REGIONAL TAX COMPLIANCE AND TAX MOTIVATED EARNINGS MANAGEMENT: EVIDENCE FROM THE 2008 ITALIAN TAX REFORM

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Abstract

Using a large sample of public and private Italian companies, I investigate whether regional tax compliance affects earnings management activity in response to a decrease in the corporate tax rate. I find evidence that the higher the regional tax compliance where the company is based, the less managers engage in tax motivated earnings management. On the other hand, empirical results do not support the hypothesis that companies with an audit committee manage their earnings less in order to reduce their tax burden. Further analyses, however, show that the presence of an audit committee is relevant when interacted with the regional tax compliance. The impact of regional tax compliance on tax motivated earnings management declines when a company has an audit committee and this suggests a substitution effect between internal and external monitoring mechanisms. Finally, sensitivity tests show that both the intensity of earnings management for tax purposes and the effect of regional tax compliance are more material for small firms.

Keywords: Tax Avoidance, Tax Enforcement, Tax Compliance, Audit Committee, Tax Reform

JEL Classification: M40, H25

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1. Introduction

This paper investigates to what extent the geographical differences, measured by regional corporate tax compliance, and corporate governance mandatory requirements affect earnings management in response to a decrease in the corporate tax rate. Moreover, I study the interplay between corporate governance and tax compliance as alternative mechanisms for preventing tax avoidance.

Despite several studies investigating firm-specific determinants of tax avoidance (Hanlon and Heitzman 2010), the effect of geographical differences in corporate tax compliance on tax planning strategies within an homogenous legal setting, that is, within a country, has still been scantily analysed. This is probably due to a lack of reliable analytical data and/or the little or no variation of tax compliance and enforcement mechanisms within several countries. In this void, a relevant contribution is given by Hoopes et al.

(2012) who investigate how the probability of an Internal Revenue Service (IRS) audit affects the tax avoidance of U.S. listed companies. Hoopes et al. find a positive and highly significant relation between IRS audit probability and corporate tax avoidance. Their main estimate of IRS audit probability varies only for asset size group and time, but in further analyses Hoopes et al. use an estimate of the IRS audit probability that also varies across geographical areas (i.e. IRS district). My study differs from Hoopes et al.'s for two reasons. First, my sample comprises not only listed companies, but also private and micro companies which are subject to lower public scrutiny and represent by far the most common type of firm in many countries. In the Annual Report on Small and Medium-sized Enterprises (SMEs) commissioned by the European Commission, it is estimated that in 2012 SMEs accounted for 67% of total employment, 58% of gross value added and 98% of all enterprises (Ecorys 2012). Second, I do not use the probability of an audit by the national revenue

agency (e.g. IRS) to proxy for geographical differences, but the estimates of regional corporate tax evasion provided by a study of the Research Center of the Italian Revenue Agency (Pisani and Polito, 2006a). Pisani and Polito (2006a) argue that the intensity of regional corporate tax evasion is not fully explained by audit probabilities and that there must be several other determinants. The intuition I test, then, is that despite the probability of an internal revenue agency audit, companies within a homogenous geographical area tend to behave similarly.

I exploit the 2008 Italian Tax Reform to analyze how regional differences in the level of enforcement of identical tax laws and mandatory corporate governance requirements affect tax avoidance. In 2007 the Italian government released bill no. 1817 (2008 Tax Reform) according to which the rates of the corporate income tax, namely Imposta sui Redditi delle Società (IRES), and of the Regional Tax on Productive Activities, namely Imposta Regionale sulle Attività Produttive (IRAP), would decrease significantly, starting in the fiscal year following the one in progress on December 31, 2007. At the same time, the government proposed that some expenses would become nondeductible after the reduction in the corporate tax rate. The 2008 Tax Reform created a strong incentive to shift income from the last fiscal year subject to the old tax rates (hereinafter "2007 fiscal year") to the first fiscal year subject to the new tax rates (hereinafter "2008 fiscal year") and this gives me the opportunity to investigate determinants of cross-sectional variation in firms' behavior.

Using a large sample of public and private Italian firms, I test three research hypotheses. First, I hypothesize that the higher the regional corporate tax compliance, the less companies manage earnings in order to shift income from the 2007 to the 2008 fiscal year. Second, I hypothesize that companies that are not required to have an audit committee manage earnings in order to shift income from the 2007 to the 2008 fiscal year more than companies that are required to have an audit committee. Third, I hypothesize that the corporate governance requirements (i.e. the presence of an audit committee) and the regional tax enforcement substitute each other in reducing income shifting from the 2007 to the 2008 fiscal year.

Results of the multivariate analysis show that, in line with my expectation, tax motivated earnings management is more intense in Italian regions characterized by lower tax compliance (i.e. higher tax evasion). Moreover, the role of regional corporate tax compliance seems to be more relevant for the smaller firms in the sample. On the other hand, I do not find evidence that the corporate governance requirements reduce earnings management activity for tax purposes. Finally, regression results show a significant interaction

effect between corporate governance and regional corporate tax compliance in preventing tax motivated earnings management. Specifically, the impact of regional tax compliance on tax motivated earnings management declines when an audit committee is appointed, suggesting a substitution effect between internal and external monitoring mechanisms.

