

Do SME Conduct Less Corporate Tax Avoidance?

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Abstract

Small-and Medium-sized Enterprises (SME) benefit from the tax cut provisions and tax subsidies from SME support policies, and thus are considered to have less motivation to avoid taxes due to the lower tax burden than that of non-SME firms. This study empirically investigates the contrast in the motives for tax avoidance between SME and non-SME firms.

Based on the sample consisting of 18,954 audited firms, 18,954 externally audited firms from 2011 to 2013, this study examines book-tax difference (BTD), the difference between accounting profits and taxable income, and estimated corporate tax avoidance (TS), which is the portion of BTD that cannot be explained by total accruals, as a proxy for tax avoidance. (Desai and Dharmapala 2006).

The empirical findings are summarized as follows. First, SME hold less motivation for tax avoidance than non-SME firms, as shown by analogous results from both BTD and TS, which are the proxies for corporate tax avoidance. Second, the logistic analysis also demonstrates logistic analysis demonstrates consistent results which also contend that SME tend to hold less motivation for tax avoidance. We conclude that the consistent results can be explained by the smaller tax burden of SME from tax deduction and exemption clauses applied to SME.

The present study investigates financial determinants that lead to tax avoidance in SME and empirically test the difference between SME and non-SME firms in tax avoidance. Throughout this study, we intend to propose policy implications for SME subsidies.

Keywords: SME, non-SME, tax avoidance, BTD, TS

I . Introduction

Tax avoidance is defined as the status of a firm's tax management activity to implicitly or explicitly reduce the tax burden of the firm. If the taxing authority regards the tax avoidance of a firm as tax evasion instead of tax saving, the firm is penalized with direct tax expenses including the original reduced tax amount and additional tax fines. Yet even aside from the direct tax expense, the firm confronts indirect tax burdens which encompass social condemnation, image degradation, stock price decreases as well as a reduction in sales. (Anderson and Frankle 1980; Richardson and Welker 2001; Dhaliwal *et. al.*, 2010; Andrews *et. al.*, 2010).

Along with the adoption of the Korean International Financial Reporting Standards (K-IFRS), the enactment of AS-SME has changed the accounting environment, and with the

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enactment the number studies that underscore subsidizing SME significantly increased. As for tax avoidance, SME have less incentive for tax avoidance than non-SME firms as SME are qualified to receive tax cut provisions and tax subsidies under SME support policies. This study attempts to empirically test whether being a SME actually impacts corporate tax avoidance.

Effective tax rates (ETR) are generally applied as proxy for corporate tax avoidance and provides information about the tax burden of a firm and the influence of tax on business operations. However, this paper examines the book-tax difference (BTD), which is the difference between accounting profits and taxable income, and TS, the estimated corporate tax avoidance measure proposed in Desai and Dharmapala (2006), to proxy for tax avoidance. Although an ample amount of tax avoidance studies have focused on listed firms, little attention has been directed towards SME.

This paper is as follows: Section I overviews the study and prior literature is reviewed in Section II. Section III demonstrates the hypotheses and models. Sections IV illustrates the empirical results and Section V concludes the paper and its caveats.

2. Literature Review

There has been a disagreement in the concept of tax avoidance (Hanlon and Heitzman, 2010). As seen in Figure 1, tax evasion is in the end of the spectrum of tax avoidance and is considered to be violating the Tax Act, which is penalized with the evaded tax amount and a fine as a result. If the violation of the Act is revealed to be deliberate, criminal punishment can be enforced as well. In this case, overall crime is referred to as tax fraud. At the other end of the spectrum is tax planning or tax saving, which is the act of reducing tax while adhering to the intentions of the government authority. Tax avoidance is somewhere in the middle of the spectrum in between tax reduction strategies and tax evasion. To clarify, tax avoidance refers to act of reducing tax against government intentions, but within the boundaries of the law.

Because tax avoidance itself is not a violation of the law, it is not subject to criminal punishment but is levied the amount of unpaid tax if revealed. It requires a vast amount of professional knowledge in the sense that it has to be conducted within the boundaries of the law while avoiding taxes imposed by governmental institutions. Thus, the taxation professionals are most likely to organize a tax avoidance strategy.

Even though it is distinctive in concept, the boundary between tax avoidance and tax evasion is ambiguous in practice. A particular act can be equivocally determined as tax avoidance or a socially accepted tax reduction strategy. The judgement of the same act may even vary with time. For example, the taxation authority can claim a certain conduct as tax avoidance, whereas the judicial branch of government can determine the conduct to be a tax reduction strategy. In such case, the taxation authority is likely to be discontented and reform the Tax Act to define similar conduct as illegal in the long term. If the judicial branch of government finds such actions to be not violating any article, yet consider the actions to be socially unacceptable tax avoidance that distorts the intention of the law, then the taxation authority can justifiably impose the tax. When the decision of the judicial branch is unearthed to the public, similar conducts will be identified as tax evasion, instead of tax avoidance.

