0.00	0.06	0.08	0.01	0.02	0.03	0.00	0.02	0.02	0.01	0.00	0.00	-0.01	-0.04
LTD	(3)	0.21	0.00	1.00	0.17	0.03	0.14	-0.02	-0.02	0.00	-0.04	-0.05	-0.02	0.04	0.00	0.02	0.31
Assets	(4)	0.11	0.06	0.17	1.00	0.75	0.69	0.13	0.04	0.00	-0.15	-0.14	-0.08	0.00	0.00	0.01	0.15
Sales	(5)	-0.17	0.08	0.03	0.75	1.00	0.62	0.11	0.25	0.00	0.13	0.12	0.08	-0.02	0.01	-0.10	-0.08
Employees	(6)	0.12	0.01	0.14	0.69	0.62	1.00	0.02	0.02	0.00	-0.06	-0.07	-0.04	0.01	0.01	0.01	0.13
Assets_g	(7)	-0.07	0.02	-0.02	0.13	0.11	0.02	1.00	0.32	-0.04	-0.01	0.00	0.01	-0.04	0.00	-0.02	-0.07
Sales_g	(8)	-0.08	0.03	-0.02	0.04	0.25	0.02	0.32	1.00	-0.01	0.14	0.14	0.10	0.00	0.00	-0.09	-0.06
CapExp_g	(9)	0.00	0.00	0.00	0.00	0.00	0.00	-0.04	-0.01	1.00	0.00	0.00	0.00	0.75	0.00	0.00	0.00
EBIT	(10)	-0.12	0.02	-0.04	-0.15	0.13	-0.06	-0.01	0.14	0.00	1.00	0.91	0.51	0.01	0.00	-0.04	-0.06
ROA	(11)	-0.12	0.02	-0.05	-0.14	0.12	-0.07	0.00	0.14	0.00	0.91	1.00	0.55	0.01	-0.07	-0.04	-0.07
ROE	(12)	-0.08	0.01	-0.02	-0.08	0.08	-0.04	0.01	0.10	0.00	0.51	0.55	1.00	0.00	-0.04	-0.03	-0.04
Tangible	(13)	0.04	0.00	0.04	0.00	-0.02	0.01	-0.04	0.00	0.75	0.01	0.01	0.00	1.00	0.00	0.00	0.08
Tax	(14)	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	-0.07	-0.04	0.00	1.00	0.00	0.00
SGA	(15)	0.08	-0.01	0.02	0.01	-0.10	0.01	-0.02	-0.09	0.00	-0.04	-0.04	-0.03	0.00	0.00	1.00	0.04
Sector_LTD	(16)	0.44	-0.04	0.31	0.15	-0.08	0.13	-0.07	-0.06	0.00	-0.06	-0.07	-0.04	0.08	0.00	0.04	1.00

Table 3: Determinants of Capital Structure

This table provides summary statistics on variables used in this study. *State* is the proportional of state shares in the firm held by state organs or government agencies; *LP* is the proportion of LP shares in the firm by the domestic and overseas institutions, firms or other entities with legal person status; *LTD* is the proportion of long-term debts in total assets; *Assets* is the logarithm of total assets; *Sales* is the logarithm of sales revenues; *Employees* is the logarithm of total number of employees; *Assets_g* is the growth in total assets; *Sales_g* is the growth in sales revenues; *CapExp_g* is the growth in capital expenditure; *EBIT* is earnings before interests and taxes; *ROA* is net incomes on total assets; *ROE* is net incomes on total equities; *Tangible* is the proportion of tangible assets in total assets; *Tax* is the average tax rate, estimated using income tax payable over earnings before income tax; *SGA* is the proportion of Sales, General and Administration Expenses on sales revenues; *SectorLTD* is the sector average of long-term debt ratios. The *t*-values in brackets are calculated using White's (1980) robust standard errors.

$$LTD_{it} = \beta_0 + \beta_1 Size_{it-1} + \beta_2 Growth_{it-1} + \beta_3 Profitability_{it-1} + \beta_4 Tangible_{it-1} + \beta_5 Tax_{it-1} + \beta_6 SGA_{it-1} + \beta_7 SectorLTD_{it-1} + \varepsilon_{it-1}$$