The paper contributes to the literature on tax accounting showing that cultural and social differences play an important role in tax planning decisions, especially for small private companies, despite a homogeneous legal system. Moreover, this study suggests that corporate governance and tax enforcement mechanisms do not reinforce each other, but the latter seems to play the most relevant role in reducing tax avoidance.

The remainder of the paper is structured as follows. Section 2 presents the related literature, describes the Italian setting and the research hypotheses. Section 3 illustrates the regression equations and the variable definitions. Sample selection, descriptive statistics and multivariate analysis results are presented in Section 4. Section 5 concludes the paper.

2. Related Literature, Italian Setting And Development of Hypotheses

Related Literature

Shackelford and Shevlin (2001) and Hanlon and Heitzman (2010) provide a comprehensive literature review on tax accounting and corporate tax avoidance. Prior studies identify several firm-specific determinants of corporate tax avoidance, such as the scale of international operations (Rego 2003; Dyreng and Lindsey 2009), leverage (Graham and Tucker 2006; Lisowsky 2010), ownership structure (Desai and Dharmapala, 2009; Chen et al., 2010) and contractual incentives for managers (Phillips 2003; Desai and Dharmapala. 2006; Hanlon et al. 2007; Robinson et al. 2010; Armstrong et al. 2012). However, how geographical differences affect corporate tax avoidance within a formally homogenous legal and tax system, that is, within a country, has still been scantily investigated. This is probably due to a lack of reliable analytical data and/or the little or no variation in tax compliance and enforcement within several countries. For instance, Desai et al. (2007) study the relationship between corporate governance, tax enforcement and tax avoidance using a cross-country sample where the measure of tax enforcement employed is at a country level. In doing this however, the measure of tax enforcement is a joint measure of any difference in the tax system and compliance among countries. Also Atwood et al. (2012), who examine the relation between corporate tax avoidance and tax system

characteristics using an international sample, employ a country-specific measure of tax enforcement, that is, a tax evasion index from the World Competitiveness Report. A possible caveat of a country-specific measure of tax enforcement and/or compliance is that any significant difference among geographical areas of a country (e.g. regions) is averaged out. A relevant contribution is given by Hoopes et al. (2012) who provide evidence that the probability of an IRS audit negatively affects the tax avoidance of U.S. listed companies. Hoopes et al.'s main estimate of IRS audit probability, however, varies only for asset size group and time . Finally, it is worth noting that all the above mentioned studies are generally based on samples of listed firms and do not investigate the tax avoidance of small and private firms, notwithstanding their importance in the economy of all countries. In a recent report on Small and Medium-sized Enterprises (SMEs) commissioned by the European Commission, Ecorys (2012, 9) states that, despite the challenging economic conditions of the EU and the spectre of a double-dip recession for several countries, "SMEs have retained their position as the backbone of the European economy, with some 20.7 million firms accounting for more than 98 per cent of all enterprises, of which the lion's share (92.2 per cent) are firms with fewer than ten employees. For 2012 it is estimated that SMEs accounted for 67 per cent of total employment and 58 per cent of gross value added".

I contribute to the extant literature investigating whether geographical differences in tax compliance and stricter statutory corporate governance requirements (i.e. the appointment of an audit committee) affect tax motivated earnings management of a large sample of public and private companies, which are theoretically subject to the same legal setting and tax enforcement mechanisms.

Italian Setting and 2008 Tax Reform

Italy is administratively divided in 20 regions, which have legislative power over several issues, such as the organization of the healthcare system. However, regions cannot impose any new corporate tax, they can only choose the rate of some specific taxes within a range that is decided at national level. Moreover, the Italian Revenue Agency (IRA), namely Agenzia delle Entrate, is a government agency with standardized procedure which has to pursue the objectives identified by the Minister of Economy and Finance in a three-year agreement. Thus, even if the IRA has regional units, the tax enforcement mechanisms and legal setting are theoretically identical across regions. Despite the fact that Italian regions were only enacted as administrative and legislative entities

with great delay in 1970, the majority of them cover geographical areas which have been characterized for centuries by socio-cultural specificities. Indeed, there have always been several differences between regions in terms of economic development and social capital (Felice, 2010, 2011, and 2012).