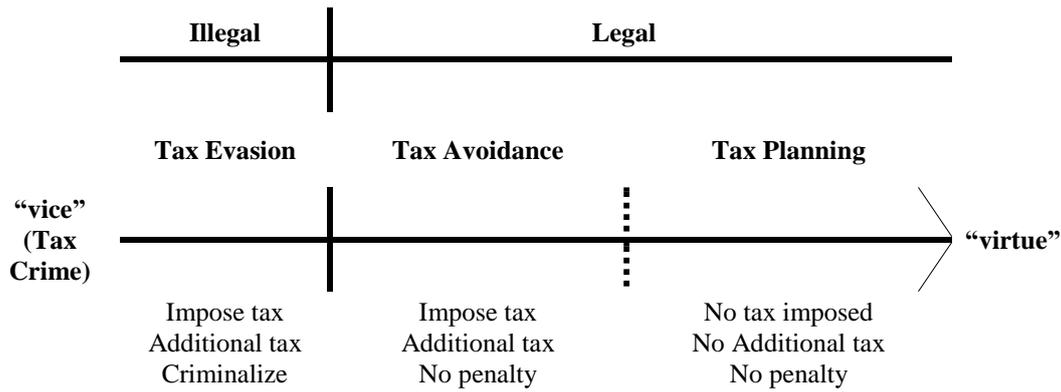


Figure 1. Tax Avoidance Categories

The Korean government implements numerous tax aid provisions as shown in Table 1. Among the tax aids, there are SME tax reduction and exemption provisions according to the Restriction of Special Taxation Act to reduce the tax burden for SME. Such tax aids are aimed to cultivate strong SME, referencing the flourishing SME in strong economies, such as the Japanese economy.

Table 1. Tax Incentives for SME

Intent	Explanation	Legal Provision	Intent	Explanation	Legal Provision
SME Business Stability Aid	Special Tax Reduction or Exemption for SME	Article 7	Aid for Start-ups and Ventures	Tax Reduction or Exemption for Small or Medium Start-up Enterprises	Article 6
	Reception Limit for SME: 18 million won	Article 25		Non-Taxation on Gains from Stock Transfer by Small or Medium Start-up Business Investment Company	Article 13
	Refundable Tax Exemption When Loss Occurs in SME	Article 72		Income Deduction for Contribution to Small or Medium Start-up Business Investment Association	Article 16
	Tax Credit for Improving Enterprise’s Billing System	Article 7-2		Special Taxation on Gift Tax on Start-up Funds	Article 30(5)
	Applying Minimum Taxation to SME	Addenda		Tax Incentives on Exercising Put Options on Venture Stocks	Article 16(2)
SME Investment Facilitation Aid	Tax Credit for Investments by SME	Article 5	SME R&D and human resource Development Aid	Loss Calculation from Reserve Fund for R&D and human resource Development	Article 9
	Special Cases of Inclusion in Deductible Expenses for SME Support Facilities	Article 8		Tax Credit for Research and human resource Development Expenses	Article 10
	Special Taxation for Supporting Project of Informatization of SME	Article 5-2		Tax Credit for Investment in Facilities for Research and human resource Development	Article 11
	Tax Credit for Investment in Productivity Increasing Facilities	Article 24		Special Taxation on Income from Transfer of Technology	Article 12
	Tax Credit for Investment in Safety Facilities	Article 25		Tax Exemption for Mergers in High-Tech Enterprises	Article 12(3)
	Tax Credit for Investment in Energy-Economizing Facilities	Article 25-2		Tax Exemption for Stock Acquisitions in High-Tech Enterprises	Article 12(4)
	Tax Credits for Investments in Facilities for Environmental Conservation	Article 25-3	Aid for SME Relocation to Provinces	Tax Reduction or Exemption for SME Relocated Outside Over-concentration Control Zones of the Seoul	Article 63

				Metropolitan Area	
	Temporary Tax Credit for Investments	Article 26		Special Taxation for Relocation of Factories in Areas subject to Development Plans of Multifunctional Administrative City and Innovation Cities to Rural Areas	Article 85-2
Aid for SME Financial Reform and Structural Regulation	Carryover Taxation of Transferable Income Tax on Consolidation between Small or Medium Enterprises	Article 31	Aid for Facilitating Employment in SME	Special Taxation on SME with stable employment	Article 35(3)
	Abatement or Exemption of Tax for SME and Trade-Adjusted Enterprises under Business Conversion	Article 33 (2)		Tax Deduction on SME that employ Industrial High School Graduates after Military Service	Article 29(2)
	Special Taxation for Succession to Deficit Carried Forward following Merger with Venture Business	Article 47 (3)		Tax Deduction on SME employee	Article 30
	Special Taxation of Corporate Tax on Margins Accruing from Transfer of Self-Distribution Facilities	Article 46 (4)		Special Tax Deduction for Boosting Employment	Article 30(4)
	Special Taxation on Reinvestment in Disposed Venture	Article 46 (8)	Aid for SME Succession	Tax Exemption for Family Business	Article 18
				Special Taxation on Gift Tax for Succession of Family business	Article 30(6)

