

Government Intervention, Institutional Environment, and Tax Avoidance: Evidence from China

Hongyan Sun, Xu Zhang

Abstract—This paper analyzes the effect of government intervention on firms' tax avoidance behaviors. Using Chinese data, we test this relation by measuring government intervention at three levels. First, we compare tax avoidance behavior between state-owned enterprises (SOEs) and non-state-owned enterprises (non-SOEs) and find that the sensitivity of tax avoidance is significantly stronger for SOEs. Second, we measure government intervention by two province-level National Economic Research Institute (NERI) index and discover that firms in regions with low level of marketization which means more government interventions are more likely to pursue tax avoidance. Third, we draw a sub-sample and divide all SOEs into central SOEs and local SOEs, and it seems that the former are more tax aggressive than the latter. Overall, tax avoidance patterns can probably be explained by the degree of government intervention, that is, more government intervention through no matter state ownership or institutional environment will lead to more tax avoidance.

Keywords—government intervention, SOEs, institutional environment, tax avoidance

I. Introduction

Nowadays, the majority of tax research incorporate agency predictions into the analysis of corporate tax avoidance. Under the agency perspective, tax avoidance activities can create opportunities for self-interest managers to pursue private benefits and rent diversion (Desai and Dharmapala, 2004, 2006 and 2009; Desai, Dyck and Zingales, 2007; etc).

In this study, we try to explore a Chinese setting to examine whether government intervention as both a firm and institutional feature constitutes another determinant of tax avoidance and lead to different magnitude of tax avoidance strategies. In China, government intervention which is a typical institutional characteristic plays a crucial role in the transformation from planned economy to market economy. Prior literatures have recognized that connection with the governments can help firms to get preferential treatment in credit access, listing priority, etc (Fan et al., 2007; Wu and Yue, 2009; Huang et al., 2010.). Therefore, in the context of shareholding transition of SOEs and the sharing tax system,

we predict the positive relationship between government intervention and tax avoidance strategies. We measure government intervention by both the extent of state ownership (SOEs and non-SOEs in full sample, central SOEs and local SOEs in sub-sample) and the level of market and legal institutions' development (two of National Economic Research Institute (NERI) Index).

Our hypotheses are tested by a sample of domestically listed non-financial A-share firms in China from 2001 to 2009. Our main findings are summarized below. First, after controlling for other factors known to affect tax avoidance, we find that the sensitivity of tax avoidance is significantly strong for SOEs than non-SOEs, suggesting less tax undertaken for SOEs. Second, firms are more tax aggressive in regions with low level of marketization where the government dominates the resource allocation more and the financial market is less developed. Third, for SOEs, we further find a significantly strong impact of the connection of central government on tax avoidance, that is, central SOEs are more tax aggressive than local SOEs. Taking together, our findings suggest that the degree of government intervention will affect firms' tax avoidance behaviors, in other words, more government intervention through no matter state ownership or institutional environment will lead to more tax avoidance.

This study contributes to the literature as follows. First, our evidence enriches the extant literature on tax avoidance. Previous studies in this area are primarily based on agency conflicts between managers and shareholders (Chen and Chu, 2005; Crocker and Slemrod, 2005; Desai and Dharmapala, 2006; S.Chen et al., 2010), while our results find out both the firm-level and institutional-level characteristics of tax avoidance strategies. Second, our findings enhance the understanding of role of government intervention in transitional economy. In recent year, there is a growing interest in government intervention or political connection. Some researchers argue that government intervention can help to enhance firm value (Fisman, 2001; Johnson and Mitton, 2003; Faccio, 2006), but other researchers provide contrary evidence and find out investment efficiency and firm performance will decline because of political connection in emerging market. Our evidence is supplementary and helpful in reconciling prior findings in the literature. Third, our study also extends the literature about role of government bureaucracies in economy society, that is, helping hand or grabbing hand theory. On the grabbing hand, governments may achieve their political goals at the cost of the enterprises, such as maintaining excessive employment level, investing government favored projects, etc (Shleifer and Vishny, 1994; Shleifer and Vishny, 1998); While on the helping hand, the enterprises also can get some subsidizations or preferential policies from the governments as a compensation. In this paper, you can see that the fiscal federalism reforms have

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changed the intergovernmental relations, and therefore the local governments turn from helping hand to grabbing hand which is supplementary to prior researches.