Pisani and Polito (2006a), using data from the national account systems provided by the National Institute of Statistics (ISTAT) and from tax returns provided by IRA, estimate Italian tax evasion by region . Table 1 presents the average annual Gross Domestic Product for the period 2000-2002 provided by ISTAT (column 1) and the estimates of the average annual evasion of IRAP by region (column 2). IRAP is a regional tax due by companies and other taxpayers, such as partnerships or individuals, which have employees or a business in which more than one person is involved. On the other hand, individuals seldom meet the requirements for being liable for IRAP. According to Pisani and Polito (2006a), the annual IRAP taxable base in Italy that taxpayers did not declare on average from 2000 to 2002 was € 202.7 billion, which represents about 16.6 per cent of the national GDP for 2002. This implies that in the same period Italian regions had € 9.8 billion less in annual tax revenues (given that at that time the IRAP rate was 4.82 per cent). The estimated IRAP evasion varies remarkably across regions, ranging from € 21.5 billion in Lombardia to € 484 million in Valle d'Aosta. The absolute amount of regional evasion, however, does not demonstrate the intensity of the phenomenon in the geographical area, because Italian regions also differ significantly in size, population and GDP. To account for such differences, Pisani and Polito (2006a) propose the use of a ratio, called "intensity of regional tax evasion", that compares the estimated annual IRAP evasion to the annual IRAP taxable base declared by taxpayers in any region. For instance, if the intensity of regional tax evasion equals 50%, it means that in the analysed region the amount of estimated IRAP evasion is half of the IRAP taxable base declared. The intensity of regional tax evasion ranges from 93.9% in Calabria, which is the region with the lowest corporate tax compliance, to 13% in Lombardia, which turns out to be the region with the highest tax compliance despite the amount of its estimated IRAP evasion.

Pisani and Polito's study is particularly useful for my purposes for several reasons. First, they are both researchers at the IRA Research Centre, so they can assess all analytical information from tax returns and use it to increase the accuracy of their estimates. Second, Pisani and Polito (2006a) focus their attention on IRAP and not on tax evasion in general. Tax evasion is a widespread phenomenon in several Italian regions, but I need to distinguish corporate tax evasion from individual tax evasion to better investigate corporate tax avoidance. Finally,

since the IRAP taxable base is very broad and its calculation for companies strictly derives from statutory individual or separate financial statements, Pisani and Polito (2006a) argue that their estimate of tax evasion almost entirely consists of transactions that have not been accounted for in company's books (the so-called underground or shadow economy). In other words, they do not really investigate tax motivated earnings manipulation, but mainly unreported income. "Extreme" tax avoidance (i.e. tax evasion) is definitely more common for SMEs than for big or listed companies, but it gives a good idea of how the social and economic environment of one Italian region differs from that of another one. For all these reasons, I think that Italy represents a unique setting in which to investigate the effect of differences in geographical tax compliance on corporate tax avoidance and the estimates of tax evasion provided by Pisani and Polito (2006a) are particularly suitable for this purpose. At the same time, it is not obvious that companies that evade taxes by hiding transactions from tax authorities are those that also engage in tax motivated earnings management,

which is a more sophisticated and less aggressive tax avoidance strategy.

In order to investigate the relation between regional tax compliance, corporate governance mandatory requirements (i.e. appointment of an audit committee) and earnings management for tax purposes, I exploit the 2008 Tax Reform which materially decreased corporate tax rates. More precisely, in September 2007, the Italian government issued bill no. 1817 (2008 Tax Reform) according to which the corporate income tax (IRES) and the Regional Tax on Productive Activities (IRAP) rates would decrease by 5.5 and 0.35 percent respectively, starting in the fiscal year following the one in progress on December 31, 2007. At the same time, the government proposed that some expenses would become nondeductible after the reduction in the corporate tax rate. These changes became certain on December 24th, 2007 when the bill was passed by the Italian Parliament and this created a strong incentive to shift income from the last fiscal year subject to the old tax rates to the first fiscal year subject to the new tax rates (Scholes et al., 1992; Guenther, 1994; Enis and Ke, 2003).

Table 1. Italian Regions and Tax Evasion

Region	Average Gross Domestic Product (2000-2002) - € million	Average Estimated Regional IRAP Evasion (1998-2002) - € million	Intensity of Average Regional Tax Evasion (1998-2002)	Corporate Tax Compliance (TAX COMPLIACE)
Abruzzo	23,017	4,031	33.11%	0.67
Basilicata	8,817	2,117	49.75%	0.50
Calabria	26,737	8,701	93.89%	0.06
Campania	77,428	20,353	60.55%	0.39
Emilia-Romagna	107,076	14,001	22.05%	0.78
Friuli-Venezia Giulia	27,764	4,470	28.22%	0.72
Lazio	126,094	16,456	26.05%	0.74
Liguria	34,033	8,508	50.29%	0.50
Lombardia	251,179	21,489	13.04%	0.87
Marche	31,236	5,613	33.95%	0.66
Molise	4,980	1,287	54.61%	0.45
Piemonte	98,957	18,082	30.53%	0.69
Puglia	56,278	14,780	60.65%	0.39
Sardegna	26,270	6,335	54.71%	0.45
Sicilia	68,343	18,319	65.89%	0.34
Toscana	81,086	14,826	33.67%	0.66
Trentino-Alto Adige	12,262	4,323	30.17%	0.70
Umbria	16,845	3,720	44.51%	0.55
Valle d'Aosta/Vallée d'Aoste	3,262	484	28.97%	0.71
Veneto	111,935	14,763	22.26%	0.78
Italy	*1,207,330*	*202,660*	*30.58%*	*0.69*

Data on the average annual Gross Domestic Product (GDP) for the period 2000-2002 are available on the website of the National Institute of Statistics (ISTAT). IRAP (i.e. Regional Tax on Productive Activities) is a regional tax due by companies and other taxpayers, such as partnerships or individuals, which have employees or a business in which more than one person is involved. The estimates of the average annual evasion of IRAP by region are estimated by Pisani and Polito (2006a). Average estimated regional IRAP evasion is the annual IRAP taxable base that taxpayers did not declare. The intensity of regional tax evasion is calculated as the estimated IRAP evasion of a region divided by the IRAP taxable base declared by taxpayers in any given fiscal year. Corporate Tax Compliance (TAX COMPLIACE) is calculated as 1 minus the intensity of average regional tax evasion.