Note) SME tax reduction or exemption from Restriction of Special Taxation Act

There are several prior studies on the tax avoidance of SME. Yoon and Bae (2001) conduct a survey research with a sample of SME accountants about the factors that influence the tendency of tax avoidance in SME. Factors related to the tax burden and Tax management have positive and statistically significant relations with the tendency of tax avoidance. On the other hand, ethical factors and the factors that restrict tax avoidance exhibited negative relations with tax avoidance tendency. This implies that accountants do not attempt to conduct tax avoidance under restrictions and ethical factors, yet have the motivation to conduct tax avoidance actively when facing high tax burdens.

On the other hand, Lee and Yoon (2011) empirically analyze the difference in the impact of tax avoidance factors on the tendency of tax avoidance using comparing the SME of Korea and Indonesia. The results show that a higher tax rate induces an increased tendency to conduct tax avoidance. Higher complexity in the tax law and strict restraints on tax avoidance lead to a decreased tendency to conduct tax avoidance. In addition, the tax avoidance tendency is higher where tax avoidance is pervasive, and tax inequity existed in both countries. A larger firm size, higher capital intensity, lower profitability, and less experience in tax probing also result in a higher tax avoidance tendency.

Cho, Park, and Lee (2011) empirically analyze the firm characteristics that influence tax avoidance using the sample data sample data of firms listed on firms listed on KOSDAQ from 2005 to 2009. The results reveal positive and statistically significant relations of firm size and tax burden with tax avoidance tendency. Conversely, tax avoidance demonstrates negative and significant relations with tax incentives and capital intensity. To clarify, firms with heavier tax burdens or larger firms have stronger motivation for tax avoidance and those endowed with more tax incentives, from provisions such as the Restriction on Special Tax Act, have less motivation for tax avoidance.

3. Research Design

3.1. Hypotheses

Tax avoidance is defined as the state of tax management activities that can either explicitly or implicitly reduce the firm's tax burden. If the taxation authority regards the tax avoidance of a SME as tax evasion rather than tax savings, the SME confronts a direct burden of the unpaid tax amount and a fine. Moreover, the direct tax expense, indirect burden from social condemnation, and degradation of firm reputation can hurt the firm performance more intensely. Considering the tax incentives that SME receive from the government, they have less incentive for tax avoidance than non-SME firms.

Lee and Lee (2005) examine the effectiveness of tax incentive policies, documenting that SME tax reduction policies, including tax exemption in investments, is highly effective. The tax burden was reported to be less than that of conglomerates. Therefore, SME are less likely to conduct tax avoidance since they are less willing to take the risk of the aforementioned indirect burdens. Lee and Yoon (2011) contend that the decision to hire an accounting delegate is one of the essential accounting decisions to establish and implement an efficient tax strategy. Compared to the firm size and financing of non-SME firms, SME are not likely to want to pay for permanent accounting professionals, which can be interpreted as the additional expense of employing accounting professionals to conduct tax avoidance. In other words, an attempt to commit tax avoidance engenders additional costs for hiring or obtaining help from an accounting professional. Therefore, we conjecture SME have less motivation for tax avoidance. Hypothesis H1 is established to empirically investigate whether being an SME actually decrease tax avoidance.

H1 : SME are less likely to conduct tax avoidance than non-SME firms

3.2. Variables Measurement and Modeling

3.2.1. Measuring Tax Avoidance: This study estimates corporate tax avoidance using BTD, which is the difference between accounting profits and taxable income. BTD is incurred either through increasing earnings on the financial report (earnings manipulation) or through decreasing taxable income (tax avoidance). In some cases, firms use both means to maximize firm value. Based on these reasons, BTD is an appropriate proxy for tax avoidance. Extant studies on tax avoidance have shown that the difference in BTD was related to firms that commit tax avoidance.