II. Background and hypothesis development

A. *Determinants of tax avoidance under agency perspective*

Nowadays, growing literature incorporates agency predictions into the analysis of corporate tax avoidance. Under the agency perspective, tax avoidance activities can create opportunities for self-interest managers to pursue private benefits and rent diversion. Desai and Dharmapala (2004) argue that complexity and obfuscation are the crucial features of tax avoidance activities which can conceal rent extraction, such as earnings management, related-party transactions and other perquisite consumption behaviors. Desai (2005) provides detailed evidence on how opportunistic managerial behaviors can be facilitated by tax avoidance. Desai and Dharmapala (2006) develop a principal-agent model to emphasize the importance of interactions between rent diversion and tax sheltering; Desai, Dyck and Zingales (2007) also analyze the interaction between resources diversion of managers and tax savings generated by tax shelters which is more pronounced in emerging markets than US setting. Desai and Dharmapala (2009) illustrate how tax shelters enable managers to manipulate reported earnings.

B. *Background of SOEs transition and fiscal reform*

In the past 30 years, China has made remarkable achievements in the economic reform and economic development when it transforms from planned economy to market-oriented economy. The major focus and problem in China's whole economic reform is to separate government administrative functions from enterprises' management and set up the modern enterprise institution gradually. Since the systematic economic reform starting in 1980s', the solely state ownership was promoted to be changed by privatization with the popular slogan of "grasping the large and letting go the small". The small and medium-sized SOEs are privatized through selling, auctioning, merging and bankrupting, and large SOEs are still kept state owned, encouraged to set up enterprise groups and put shareholding system into effect through spinning off profitable units to list on domestic and international stock exchanges. In 2003, the State-owned Asset Supervision and Administration Commission (SASAC) was set up to present the state to implement the duties and rights as owners through the management of assets, personnel and operations. The SASAC is set at state, provincial and municipal level, accordingly, large SOEs crucial to national security and lifeline of national economy other SOEs are managed by central government and local government respectively.

Incidental to the transition of SOEs, the fiscal reform is also been conducted simultaneously. In 1994, the Tax Sharing System (TSS) was implemented officially and addressed three areas of concern: First, central and local governments share the fiscal revenues according to tax types rather than negotiation and bargain. Under TSS, all the taxes are classified into central taxes, local taxes and sharing taxes. Income tax belongs to sharing taxes, 60% for central government and 40% for local government; Second, for better supervision and enforcement of tax collection and administration, the taxation sector was split into national tax bureau (NTB) for central and sharing taxes and local tax bureaus (LTBs) for local taxes. NTB is set at four levels, State Administration of Taxation (SAT) and provincial, municipal and county bureaus and the latter three are subordinate to the former. LTBs are set at provincial, municipal and county levels and under dual leadership of central government and NTB; Third, tax return and transfer payment institution. The sharing taxes should be submitted to central government first and then returned based on sharing proportion. To stimulate the initiative of local governments, incentive tax return will be given according to the increment of tax revenues. In addition, the central government will give special appropriations to undeveloped regions to increase the fiscal abilities of local governments to develop agriculture, education, public health, culture and society security.