Development of Hypotheses

Hoopes et al. (2012) provide evidence that tax avoidance decreases with the probability of an IRS audit for U.S. listed firms. Hoopes et al. argue that this result is not obvious because there are several reasons for which companies may decide their tax planning strategies without considering the IRS audit risk. For instance, companies may forgo an aggressive tax avoidance strategy in order to avoid political costs (Hanlon and Slemrod 2009) or because the incentive to reduce costs is not particularly high (Slemrod 2004; Graham et al. 2005; Armstrong et al. 2012).

I investigate whether the corporate tax compliance of the region where the company is based affects the level of its tax motivated earnings management. My measure of regional corporate tax compliance seems not to be associated with the probability of being audited by the IRA. In fact, Pisani and Polito (2006a: 11) point out that the regions with the highest intensity of corporate tax evasion (i.e. Campania, Puglia, Calabria and Sicily) are also regions where the probability of a company being audited is significantly higher than the national average. Thus, Pisani and Polito (2006a: 11) conclude that tax evasion has multiple causes which cannot be attributed solely to the effectiveness of enforcement actions and consequently the number of audits carried out cannot be considered as a valid indicator for assessing the effectiveness of enforcement. On the other hand, the direction of the relation between regional tax compliance and tax motivated earnings management, although intuitive, is not obvious. Given that the regional tax evasion estimated by Pisani and Polito (2006a) mainly consists of unsophisticated tax evasion (i.e. transactions that are not accounted for in company's books), it might be the case that those companies that evade more are less prone to engage in book-conformity tax avoidance since this behaviour could attract the attention of the IRA and increase the probability of an audit. So, the intuition I test is that, despite the probability of an IRA audit, companies within a homogenous geographical area tend to behave similarly.

Consequently, I examine the first hypothesis stated in the alternative form as follows:

H1: The higher the regional tax compliance, the less companies manage earnings in order to shift taxable income from the last fiscal year with higher statutory corporate tax rates to the first fiscal year with lower statutory corporate tax rates.

Empirical research on tax avoidance determinants is still not conclusive and, more specifically, the analysis of the relation between corporate governance and tax avoidance is particularly problematic given that corporate governance tends to be endogenous (Hanlon and Heitzman 2010). Nevertheless, there is evidence that incentive compensation schemes affect tax avoidance (Phillips 2003; Desai and Dharmapala. 2006; Hanlon et al. 2007; Robinson et al. 2010; Armstrong et al. 2012), as does ownership structure (Desai and Dharmapala, 2009; Chen et al., 2010). Unfortunately, given that a large percentage of my sample consists of small or even micro firms, there are no reliable and available data on board composition and ownership structure. For this reason, I have decided to investigate the impact of corporate governance on tax motivated earnings management using a mandatory corporate governance requirement, triggered by the legal form or firm size, that is, the appointment of an audit committee.

Under Italian law there are two main legal forms which grant limited liability for equity participants, the first one is the Società per Azioni (SPA) and the second one is the Società a Responsabilità Limitata (SRL). SPAs have shares whose par value has to be equal or greater than € 120,000. SRLs do not have shares but quotas and the minimum par value of quotas is € 10,000. Only SPAs can be listed companies. There are several differences between SPA and SRL, since the former are the Italian version of public limited companies, whereas the latter are private limited companies. SRL is the most flexible legal form and the corporate governance requirements are always lower or equal to those of SPA. In particular, SPAs have to appoint an audit committee, namely Collegio Sindacale, whose members must be three or five independent professionals and, if the audit committee is in charge of financial auditing, all of them must be certified public accountants. The audit committee oversees that the board of directors and the company comply with the law and articles

of association and, when the company is not listed and does not prepare consolidated financial statements, can also audit the company's financial statements. According to Italian Civil Code (art. 2477) at that time, on the other hand, a SRL company had to appoint an audit committee only when:

Either the par value of equity quotas is equal to or greater than € 120,000; or

For two consecutive fiscal years the company passed two of the following limits:

Total assets of € 3,125,000;

Net revenues of € 6,250,000;

50 employees.

Finally, it is worth mentioning that the audit committee members, when performing a financial audit, have to sign the company's tax return after having audited it. Given the statutory objectives of the audit committee, audit committee members should prevent companies from engaging in risky tax avoidance, such as earnings management to shift income from one period with higher corporate tax rate to another period with lower corporate tax rate.

Consequently, I examine the second hypothesis stated in the alternative form as follows:

H2: Companies that are required to have an audit committee manage earnings in order to shift taxable income from the fiscal year with higher statutory corporate tax rates to the fiscal year with lower statutory corporate tax rates less than companies that are not required to have an audit committee.