Desai and Dharmapala (2006) introduce a measurement to proxy for tax avoidance under the assumption that the difference between accounting profit and taxable income is attributable to earnings manipulation and tax avoidance. They calculate abnormal BTD (discretionary portion of BTD) by regressing BTD on total accruals, thereby excluding normal BTD (non-discretionary portion of BTD). This calculation controls for in the amount in total accruals explained by earnings management. Numerous recent papers have adopted the estimation from Desai and Dharmapala (2006), and following the convention, tests are also conducted using the measure of corporate tax avoidance from Desai and Dharmapala (2006). Thus BTD and the measure from Desai and Dharmapala (2006), referred to as estimated corporate tax avoidance (TS), are both used as proxies for tax avoidance. Despite the difference in between the tax structure in the US and Korea, we adopt the measure from Desai & Dharmapala (2006) to accurately capture tax avoidance after controlling the effect of earnings manipulation.

BTB is calculated by subtracting taxable income from accounting profit and scaling the result with total assets, as shown in (Eq. 1). We present the measure proposed in Desai & Dharmapala (2006) as (Eq. 2). The residual variable of (Eq. 2) is the estimated corporate tax avoidance (TS)

$$BTD_{i,t} = \frac{(\text{accounting profit} - \text{taxable income})}{\text{total asset}} \quad (\text{Eq. 1})$$

$$BTD_{i,t} = \beta_1 TA_{i,t} + \epsilon_{it}$$

$$TS_{i,t} = \epsilon_{i,t} \quad (\text{Eq. 2})$$

$BTD_{i,t}$ = (earnings before tax – taxable income)/total assets of firm i in year t

$TA_{i,t}$ = (net income – operating cash flow)/total assets of firm i in term t

$TS_{i,t}$ = estimated corporate tax avoidance of firm i in term t

The dependent variable of (Eq. 2) is BTD and the independent variable is total accruals, which is the difference between accounting profits and operating cash flows. The measure by Desai & Dharmapala (2006) has the advantage of controlling the effect of earnings manipulation on BTD to reduce measurement error. In this vein, we regard total accruals as the proxy for earnings manipulation as in Desai & Dharmapala (2006).

3.2.2. Research Model: This paper investigates the financial determinants that are associated with tax avoidance in SME. We use BTD and TS to proxy for tax avoidance and conduct a regression analysis on the model of (Eq. 3)

$$BTD_{i,t} (TS_{i,t}) = \alpha_0 + \alpha_1 SME_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 ROA_{i,t} + \alpha_4 LEV_{i,t} + \alpha_5 CFO_{i,t} + \alpha_6 PPE_{i,t} + \alpha_7 RNDS_{i,t} + \alpha_8 GS_{i,t} + \alpha_9 ES_{i,t} + \sum YD + \sum IND + e_{i,t} \quad (\text{Eq.3})$$

$BTD_{i,t}$ = (accounting profit – taxable income)/total assets

TS_{it} = estimated corporate tax avoidance proposed in Desai & Dharmapala(2006)

$SIZE_{i,t}$ = logarithm of total assets

$ROA_{i,t}$ = net income/total assets

$LEV_{i,t}$ = total liabilities/total assets

$CFO_{i,t}$ = operating cash flow/total assets

$PPE_{i,t}$ = (tangible assets – land – assets under construction)/total assets,

$RNDS_{i,t}$ = R&D/total sales

$GS_{i,t}$ = (sales during current term – sales during previous term)/sales during previous term

$ES_{i,t}$ = sales from export/total sales

$AD_{i,t}$ = 1 if the auditor's report is unqualified, otherwise 0

$BIG4_{i,t}$ = 1 if the auditor firm is BIG4, otherwise 0

YD = year dummy variable

IND = industry dummy variable

ϵ = residual

The definitions of BTD and TS are as specified in the previous section. Here we enumerate the financial determinants that we conjecture to be related to BTD or TS . Firms with high profitability (ROA) are expected to actively conduct tax avoidance. High leverage (LEV) firms are relatively passive due to the tax shield of interest expenses. Firm size ($SIZE$) has an ambiguous effect on tax avoidance for it is plausible that the large firms are likely to establish a dominant tax strategy, yet on the other hand, according to the political cost theory, large firms are also likely to be less involved in tax avoidance. Since firms with a high capital intensity (PPE) have various means to reduce tax, they are less likely to conduct tax avoidance.

Firms with greater operating cash flow are feasibly more involved in tax avoidance (Ko *et. al.*, 2007; Ko and Park, 2011). R&D intensity, due to a number of tax reduction and exemption policies, is conjectured to be negatively related to tax avoidance. If the firm has positive sales growth (SG) then it will be more active in committing tax avoidance to minimize cash outflow the from increased sales. Firms substantially dependent on exports (with a high proportion of overseas sales (ES)) tend to be less interested in tax avoidance. Firms with proper unqualified opinions (AD) or those audited by the major auditors

(BIG4) have less motivation for tax avoidance. We control for the annual and industrial differences through dummy variables.