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
<i>Assets</i>	0.0203 (102.10)***			0.0210 (108.28)***	0.0208 (111.65)***	0.0206 (109.91)***	0.0209 (112.25)***
<i>Sales</i>		0.0084 (36.26)***					
<i>Employees</i>			0.0214 (91.16)***				
<i>Asset_g</i>	0.0011 (4.18)***	0.0077 (30.45)***	0.0056 (22.63)***				
<i>Sales_g</i>				-0.0013 (-5.15)***			
<i>CapitalExp_g</i>					-0.0171 (-7.31)***	-0.0172 (-7.14)***	-0.0170 (-7.14)***
<i>EBIT</i>	-0.0005 (-1.33)	-0.0103 (-12.92)***	-0.0053 (-10.26)***	-0.0003 (-0.65)	-0.0012 (-2.93)***		
<i>ROA</i>						-0.0054 (-8.80)***	
<i>ROE</i>							-0.0001 (-2.19)**
<i>Tax</i>	-0.0001 (-0.69)	-0.0001 (-0.80)	-0.0001 (-1.19)	-0.0001 (-0.66)	-0.0001 (-0.50)	-0.0001 (-0.49)	-0.0001 (-0.51)
<i>SGA</i>	0.0009 (1.85)*	0.0016 (2.10)**	0.0010 (1.90)*	0.0009 (1.81)*	0.0009 (1.83)*	0.0009 (1.81)*	0.0009 (1.84)*
<i>SectorLTD</i>	0.9053 (147.20)***	0.9622 (156.92)***	0.9162 (154.48)***	0.9049 (147.45)***	0.8803 (143.87)***	0.8788 (143.17)***	0.8806 (144.57)***
<i>Tangible</i>	0.0024 (1.00)	0.0023 (0.99)	0.0022 (0.99)	0.0024 (1.00)	0.0189 (7.13)***	0.0190 (7.13)***	0.0189 (7.13)***
Obs.	876,353	876,353	876,353	876,353	876,353	876,353	876,353
Adj-R ² (%)	11.28	10.28	10.98	11.28	11.47	11.48	11.47

* significant at 10% level

** significant at 5% level

*** significant at 1% level

Table 4: Political Patronage and Capital Structure

This table provides summary statistics on variables used in this study. *State* is the proportional of state shares in the firm held by state organs or government agencies; *LP* is the proportion of LP shares in the firm by the domestic and overseas institutions, firms or other entities with legal person status; *LTD* is the proportion of long-term debts in total assets; *Assets* is the logarithm of total assets; *Sales_g* is the growth in sales revenues; *ROA* is net incomes on total assets; *Tangible* is the proportion of tangible assets in total assets; *Tax* is the average tax rate, estimated using income tax payable over earnings before income tax; *SGA* is the proportion of Sales, General and Administration Expenses on sales revenues; *SectorLTD* is the sector average of long-term debt ratios. The *t*-values in brackets are calculated using White's (1980) robust standard errors.

$$LTD_{it} = \beta_0 + \beta_1 State_{it-1} + \beta_2 LP_{it-1} + \sum_{j=3}^n \beta_j Control_{jt-1} + \varepsilon_{it-1}$$

	Full sample			Large and medium-sized			Small-sized		
	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16
<i>State</i>	0.0291 (56.93)***		0.0306 (59.24)***	0.0341 (28.99)***		0.0378 (30.93)***	0.0258 (44.43)***		0.0269 (46.05)***
<i>LP</i>		0.0007 (2.38)**	0.0052 (18.24)***		-0.0021 (-2.48)**	0.0094 (10.80)***		0.0011 (3.67)***	0.0044 (14.57)***
<i>Assets</i>	0.0202 (108.21)***	0.0206 (109.63)***	0.0199 (106.84)***	0.0216 (33.20)***	0.0247 (38.42)***	0.0207 (31.56)***	0.0171 (71.61)***	0.0165 (68.57)***	0.0170 (70.95)***
<i>CapExp_g</i>	-0.0161 (-7.07)***	-0.0172 (-7.14)***	-0.0160 (-7.07)***	-0.0105 (-1.83)*	-0.0108 (-1.84)*	-0.0105 (-1.83)*	-0.0164 (-6.79)***	-0.0174 (-6.87)***	-0.0163 (-6.79)***
<i>ROA</i>	-0.0021 (-4.81)***	-0.0054 (-8.82)***	-0.0022 (-4.94)***	-0.0515 (-5.05)***	-0.0616 (-5.24)***	-0.0510 (-5.04)***	-0.0010 (-2.54)**	-0.0040 (-7.52)***	-0.0011 (-2.69)***
<i>Tax</i>	-0.0000 (-0.51)	-0.0000 (-0.49)	-0.0000 (-0.48)	0.0001 (0.34)	0.0001 (0.39)	0.0001 (0.34)	-0.0001 (-2.28)**	-0.0001 (-2.37)**	-0.0001 (-2.24)**
<i>SGA</i>	0.0001 (0.60)	0.0009 (1.81)*	0.0000 (0.49)	0.0031 (1.79)*	0.0058 (2.28)**	0.0027 (1.68)*	0.0002 (0.76)	0.0008 (1.74)*	0.0001 (0.70)
<i>SectorLTD</i>	0.7715 (129.16)***	0.8791 (143.17)***	0.7686 (129.11)***	0.8879 (41.39)***	1.0163 (46.52)***	0.8762 (40.47)***	0.7309 (115.19)***	0.8238 (125.88)***	0.7292 (115.28)***
<i>Tangible</i>	0.0179 (7.04)***	0.0190 (7.13)***	0.0178 (7.03)***	0.0386 (3.36)***	0.0395 (3.38)***	0.0388 (3.36)***	0.0179 (6.94)***	0.0190 (7.03)***	0.0178 (6.94)***
Obs.	876,353	876,353	876,353	125,324	125,324	125,324	751,029	751,029	751,029
Adj-R ² (%)	12.02	11.48	12.06	17.91	17.07	17.98	9.35	8.94	9.37