Desai et al. (2007) argue that corporate governance and tax enforcement act as monitoring mechanisms that make it more difficult for managers and insider shareholders to divert income in order to both reduce the tax burden and maximize their utility at the expense of the country and minority shareholders. The authors, however, do not study whether and to what extent these two mechanisms may either reinforce or substitute each other. Moreover, Desai et al.'s focus is more on managerial diversion than on tax avoidance, because the latter is considered mainly a way used by managers to divert resources from the company at the expense of minority shareholders and government. Consistently with the idea that the interaction between corporate governance and tax avoidance is relevant for firm value, several studies show that investor reaction to tax avoidance policies varies according to the quality of the firm's corporate governance (Desai and Dharmapala 2006, 2009; Guedhami and Pittman 2008; Wilson 2009). Finally, Hoopes et al. (2012) provide some evidence that the interaction between the probability of an IRS audit and corporate governance is relevant for the tax avoidance policies of U.S. listed firms. In particular, Hoopes et al. find that, when corporate governance is good, the IRS monitoring role in preventing firms from avoiding tax is relatively less important.

Consequently, I examine the third hypothesis stated in the alternative form as follows:

H3: Corporate governance requirements (i.e. the presence of an audit committee) and regional tax compliance substitute each other in reducing tax motivated earnings management.

3. Research Design

Regression Equations

I test my predictions (H1 through H3) on differences in companies' earnings management activity in response to a decrease in the statutory corporate tax rate by estimating the following models, using ordinary least squares (firm and year subscripts are suppressed):

$$AWCA = \beta_0 + \beta_1 \, POST + \beta_2 \, TAX \, COMPLIANCE + \beta_3 POST \times$$

$$\times TAX \, COMPLIANCE + \sum_{k=4}^{10} \beta_k \, CONTROL_k$$

$$+ \varepsilon \qquad\qquad (1)$$

$$AWCA = \beta_0 + \beta_1 \, POST + \beta_2 \, AUDIT + \beta_3 POST \times AUDIT +$$

$$+ \sum_{k=4}^{10} \beta_k \, CONTROL_k + \varepsilon \qquad\qquad (2)$$

$$AWCA = \beta_0 + \beta_1\ POST + \beta_2\ TAX\ COMPLIANCE + \beta_3 POST \times TAX\ COMPLIANCE + \beta_4\ AUDIT\ + \beta_5 POST$$
$$\times\ AUDIT\ + \beta_6 TAX\ COMPLIANCE \times AUDIT\ + \beta_7 POST \times TAX\ COMPLIANCE \times AUDIT$$
$$+ \sum_{k=8}^{14} \beta_k\ CONTROL_k\ + \varepsilon \qquad\qquad (3)$$

where:

AWCA = abnormal working capital accruals estimated using the modified version of the Jones model (Dechow et al., 1995);

POST = 1 in the first fiscal year subject to the new and lower statutory corporate tax rate (i.e. 2008 fiscal year), and 0 in the fiscal year before (i.e. 2007 fiscal year);

TAX COMPLIANCE = 1 minus the intensity of regional tax evasion estimated by Pisani and Polito (2006a)

AUDIT = 1 if the firm has to appoint an audit committee, and 0 otherwise;

CONTROL = firm-specific control variables.

The dependent variable, AWCA, proxies for the direction and the intensity of earnings management by means of working capital accruals. The dummy variable POST measures whether, ceteris paribus, the average of the abnormal working capital accruals has changed significantly from the 2007 fiscal year to the 2008 fiscal year. If Italian companies engaged in earnings management to shift taxable income from the last fiscal year with higher corporate tax rate (i.e. 2007) to the first fiscal year with lower corporate tax rate (i.e. 2008), I expect the level of AWAC to be greater in 2008, thus the POST coefficient should be positive and statistically significant. TAX COMPLIANCE is a time-invariant firm-specific continuous variable whose maximum theoretical value is 1, this being the ideal situation when all companies in a given region fully comply with tax laws and pay due taxes on the whole income earned. Table 1 shows the TAX COMPLIANCE values, which range from 0.06 for Calabria (a region where companies are estimated to evade an amount which is almost as big as the declared taxable base) to 0.87 for Lombardia (a region where companies are estimated to evade on average only 13 per cent of the declared tax base). AUDIT is a time-invariant firm-specific dummy variable which equals 1, if the company is required to appoint an audit committee because either it is an SPA or it is an SRL that in 2006 passed the size limits under which SRLs are allowed to not have an audit committee, zero otherwise.

Model (1) is used to test H1. If the average tax compliance of the region where the company is legally based affects the earnings management activity, the coefficients of TAX COMPLIANCE and POST×TAX COMPLIANCE will be statistically significant. In particular, according to H1, the POST×TAX COMPLIANCE coefficient should be negative. In fact, a negative and statistically significant coefficient of POST×TAX COMPLIANCE means that the relation between abnormal working capital accruals and regional the compliance changed in the first fiscal year of reduced corporate tax rate and that in the 2008, compared to that of the 2007, the higher the tax compliance the lower the abnormal working capital accruals. I do not have any expectation about the sign of the TAX COMPLIANCE coefficient.