3.3. Sample

The present study uses the sample of firms listed on the Korea Stock Exchange and the firms subject to external audit, from 2011 to 2013. We exclude those firms that meet the following criteria to reach a final sample of 18,754 firm-year observations as the total sample:

- in the financial industry
- with a fiscal year-end that is not in December
- with impaired capital
- classified as administration firms
- with missing data

We illustrate sample selection process. First, we extract listed firms and firms subject to external audit from Kis-value in the period of 2011 to 2013. Then we eliminate the firms in the financial industry from the sample as the financial statements of financial institutions differ from that of manufacturing firms in structure and explanation. The majority of the listed firms close accounts during December. To keep the consistency in measurement and for the sake of convenience in interpreting results, we exclude the firms whose fiscal year ends in months other than December. Third, we intend to exclude administration firms and firms with impaired capital because the financial information of these firms can be considerably different from that of a normal firm. Lastly, we extract the financial data from Kis-value and remove observations with missing data. The sample is winsorized at the 1% on both ends to control for outliers. Our final total sample comprises 18,754 firm-year observations.

4. Empirical Results

4.1. Descriptive Statistics and Correlation Analysis

Table 2, summarizes the descriptive statistics of the total sample. For SMEs, the mean of BTD, a measurement of tax avoidance, is 0.0131 and the median is 0.0081, whereas the mean and median of TS are 0.0004 and -0.0032, respectively. The distribution of TS is skewed to the right. In the total sample, the mean and median of BTD are 0.0132 and 0.0079, respectively and those of TS are 0.0004 and -0.0034. As seen in the SME sample, the distribution of TS is again skewed to the right for the total sample as well. The standard deviation of BTD and TS are 0.0677 and 0.0647 between SME and 0.0682 and 0.0652 for the total sample. There was only a marginal difference in tax avoidance SME and non-SME firms.

Table 2. Descriptive Statistics (n=18,754)

Panel A : SME(n=16,740)

Variable	Mean	SD	Min	25%	Median	75%	Max
SIZE	24.1878	1.1576	20.4027	23.4010	23.8868	24.6890	32.6733
LEV	0.1460	0.1704	0.0000	0.0242	0.0855	0.2059	1.0356
PPE	0.1984	0.1760	0.0000	0.0638	0.1543	0.2835	0.9859
RNDS	0.0116	0.0392	0.0000	0.0000	0.0000	0.0060	0.9836
CFO	0.0811	0.1009	-0.7656	0.0138	0.0640	0.1283	1.0144

ROA	0.0786	0.1043	-0.4972	0.0246	0.0587	0.1125	2.1327
GS	0.1217	0.4446	-0.9930	-0.0461	0.0593	0.1953	6.8556
ES	0.0000	0.1020	0.0000	0.0000	0.0000	0.0000	1.0000
AD	0.9400	0.2380	0.0000	1.0000	1.0000	1.0000	1.0000
BIG4	0.2200	0.4120	0.0000	0.0000	0.0000	0.0000	1.0000
BTD	0.0132	0.0682	-0.7495	-0.0085	0.0078	0.0326	0.8625
TS	0.0004	0.0652	-0.7797	-0.0221	-0.0034	0.0220	0.8397

Panel B : TOTAL(n=18,754)

Variable	Mean	SD	Min	25%	Median	75%	Max
SIZE	24.2459	1.2061	20.4027	23.4175	23.9274	24.7784	32.6733
LEV	0.1448	0.1677	0.0000	0.0252	0.0857	0.2039	1.0356
PPE	0.1977	0.1745	0.0000	0.0645	0.1547	0.2810	0.9859
RNDS	0.0117	0.0389	0.0000	0.0000	0.0000	0.0061	0.9836
CFO	0.0806	0.0996	-0.7656	0.0142	0.0638	0.1273	1.0144
ROA	0.0783	0.1066	-0.4972	0.0244	0.0580	0.1103	4.1102
GS	0.1193	0.4417	-0.9991	-0.0459	0.0581	0.1921	6.8556
ES	0.0400	0.1550	0.0000	0.0000	0.0000	0.0000	1.0000
AD	0.9500	0.2260	0.0000	1.0000	1.0000	1.0000	1.0000
BIG4	0.2600	0.4370	0.0000	0.0000	0.0000	1.0000	1.0000
BTD	0.0131	0.0677	-0.7495	-0.0085	0.0081	0.0329	0.8625
TS	0.0004	0.0647	-0.7797	-0.0220	-0.0032	0.0223	0.8397

Note) Variable definition

$BTD = (\text{accounting profit-taxable income})/\text{total assets}$, $TS =$ estimated corporate tax avoidance proposed in Desai & Dharmapala (2006), $SIZE =$ logarithm of total assets, $ROA =$ net income/total assets, $LEV =$ total liabilities/total assets, $CFO =$ operating cash flow/total assets, $PPE =$ (tangible assets – land – assets under construction)/total assets, $RNDS =$ R&D/total sales, $GS =$ (sales during current term-sales during previous term)/sales during previous term, $ES =$ sales from export/total sales, $AD = 1$ if the auditor's report is unqualified, otherwise 0, $BIG4 = 1$ if the auditor firm is BIG4, otherwise 0.