C. *Hypothesis development*

In the context of shareholding transition, the governments still retain ownership in large listed SOEs. As a matter of fact, these SOEs are not only economic but also political and have to accomplish social and political goals such as employment, fiscal health, regional development, social stability, etc (S.Chen et al.,2010). Many listed SOEs are spin-offs or offshoots of the profitable units of SOE holding companies (e.g., Green 2003; Chow 2007) which usually retain a significant ownership in the listed spin-off firms (Ding et al.2007) and require resources from the listed firms to help the poor-performing divisions and non-revenue-generating units survive (e.g. Wu 2005; Ding et al. 2007). Consequently, the SOEs are more likely to achieve more tax preferences and reductions from the tax bureaus as compensation to some extent depending on the political connection with the governments. Recently, top managers of large listed SOEs are often criticized for corruption and extremely high company-paid consumptions such as luxury wine, cigarette, vehicles, office complexes and extravagant entertainment of travel expenses for compensation. Under the agency framework, the top managers in listed SOEs tend to have greater tunneling incentives and activities which can be well masked by tax avoidance activities to some extent which consents to the opinion of Desai and Dharmapala (2006) and undertake less risks of being penalized by tax bureaus than non-SOEs. Based on the above discussion, we arrive at the first hypothesis:

H1: SOEs are more likely pursue tax avoidance than non-SOEs

As mentioned above, the fiscal federalism and economic reform has important effect on the relation between central

and local governments, and further, the relation between governments and enterprises. Under the tax contracting mechanism before 1994, local governments can retain the residual tax revenues after remitting a fixed share negotiated with the central government instead of submitting all revenues to the central. They also get more autonomy to accommodate national tax policy to local differences and formulate local tax systems through coordination with local enterprises. As a result, the initiative of local government was promoted but an unintentional consequence occurred. They tried to withhold tax remittances and submit less fiscal resources to central government by diverting tax revenues from budget to off-budget items or giving local enterprises tax holidays and exemptions. All these problems led to the “Tax Sharing System” reform in 1994. The National Tax Bureau was set up to supervise and collect central taxes and shared taxes and the tax deductions and exemptions are restrained from the local governments. Obviously, enterprises having close relation central government may be more likely to get tax preferences. At the same time, giving the fixed sharing ratio of shared taxes, local government will try hard to increase tax revenues in order to get more tax return and incentive reward from central government. Furthermore, tax contribution of local government is also an important criterion of performance assessment related to officials’ promotion. Therefore, the second hypothesis is developed as following:

H2: Local SOEs will avoid less taxes than central SOEs.

The above hypotheses are based on firm-level government intervention, and we predict that institutional-level government intervention will also work in the same way. In the past 30 years, the major focus and problem in China’s whole economic reform is to separate government administrative functions from enterprises’ management and set up the modern enterprise institution gradually. However, compared with developed regions, the degree of government intervention is higher in less developed regions. For example, facing with limited natural and society resources, governments in undeveloped regions may play more crucial role in resource allocation than market regulation. Besides, in the process of the reform of financial sectors, a number of national commercial banks, regional banks and foreign banks are established successively since 1986 which seems to superficially break the mono-bank system in China. However, four state-owned commercial banks even dominate in size and market shares which destroy the marketization level of economy and the fairness of competition. Therefore, the governments can also affect firms’ strategic decisions through banking sectors by regulating loans (Fan, et al., 2007). In all, considering these objective circumstances, we believe that the governments in undeveloped areas intervene in the enterprises more, and at the meanwhile, are more likely to give help hand to the enterprises. The above discussion leads to our third hypothesis:

H3: Firms in regions with high level government intervention will avoid more income taxes.

III. Sample and research design

A. Sample selection

Our sample is drawn from listed A-share non-financial firms in China covering the period 2001-2009 from CSMAR database. We obtain 4651 observations for our primary tests after deleting: (1) observations with missing values for all variables; (2) each continuous variable at 2.25 top and bottom percentiles of their distributions to avoid the influence of outliers. In addition, we truncate ETR to the range (0, 1) and remove observations with negative taxable income.

Table I reports our sample composition. There are 4,651 firm-year observations in the full sample, 73.5% come from 765 SOEs and 307 non-SOEs. In the sub-sample, we divided all SOEs into central SOEs and local SOEs, accounting for 23.7% and 76.3% respectively.