Model (2) is used to test H2. If companies that have an audit committee engage in tax motivated earnings management less than companies that do not have an audit committee, the POST×AUDIT coefficient will be negative and statistically significant. I do not have any expectation about the sign of AUDIT variable.

Model (3) is used to test H3. If the monitoring role of the audit committee and the regional tax compliance reinforce each other in constraining tax motivated earnings management, the POST×TAX COMPLIANCE×AUDIT coefficient will be negative and statistically significant. On the contrary, a positive coefficient will support the idea that corporate governance mechanisms and tax enforcement tend to substitute each other.

Statistical significance is always assessed using standard errors clustered at firm level and all the variables are winsorized at the first and ninety-ninth percentile.

Abnormal Working Capital Accruals

Guenther (1994) argues that earnings management for tax savings may be achieved more affectively throughout manipulations of current accruals rather than of non-current accruals (e.g. depreciation expense). This is also true in the Italian setting, because according to tax law the most material long-term accruals such as depreciation and amortization expense follow specific valuation rules that cannot be changed from one fiscal year to another. Thus, I use the following model for each of the two-digit NACE code industry groups to estimate cross-sectional abnormal working capital accruals (AWCA), which are given by the residual term. Firm subscripts are suppressed.

$$\frac{WCA_t}{Assets_{t-1}} = \beta_0 + \beta_1 \frac{1}{Assets_{t-1}} + \beta_2 \frac{\Delta REV_t - \Delta AR_t}{Assets_{t-1}} + AWCA_t \tag{4}$$

where:

WCA_t = working capital accruals in period t calculated indirectly as the change in non-cash current assets less the change in current liabilities, excluding the short term debts and the current portion of long-term debt;

$Assets_{t-1}$ = lagged total assets;

ΔREV_t = change in revenues;

ΔAR_t = change in accounts receivable.

I require each estimation sample to have at least 10 firm-year observations. All the variables are winsorized at the first and ninety-ninth percentile.

Control Variables

The models (1) to (3) include several control variables that according to the literature can influence abnormal accruals. The first control variable is firm size (SIZE), calculated as the natural logarithm of total assets at the beginning of each fiscal year. Previous studies, in fact, show that larger companies are subject to a greater degree of monitoring and public scrutiny and this has an influence on earnings management activity (Watts and Zimmerman, 1978). The change in revenues (GROWTH) is used as a proxy for the growth rate, as growth prospects may affect earnings management decisions (Barth et al., 2008). To control for firm performance, I use the return on assets (ROA), calculated as the ratio between net income before extraordinary items and average total assets (Kothari et al., 2005). Loss-making firms may have lower incentives to engage in tax motivated earnings management and I identify these firms with a dummy variable (LOSS), which equals one if the operating profit is negative, zero otherwise. Given that differences in operating cycles between companies can affect the measures of abnormal accruals (Francis et al. 2005), I control for both asset turnover (TURNOVER), calculated as revenues divided by total assets, and the working capital cycle (OP_CYCLE), calculated as the average working capital divided by revenues. Finally, I include the financial leverage (LEVERAGE), measured as the ratio between total liabilities and total assets, since the capital structure affects earnings management decisions (Defond and Jiambalvo, 1994; Elfakhani, and Kurdi, 2009.).

All the variables are described in Appendix A. The models also include industry fixed effects, where industries are identified by a two-digit NACE code. Lastly, all the control variables have been winsorized at the first and ninety-ninth percentile.

4. Sample Selection and Empirical Results

Sample Selection and Description

This study is based on a sample of private and public companies with limited responsibility for equity participants from 2006 to 2008. Data are collected using the November 2011 AIDA CD Rom. It is worth saying that I extract accounting data from individual or separate financial statements, because earnings before taxes from these statements are the starting point for the taxable income calculation. In other words, even if a company prepares consolidated financial statements, I use accounting information from its separate financial statements since, under Italian law, consolidated financial statements do not have any relevance for tax purposes. AIDA is the Italian database provided by Bureau van Dijk, which does not include financial companies (i.e. banks and insurance companies). Moreover, I exclude all cooperative companies because they benefit from several tax advantages, as long as they follow the cooperative principles, and are subject to quite different governance rules. I also require all companies to have non-missing and non-negative revenues from 2006 to 2008. Initially, 183,731 companies met these requirements. Then, I eliminated firm-year observations without the data necessary to calculate the regression models variables, resulting in an unbalanced panel sample of 293,083 observations for 156,412 unique companies. Finally, in the analyses I also consider the balanced sample that consists of 273,306 firm-year observation for 136,653 unique companies.

Table 2 describes the samples' composition by legal form and region. The unbalanced sample does not differ remarkably from the balanced sample either in terms of legal form or region. The SRL legal form is by far the most common in both samples and the distribution of companies by region is consistent with the size and economic relevance of each region (Table 1). On the other hand, when splitting the balanced sample in two sub-samples using the median value of 2006 total assets, the small firms sample differs materially from the big firms sample in several ways. Not surprisingly, in the small firms sample the percentage of SRLs is 98, which is significantly greater that the 67 per cent of the big firms sample. Also the distribution of companies by region varies significantly. For instance, the percentage of companies based in Lombardia, the region with the highest tax compliance, is 26 in the small firms sample and 29.5 in the big firms sample.