Table 3, shows the Pearson correlation among main variables. Panel A, which is on the sample of SME, exhibits a positive relation between TS and ROA, CFO, GS, LEV, and RNDS, whereas there is a negative relation between TS and SIZE. ES, AD, BIG4 hold insignificant relation. The correlation for the total sample illustrates positive associations between TS and ROA, CFO, GS, LEV, and RNDS and also a negative association between TS and SIZE. Consistent with the correlation analysis in the SME sample, we find that ES, AD, and BIG4 have an insignificant relation with TS.

Table 3. Pearson Correlation among Main Variables

Panel A : SME

Variable	SIZE	ROA	LEV	CFO	PPE	RNDS	ES	GS	AD	BIG4
TS	- .036*** .000	.397*** .000	.015* .052	.301*** .000	.061*** .000	.051*** .000	-.009 .253	.116*** .000	-.001 .886	.011 .161
SIZE	1	- .036*** .000	- .073*** .000	.048*** .000	-.020** .011	-.001 .887	.012 .114	- .036*** .000	-.007 .377	.041** .000
ROA		1	-.211** .000	.411** .000	-.176** .000	-.034** .000	-.007 .377	.225** .000	-.002 .775	-.002 .792
LEV			1	- .129*** .000	.425*** .000	-.002 .764	-.006 .467	.049*** .000	-.004 .630	-.005 .488
CFO				1	.050*** .000	-.018** .023	- .024*** .002	.088*** .000	.001 .935	.015 .053
PPE					1	- .036*** .000	-.005 .503	.031*** .000	.000 .953	.035*** .000
RNDS						1	.006 .449	- .023*** .004	-.005 .517	-.009 .265
ES							1	-.010 .181	.009 .260	.063*** .000
GS								1	- .016** .040	-.004 .612
AD									1	.083*** .000

Panel B : TOTAL

Variable	SIZE	ROA	LEV	CFO	PPE	RNDS	ES	GS	AD	BIG4
TS	- .024*** .001	.382*** .000	.018** .015	.293*** .000	.060*** .000	.045*** .000	-.005 .458	.116*** .000	-.001 .908	.009 .212
SIZE	1	- .039*** .000	- .068*** .000	.036*** .000	- .022*** .002	-.008 .286	.055*** .000	- .035*** .000	.005 .487	.084*** .000
ROA		1	- .198*** .000	.401*** .000	- .169*** .000	- .036*** .000	- .021*** .003	.219*** .000	-.005 .495	-.011 .132
LEV			1	- .124*** .000	.425*** .000	-.002 .748	-.010 .172	.052*** .000	-.006 .417	-.009 .243
CFO				1	.054*** .000	- .023*** .001	-.017** .022	.091*** .000	-.001 .929	.009 .214
PPE					1	- .032*** .000	.002 .739	.025*** .001	-.002 .818	.032*** .000
RNDS						1	.008 .251	- .026*** .000	-.005 .536	-.002 .825
ES							1	-.011 .126	.042*** .000	.157*** .000
GS								1	-.016** .026	-.007 .308
AD									1	.096*** .000

4.2. Regression Analysis and Logistic Regression

4.2.1. Regression of Tax Avoidance on Being SME: Table 4, empirically investigates whether being an SME influences tax avoidance. The coefficients of tax avoidance, measured by TS and BTD were -2.906 and -2.839 , respectively, both of which held statistical significance at the 1% level. Our findings suggest that SME have less incentive for tax avoidance.

Firms with high profitability (ROA) decrease their earnings through smoothing income, and operating cash flows (CFO) put more weight on the tax burden. Therefore both of these control variables have positive causal effects on tax avoidance. To reduce cash outflows, firms with positive sales growth (GS) intend to be more active in tax avoidance. Between the contradicting conjectures of the according to the political power theory and the political cost theory, large firms refrain from conducting tax avoidance. On the other hand, firms with high leverage (LEV) are passive in tax avoidance due to the tax shield from interest expenses. We infer in the previous section that firms with high R&D intensity will have less motivation to conduct tax avoidance. However the empirical results point in the opposite direction. This is conjectured to be due to the hurdle that exists in the tax reduction and exemption policies which require firms to invest in R&D up to a certain level, firms with relatively high R&D intensity only hold marginal incentives to refrain from conducting tax avoidance.