- * significant at 10% level
 ** significant at 5% level
 *** significant at 1% level

Table 5: Political Patronage and Capital Structure (continued)

This table provides summary statistics on variables used in this study. *State* is the proportional of state shares in the firm held by state organs or government agencies; *LP* is the proportion of LP shares in the firm by the domestic and overseas institutions, firms or other entities with legal person status; *LTD* is the proportion of long-term debts in total assets; *Assets* is the logarithm of total assets; *Sales_g* is the growth in sales revenues; *ROA* is net incomes on total assets; *Tangible* is the proportion of tangible assets in total assets; *Tax* is the average tax rate, estimated using income tax payable over earnings before income tax; *SGA* is the proportion of Sales, General and Administration Expenses on sales revenues; *SectorLTD* is the sector average of long-term debt ratios. The *t*-values in brackets are calculated using White's (1980) robust standard errors.

$$LTD_{it} = \beta_0 + \beta_1 State_{it-1} + \beta_2 LP_{it-1} + \sum_{j=3}^n \beta_j Control_{jt-1} + \varepsilon_{it-1}$$

	Full sample			State			Non-state		
	Model 8	Model 9	Model 10	Model 17	Model 18	Model 19	Model 20	Model 21	Model 22
<i>State</i>	0.0291 (56.93)***		0.0306 (59.24)***	0.0216 (37.29)***		0.0210 (34.73)***	0.0085 (4.37)***		0.0103 (5.31)***
<i>LP</i>		0.0007 (2.38)**	0.0052 (18.24)***		-0.0085 (-18.08)***	-0.0020 (-4.02)***		0.0054 (15.38)***	0.0056 (15.86)***
<i>Assets</i>	0.0202 (108.21)***	0.0206 (109.63)***	0.0199 (106.84)***	0.0274 (97.37)***	0.0283 (99.48)***	0.0276 (96.84)***	0.0120 (50.61)***	0.0122 (51.45)***	0.0120 (50.70)***
<i>CapExp_g</i>	-0.0161 (-7.07)***	-0.0172 (-7.14)***	-0.0160 (-7.07)***	-0.0177 (-4.99)***	-0.0194 (-5.07)***	-0.0177 (-4.99)***	-0.0093 (-3.81)***	-0.0092 (-3.81)***	-0.0092 (-3.81)***
<i>ROA</i>	-0.0021 (-4.81)***	-0.0054 (-8.82)***	-0.0022 (-4.94)***	-0.0057 (-6.26)***	-0.0116 (-10.78)***	-0.0058 (-6.35)***	-0.0023 (-4.23)***	-0.0026 (-4.57)***	-0.0025 (-4.51)***
<i>Tax</i>	-0.0000 (-0.51)	-0.0000 (-0.49)	-0.0000 (-0.48)	-0.0001 (-2.01)**	-0.0002 (-2.23)**	-0.0001 (-2.03)***	0.0000 (0.76)	0.0001 (0.73)	0.0001 (0.77)
<i>SGA</i>	0.0001 (0.60)	0.0009 (1.81)*	0.0000 (0.49)	-0.0000 (-0.11)	0.0004 (1.31)	-0.0000 (-0.05)	0.0010 (1.29)	0.0011 (1.35)	0.0010 (1.27)
<i>SectorLTD</i>	0.7715 (129.16)***	0.8791 (143.17)***	0.7686 (129.11)***	0.7659 (94.91)***	0.8381 (97.10)***	0.7657 (94.70)***	0.6125 (63.26)***	0.6134 (63.85)***	0.6087 (63.10)***
<i>Tangible</i>	0.0179 (7.04)***	0.0190 (7.13)***	0.0178 (7.03)***	0.0186 (5.20)***	0.0204 (5.28)***	0.0186 (5.20)***	0.0342 (9.85)***	0.0340 (9.85)***	0.0340 (9.85)***
Obs.	876,353	876,353	876,353	373,628	373,628	373,628	497,035	497,035	497,035
Adj-R ² (%)	12.02	11.48	12.06	12.91	12.56	12.92	4.90	4.95	4.95