Table 2. Sample Composition by Legal Form and Region

	Unbalanced Panel Sample		Balanced Panel Sample		Small Firms (2006 total assets<2,134)		Big Firms (2006 total assets≥2,134)	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
Panel A: Sample by Legal Form								
S.A.P.A.	21	0.01	21	0.02	2	0.00	19	0.03
S.P.A.	24,636	15.75	23,548	17.23	1,244	1.82	22,304	32.64
S.R.L.	131,755	84.24	113,084	82.75	67,080	98.18	46,004	67.33
Total	*156,412*	*100*	*136,653*	*100*	*68,326*	*100*	*68,327*	*100*
Panel B: Sample by Region								
Abruzzo	2,346	1.5	1,982	1.45	977	1.43	1,005	1.47
Basilicata	518	0.33	443	0.32	207	0.3	236	0.35
Calabria	1,754	1.12	1,477	1.08	749	1.1	728	1.07
Campania	9,551	6.11	8,364	6.12	4,733	6.93	3,631	5.31
Emilia-Romagna	15,539	9.93	13,627	9.97	6,459	9.45	7,168	10.49
Friuli-Venezia Giulia	3,452	2.21	3,113	2.28	1,493	2.19	1,620	2.37
Lazio	14,956	9.56	12,514	9.16	7,039	10.3	5,475	8.01
Liguria	3,266	2.09	2,825	2.07	1,582	2.32	1,243	1.82
Lombardia	42,847	27.39	37,959	27.78	17,809	26.06	20,150	29.49
Marche	4,382	2.8	3,838	2.81	2,003	2.93	1,835	2.69
Molise	373	0.24	309	0.23	150	0.22	159	0.23
Piemonte	10,922	6.98	9,879	7.23	4,679	6.85	5,200	7.61
Puglia	5,440	3.48	4,566	3.34	2,625	3.84	1,941	2.84
Sardegna	2,344	1.5	2,015	1.47	1,072	1.57	943	1.38
Sicilia	5,140	3.29	4,448	3.25	2,420	3.54	2,028	2.97
Toscana	10,805	6.91	9,179	6.72	4,736	6.93	4,443	6.5
Trentino-Alto Adige	2,920	1.87	2,518	1.84	1,090	1.6	1,428	2.09
Umbria	1,857	1.19	1,601	1.17	746	1.09	855	1.25
Valle d'Aosta/Vallée d'Aoste	252	0.16	230	0.17	90	0.13	140	0.2
Veneto	17,748	11.35	15,766	11.54	7,667	11.22	8,099	11.85
Total	*156,412*	*100*	*136,653*	*100*	*68,326*	*100*	*68,327*	*100*

Descriptive Statistics

Table 3 shows the descriptive statistics of the regression model variables and total assets for the unbalanced and balanced panel samples. The unbalanced panel sample does not differ significantly from the unbalanced panel sample for any variable. The mean (median) firm size is € 16.4 (2.3) million and three-quarters of the sample have total assets of less than € 6.5 million.

Table 4 presents the Pearson correlations of regression model variables for the unbalanced panel sample. For the sake of parsimony, I do not report the variable correlations for the balanced panel sample, since they are almost identical to those presented. Obviously, there is a highly positive correlation between AUDIT and size variables, because by law bigger companies are required to appoint an audit committee regardless of their legal form. Moreover, companies with an audit committee (AUDIT=1) tend to have lower leverage and asset turnover. The TAX COMPLIANCE variable, on the other hand, is not materially correlated with any other variable.

Table 3. Descriptive Statistics

Variable	N	Mean	Std.Dev.	P25	P50	P75
Panel A: Unbalanced Panel Sample						
DWCA	293,083	-0.001	0.174	-0.082	-0.007	0.074
POST	293,083	0.478	0.500	0.000	0.000	1.000
TAX COMPLIANCE	293,083	0.704	0.172	0.663	0.740	0.870
POST×TAX COMPLIANCE	293,083	0.337	0.372	0.000	0.000	0.740
AUDIT	293,083	0.304	0.460	0.000	0.000	1.000
POST×AUDIT	293,083	0.150	0.357	0.000	0.000	0.000
SIZE	293,083	7.844	1.374	6.858	7.671	8.687
ROA	293,083	0.022	0.068	0.000	0.010	0.040
GROWHT	293,083	0.213	0.815	-0.058	0.052	0.207
LEVERAGE	293,083	0.771	0.203	0.661	0.829	0.928
TURNOVER	293,083	1.465	1.056	0.815	1.276	1.826
LOSS	293,083	0.124	0.330	0.000	0.000	0.000
OP_CYCLE (in days)	293,083	306.1	602.7	123.8	181.0	263.3
Assets (in € thousand)	293,083	16,378	427,850	1,054	2,348	6,511
Panel B: Balanced Panel Sample						
DWCA	273,306	-0.001	0.172	-0.080	-0.007	0.073
POST	273,306	0.500	0.500	0.000	0.500	1.000
TAX COMPLIANCE	273,306	0.705	0.171	0.663	0.740	0.870
POST×TAX COMPLIANCE	273,306	0.353	0.373	0.000	0.031	0.740
AUDIT	273,306	0.317	0.465	0.000	0.000	1.000
POST×AUDIT	273,306	0.158	0.365	0.000	0.000	0.000
SIZE	273,306	7.883	1.384	6.883	7.712	8.743
ROA	273,306	0.022	0.068	0.000	0.010	0.041
GROWHT	273,306	0.201	0.785	-0.058	0.050	0.202
LEVERAGE	273,306	0.769	0.204	0.656	0.826	0.926
TURNOVER	273,306	1.463	1.050	0.817	1.276	1.823
LOSS	273,306	0.125	0.331	0.000	0.000	0.000
OP_CYCLE (in days)	273,306	300.0	582.3	124.2	181.2	262.4
Assets (in € thousand)	273,306	17,091	441,894	1,079	2,441	6,884
All variables are defined in Appendix A.						