As beneficiaries of tax reduction and exemptions from the Tax Act, SME are empirically confirmed to have less tax burden than non-SME firms. Despite external monitoring and closer scrutiny, non-SME firms are more likely to conduct tax avoidance. Nonetheless, our empirical findings on Table 4, imply that the difference in tax avoidance between SME and non-SME is insignificant over the total sample period. Both SME and non-SME are highly involved in tax avoidance. Even if a SME enjoys the tax incentives and thereby is assumed to be less active in tax avoidance, the results indicate that the level of tax avoidance is comparable to that of non-SME firms. The results indicate the lack of external monitoring and close examination entails active tax avoidance in SME, in spite of numerous incentives. Although non-SME firms face extensive monitoring from external stakeholders through auditing and disclosure regulations, these firms are more likely to have heavier tax burdens, inducing more incentives to avoid tax. On the other hand, SME are supported by national policy and special tax provisions which provide the firms with tax reductions and exemptions. With a relatively smaller tax burden, SME face less incentives to conduct tax avoidance compared to non-SME firms.

Table 4. Regression of Tax Avoidance on Being SME

$$TS_{it}(BTD_{it}) = \alpha_0 + \alpha_1 SME_{it} + \alpha_2 SIZE_{it} + \alpha_3 ROA_{it} + \alpha_4 LEV_{it} + \alpha_5 CFO_{it} + \alpha_6 PPE_{it} + \alpha_7 RND S_{it} + \alpha_8 GS_{it} + \alpha_9 ES_{it} + \alpha_{10} AD + \alpha_{11} BIG4 + YD + IND + \epsilon_{it}$$

Variable	TAX Avoidance			
	TS		BTD	
	Coeff.	t(p-value)	Coeff.	t(p-value)
Intercept	-0.017	-1.843*	0.006	0.590
SME	-0.005	-2.906***	-0.005	-2.839***
SIZE	-0.001	-1.686*	-0.001	-2.171**
ROA	0.208	45.381***	0.341	73.540***
LEV	0.027	9.414***	0.023	8.027***
CFO	0.104	21.857***	0.079	16.392***

<i>PPE</i>	0.030	10.934^{***}	0.030	10.625^{***}
<i>RNDS</i>	0.106	9.732^{***}	0.099	8.973^{***}
<i>GS</i>	0.003	3.315^{***}	0.002	2.463^{**}
<i>ES</i>	-0.002	-0.758	-0.002	-0.716
<i>AD</i>	0.000	0.018	0.000	-0.184
<i>BIG4</i>	0.001	0.804	0.001	0.805
<i>YD</i>	<i>Included</i>		<i>Included</i>	
<i>IND</i>	<i>Included</i>		<i>Included</i>	
<i>N</i>	18,754		18,754	
<i>Adj. R²</i>	0.189		0.244	
<i>F-value</i>	399.347 (0.000)^{***}		552.537 (0.000)^{***}	

Note) 1. *, **, *** indicates the 1%, 5%, 10% significance level, respectively.

We conduct an additional logistic regression analysis to examine whether SME has less motivation for tax avoidance than non-SME firms. As seen in Table 5, the coefficients for corporate tax avoidance, measured by TS and BTD, are -0.193 and -0.260, respectively, and are both significant at the 1% level. This implies that SME certainly hold less motivation for tax avoidance, the result of which is consistent with that of <Table 3>. As we have speculated, SME receive tax incentives from the government and thus are passive in tax avoidance.

Table 5. Logistic Regression Analysis

$$TS_{it} \text{ or } BTD_{it} = \alpha_0 + \alpha_1 SME_{it} + \alpha_2 SIZE_{it} + \alpha_3 ROA_{it} + \alpha_4 LEV_{it} + \alpha_5 CFO_{it} + \alpha_6 PPE_{it} + \alpha_7 RNDS_{it} + \alpha_8 GS_{it} + \alpha_9 ES_{it} + \alpha_{10} AD + \alpha_{11} BIG4 + \epsilon_{it}$$