TABLE I. SAMPLE INFORMATION

	<i>Number of firm-years</i>	<i>Percent</i>	<i>Number of firms</i>	<i>Percent</i>
Full sample	4,651		1,072	
SOEs	3,417	73.5%	765	71.4%
Non-SOEs	1,234	26.5%	307	28.6%
Sub-Sample	3,417		765	
Central SOEs	810	23.7%	198	25.9%
Local SOEs	2,607	76.3%	567	74.1%

B. Tax avoidance measures

Because the tax returns are not publicly available, we use financial statement data to calculate the taxable income (tax expenses reported on the income statement minus changes of deferred income tax assets and liabilities) according to China’s accounting standard and income tax law. Consistent with prior tax literature, we utilize multiple proxies to capture tax avoidance. First measure is the effective tax rate (*ETR*) which is the actual income tax rate that firms bear. We use tax payable to tax bureau (taxable income divided by statutory tax rate) as the numerator and total pre-tax income as the denominator. The other two measures focus on book-tax difference: the Manzon and Plesko (2002) book-tax difference (*MP*) and a residual book-tax difference advanced by Desai and Dharmapala (2006) which mitigates the book-tax difference caused by earnings management (*DD*). Generally speaking, firms are more likely to pursue tax avoidance with lower effective tax rate (*ETR*) and higher book-tax differences than other firms.

C. Research design

Following the majority of tax avoidance literature, we test our hypothesis by the following regression:

$$\begin{aligned}
 TaxAvoid_{i,t} = & \alpha_0 + \beta_1 OWNER_{i,t} + \beta_2 INDEX_{i,t} + \beta_3 ROA_{i,t} \\
 & + \beta_4 LEV_{i,t} + \beta_5 NOL_{i,t} + \beta_6 ACCR_{i,t} + \beta_7 INV_{i,t} \\
 & + \beta_8 PPE_{i,t} + \beta_9 INTANG_{i,t} + \beta_{10} EQINV_{i,t} \\
 & + \beta_{11} ADMEXP_{i,t} + \beta_{12} PROVISION_{i,t} + \beta_{13} Mb_{i,t-1}
 \end{aligned}$$

$$+ \beta_{14}SIZE_{i,t-1} + \beta_{15}BTD_{i,t-1} + \sum \gamma_j Industry$$

$$+ \sum \delta_k Year + \epsilon$$

where *TaxAvoid* is the tax avoidance measure as described above; *OWNER* is the firm-level government intervention measures interpreted as followings: (1) a dummy variable coded as one for SOEs, zero otherwise in the full sample; or (2) a dummy variable coded as one for SOEs affiliated with central governments, zero for SOEs affiliated with local governments in the sub-sample. In addition, we also measure government intervention at institutional level (*INDEX*): two of NERI Index of Marketization for China's Provinces. One index is the level of society resources allocated by the governments (*IndexRes*) and the other is the degree of competition in banking industry (*IndexBank*).

We control for firm level characteristics in the following aspects. First, we capture firms' performance (*ROA*, return on assets), leverage (*LEV*) and loss carry-forwards (*NOL*). Second, we control variables that can lead to differences between book and tax reporting and therefore affect the tax avoidance measures. According to the income tax law in China, accounts receivables (*ACCR*), inventories (*INV*), depreciation and amortization of fixed assets (*PPE*) and intangible assets (*INTANG*), consolidated earnings accounted for using the equity method (*EQINV*) may generate timing differences in the recognition of revenues and expenses. All provisions for the assets (*PROVISION*) are not allowed to be deducted from taxable income and some expenses only can be deducted before tax limited to fixed amount or percentage, such as managers' salaries, business and entertainment fees which are all recognized as administration expenses (*ADMEXP*) according to Chinese accounting standards. Third, we control for firms' size (*SIZE*) and growth (*MB*), measured as natural logarithm of market value of equity and market-to-book ratio respectively. Large firms may be less tax aggressive because of reputation consideration, strict regulation, and supervision by the media (Zimmerman, 1983; Wilkie et al., 1990; Kern et al., 1992) or more tax aggressive for ability of tax planning and political connection (Porcano et al., 1986; Holland et al., 1998; Kim et al., 1998; Derashid et al., 2003) and growing firms may tend to choose more tax-favored assets. We also include lagged book-tax differences (*BTD*) to control for the persistence of book-tax differences through time. Except *MB*, *SIZE*, dummy and index variables, all variables are divided by lagged assets to avoid heteroscedasticity. In addition, we control year and industry dummies for all regressions.