* significant at 10% level
 ** significant at 5% level
 *** significant at 1% level

Table 6: Robustness Checks

This table provides results for a set of models which are intended to rule out the potential time series effect. We regress debt ratios on capital structure variables for every year and then compute the time series average and standard deviation of regression coefficients for every variable. *State* is the proportional of state shares in the firm held by state organs or government agencies; *LP* is the proportion of LP shares in the firm by the domestic and overseas institutions, firms or other entities with legal person status; *LTD* is the proportion of long-term debts in total assets; *Assets* is the logarithm of total assets; *Sales* is the logarithm of sales revenues; *Employment* is the logarithm of total number of employees; *Assets_g* is the growth in total assets; *Sales_g* is the growth in sales revenues; *CapExp_g* is the growth in capital expenditure; *EBIT* is earnings before interests and taxes; *ROA* is net incomes on total assets; *ROE* is net incomes on total equities; *Tangible* is the proportion of tangible assets in total assets; *Tax* is the average tax rate, estimated using income tax payable over earnings before income tax; *SGA* is the proportion of Sales, General and Administration Expenses on sales revenues; *SectorLTD* is the sector average of long-term debt ratios. The *t*-values in parentheses are calculated using White's (1980) robust standard errors.

$$LTD_{it} = \beta_0 + \beta_1 State_{it-1} + \beta_2 LP_{it-1} + \sum_{j=3}^n \beta_j Control_{jt-1} + \varepsilon_{it-1}$$

	Full	Large + Medium	Small	State	Non-state
	Model 23	Model 24	Model 25	Model 26	Model 27
<i>State</i>	0.0287 (5.02)***	0.0337 (4.23)***	0.0254 (5.23)***	0.0181 (3.69)***	0.0104 (1.05)
<i>LP</i>	0.0062 (2.61)***	0.0105 (1.94)*	0.0051 (2.04)**	-0.0013 (-0.45)	0.0075 (2.15)**
<i>Assets</i>	0.0215 (5.01)***	0.0223 (6.15)***	0.0182 (5.90)***	0.0297 (6.96)***	0.0121 (5.74)***
<i>CapExp_g</i>	-0.0121 (-0.89)	-0.0142 (-1.67)	-0.0115 (-0.85)	-0.0169 (-1.30)	-0.0110 (-1.04)
<i>ROA</i>	-0.0017 (-0.29)	-0.0856 (-1.47)	-0.0005 (-0.09)	-0.0047 (-0.59)	-0.0044 (-1.13)
<i>Tax</i>	0.0000 (0.11)	0.0001 (0.06)	-0.0001 (-0.60)	-0.0008 (-0.39)	-0.0000 (-0.08)
<i>SGA</i>	0.0005 (0.47)	0.0102 (0.78)	0.0008 (0.49)	0.0005 (0.37)	0.0016 (0.89)
<i>SectorLTD</i>	0.7132 (21.59)	0.8104 (9.42)***	0.6765 (17.32)***	0.6615 (16.31)***	0.6308 (12.47)***
<i>Tangible</i>	0.0381 (5.75)***	0.0600 (3.17)***	0.0372 (9.43)***	0.0498 (12.60)***	0.0401 (3.09)***
Obs.	876,353	125,324	751,029	373,628	497,035
Adj-R ² (%)	-	-	-	-	-

* significant at 10% level

** significant at 5% level

*** significant at 1% level