Variable	TAX Avoidance							
	TS				BTD			
	Coeff.	Wald	t(p-value)	Exp(B)	Coeff.	Wald	t(p-value)	Exp(B)
<i>Intercept</i>	0.032	0.009	0.923	1.033	1.044	9.931	0.002^{***}	2.841
<i>SME</i>	-0.193	11.153	0.001^{***}	0.825	-0.260	20.798	0.000^{***}	0.771
<i>SIZE</i>	-0.035	7.228	0.007^{***}	0.966	-0.062	23.201	0.000^{***}	0.940
<i>ROA</i>	2.431	149.009	0.000^{***}	11.374	7.007	889.853	0.000^{***}	1104.005
<i>LEV</i>	0.226	4.738	0.030^{**}	1.254	0.136	1.763	0.184	1.146
<i>CFO</i>	5.388	725.890	0.000^{***}	218.853	1.965	113.613	0.000^{***}	75.140
<i>PPE</i>	1.501	216.539	0.000^{***}	4.485	1.249	158.953	0.000^{***}	3.487
<i>RNDS</i>	6.484	153.059	0.000^{***}	654.728	6.576	159.146	0.000^{***}	717.439
<i>GS</i>	0.221	31.836	0.000^{***}	1.248	0.180	21.350	0.000^{***}	1.198
<i>ES</i>	0.197	3.127	0.077[*]	1.218	0.085	0.604	0.437	1.089
<i>AD</i>	-0.064	0.851	0.356	0.938	-0.046	0.455	0.500	0.955
<i>BIG4</i>	0.016	0.179	0.672	1.016	-0.016	20.798	0.000^{***}	0.771

<i>N</i>	18,754	18,754
<i>X</i> ² -value (<i>p</i> -value)	2087.186 (0.000)***	1562.238 (0.000)***
-2Log Likelihood	23911.379	24436.313
Pseudo <i>R</i> ²	0.140	0.107

Note) 1. *, **, *** indicates the 1%, 5%, 10% significance level, respectively.

6. Conclusion

SME are endowed with tax reduction and exemptions in the Tax Act, which in turn leads to a smaller tax burden than non-SME firms and thus less motivation for tax avoidance. Therefore, being a SME is hypothesized to have a negative influence on tax avoidance. However, non-SME firms are mandated to disclose their financial information to external stakeholders to be publically traded, which entails consistent monitoring by external parties. In addition, SME may conduct tax avoidance to alleviate financing distress. Therefore, whether SME conduct less tax avoidance than non-SME firms is a question to be empirically investigated.

This study examines a sample of 18,754 listed firms from the year 2011 to 2013 extracted from Kis-value. We employ the measures book-tax difference (BTD) and the amount that is unexplained by total accruals (TS), estimated following the methodology from Desai and Dharmapala (2006)

The empirical findings are recapitulated as follows. SME have less motivation for tax avoidance than non-SME firms and the result is consistent when measured by either BTD or TS. The additional logistic analysis highlights the same results of less tax avoidance for SME. The empirical results are in line with our expectations regarding corporate tax avoidance, as SME are beneficiaries of government tax incentives.

Recent attempts by the government to support SME include facilitating accounting and simplifying Initial Public Offerings. This study is meaningful in testing whether tax incentives for SME can mitigate tax avoidance. Overall, this study provides policy implications of subsidizing SME through the enactment of AS-SME and tax incentives.

References

- [1] J. C. Anderson and A. W. Frankle, "Voluntary social reporting : An iso - beta portfolio analysis", *The Accounting Review*, vol. 55, (1980), pp. 467-480.
- [2] A. Andrews, S. Linn and H. Yi, "Corporate governance and executive perquisites : Evidence from the new SEC disclosure rules", Working paper, (2009).
- [3] Corporation Tax. *Statistical Yearbook of National Tax*, (2011).
- [4] Desai, M. and D. Dharmapala, "Corporate tax avoidance and high-powered incentives," *Journal of Financial Economics*, vol. 79, no. 1, (2006), pp. 145-179.
- [5] D. S. Dhaliwal, Z. Li, A. Tsang and G. Y. Yang. "Voluntary non-financial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting", *The Accounting Review*, vol. 86, no. 1, (2010), pp. 59-100.
- [6] H. Intae, C. Jongseo, and K. Sunmin, "Establishment of Accounting Standards for Unlisted Companies in IFRS", *Korean Accounting Journal*, vol. 18, no. 1, (2009), pp. 1-34.
- [7] H. Jinsoo and L. Jumyoung, "A Survey and Proposal for Accounting Procedures of Small and Medium-sized Companies-Regarding Applied Status of Special Provisions for Small and Medium-sized Companies-", *Korean Accounting Journal*, vol. 13, no. 2, (2004), pp. 259-288.
- [8] K. Jeongho and I. Chaechang, "Study on Corporate Tax Avoidance of SME and non-SME", *Proceeding on Advanced Science and Technology Letters*, vol. 126, (2016), pp. 44-49.
- [9] A. J. Richardson and M. Welker, "Social disclosure, financial disclosure and the cost of equity capital", *Accounting, Organizations & Society*, vol. 26, (2001), pp.597-616.
- [10] SME Accounting Standards disclosed draft. Korea Accounting Institute, (2012).
- [11] Y. Seungjoon, P. Jongil, C. Youngkee and C. Kwan, "Accounting Standards for the Unlisted-Companies after IFRS Adoption in Korea", *Korean Tax and Accounting Journal*, vol. 11, no. 2, (2010), pp. 9-44.