iv. Empirical results

Table II presents the main regression analysis of our hypothesis. We conduct the analyses using three alternative proxies to capture the government intervention. Table III shows that the coefficients of SOE dummy are significantly negative to *ETR* and positive to *MP* and *DD* book-tax differences which means SOEs are more tax aggressive based on all three measures of tax avoidance. In addition, the coefficient symbols of the *IndexRes* and *IndexBank* are

contrary to those of SOE dummy which make us draw the conclusion that firms in provinces with low index which means less developed marketization and closer relation with the government have low effect tax rate and large book-tax differences, and tend to avoid more income tax payments.

Table III records the analysis of the sub-sample in which we divided all SOEs in to SOEs affiliated with central government (central SOEs) and SOEs affiliated with local government (local SOEs). The result is consistent with our prediction, that is, central SOEs can get more tax preferences and reductions from NTBs who are exclusively responsible for the supervision and management of income tax and undertake less risks of being penalized by tax bureaus based on more closer relation with the central. Therefore, central SOEs are more tax aggressive than local SOEs. Additionally, the coefficients of *IndexRes* and *IndexBank* also make sense just as in the full sample.

To sum up, the above analysis indicates that the degree of government-business relationship will affect firms' tax avoidance behaviors, in other words, firms with closer tie with the governments are more likely to pursue tax avoidance.

TABLE II. FULL SAMPLE ANALYSIS

	ETR		MP		DD	
SOE	-0.010** (-2.21)	-0.011** (-2.56)	0.002** -2.36	0.002*** -2.75	0.002** -2.19	0.002** -2.55
IndexGM	0.004*** -5.76		-0.001*** (-6.91)		-0.001*** (-5.66)	
IndexFM		0.002* -1.93		-0.001*** (-2.93)		-0.001*** (-2.61)
Year and industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	26.7%	26.1%	65.0%	64.6%	54.1%	53.7%
N	4651	4651	4651	4651	4651	4651
F	25.6	24.5	113.9	108.5	68.3	65.5

Robust t-statistics are reported in parentheses. ***, **, and * represent statistical significance at the 1%, 5% and 10% level, respectively, two-tailed.

TABLE III. SUB-SAMPLE ANALYSIS

	ETR		MP		DD	
Central	-0.022*** (-4.04)	-0.022*** (-3.96)	0.003*** -4.08	0.003*** -3.94	0.003*** -3.79	0.003*** -3.66
IndexGM	0.004*** -5.64		-0.001*** (-6.54)		-0.001*** (-5.15)	
IndexFM		0.001 -1.19		-0.001* (-2.08)		-0.001 (-1.61)
Year and industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	28.3%	27.6%	66.1%	65.6%	55.5%	55.0%
N	3417	3417	3417	3417	3417	3417
F	21.1	19.9	89.9	84	54.2	50

Robust t-statistics are reported in parentheses. ***, **, and * represent statistical significance at the 1%, 5% and 10% level, respectively, two-tailed.

V. Conclusion

In this study, we present evidence on the impact of government intervention on firms' tax avoidance strategies in a sample of domestically listed non-financial A-share firms in China from 2001 to 2009. We use multiple measures to capture tax avoidance and different proxies for government intervention to triangulate our results. On one hand, we measure government intervention by the nature of ownership structure and find that the tax avoidance measures are more sensitive to SOE dummy in full sample and central SOE dummy in sub-sample which means SOEs and central SOEs are more likely to avoid income tax payments than non-SOEs and local SOEs respectively. On the other hand, we also examine government intervention by NERI index and draw the conclusion that firms in provinces with closer tie to government may be more tax aggressive. In brief, we conclude that the degree of government intervention will affect firms' tax avoidance behaviors and closer relation with government through no matter state ownership or institutional environment will lead to more tax avoidance.

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