Table 4. Pair-Wise Pearson Variable Correlations (Unbalanced Sample)

	Variable	1	2	3	4	5	6	7
1	DWCA	1.00						
2	POST	0.00	1.00					
3	TAX COMPLIANCE	0.00	0.00	1.00				
4	POST×TAX COMPLIANCE	0.00	**0.95**	**0.22**	1.00			
5	AUDIT	**-0.02**	**0.02**	**0.05**	**0.03**	1.00		
6	POST×AUDIT	**-0.01**	**0.44**	**0.04**	**0.43**	**0.64**	1.00	
7	SIZE	**-0.02**	**0.06**	**0.08**	**0.07**	**0.69**	**0.45**	1.00
8	ROA	**0.13**	**-0.04**	**0.04**	**-0.03**	**-0.06**	**-0.06**	**-0.08**
9	GROWHT	**0.09**	**-0.09**	**-0.03**	**-0.09**	**-0.07**	**-0.07**	**-0.09**
10	LEVERAGE	**-0.02**	**-0.08**	**-0.05**	**-0.09**	**-0.22**	**-0.18**	**-0.19**
11	TURNOVER	**0.03**	**-0.02**	**0.01**	**-0.02**	**-0.16**	**-0.11**	**-0.36**
12	LOSS	**-0.09**	**0.06**	0.00	**0.06**	**0.08**	**0.08**	**0.06**
13	OP_CYCLE (in days)	**0.03**	**0.02**	**-0.02**	**0.01**	**0.05**	**0.03**	**0.20**
		8	9	10	11	12	13	
8	ROA	1.00						
9	GROWHT	**0.07**	1.00					
10	LEVERAGE	**-0.40**	**0.09**	1.00				
11	TURNOVER	**0.11**	**0.04**	**0.14**	1.00			
12	LOSS	**-0.46**	**-0.05**	**0.06**	**-0.07**	1.00		
13	OP_CYCLE (in days)	**-0.10**	**-0.04**	**0.03**	**-0.34**	**0.09**	1.00	
This table presents the Pearson correlations between the regression variables for the 293,083 firm-year observations of the unbalanced panel sample. Correlations in bold are statistically significant at the 1 percent level. All variables are defined in Appendix A.								

Tax Avoidance and Regional Tax Compliance

Table 5 reports the regression results from Model (1), which provide evidence that regional tax compliance has a significant role in reducing tax motivated earnings management. The coefficient estimates of the unbalanced panel sample and the balanced one are very similar. The POST coefficient is positive and significant at the 1 percent level for both the samples (column 1 and 2). This suggests that the Italian firms engaged in earnings management to shift taxable income from the last fiscal year with a higher corporate tax rate to the first fiscal year with a lower corporate tax rate. In untabulated results, I find that the POST coefficient remains positive and highly significant even estimating Model (1) without the variables TAX COMPLIANCE and POST×TAX COMPLIANCE. More importantly and consistently with H1, the POST×TAX COMPLIANCE coefficient is negative and significant at the 5 percent level. In both samples, the higher the regional tax compliance, the lower the level of abnormal working capital accruals in the first fiscal year with reduced corporate tax rates. Economically, the coefficient estimate of -0.008 is not high, but still material, since the mean (median) of the ratio earnings before tax to lagged total assets is 0.039 (0.033) in the unbalanced panel sample.

In the next two regressions (column 3 and 4), I examine whether the firm's size plays a significant role. In the small firms sample, the coefficients of interest present the same sign and statistical significance as the whole samples, but the magnitude of estimates increases remarkably. In particular, the estimate of the POST×TAX COMPLIANCE coefficient is -0.014 and also the POST coefficient rises from 0.011 to 0.016 for the balanced panel sample. On the other hand, in the big firms sample (column 4), all the coefficients of interest are not statistically different from zero. These results suggest that the earnings management activity in response to a decrease in corporate tax rate changes significantly in different size clusters. In untabulated results, I further split the small firms sample in two sub-samples by firm size, in order to estimate Model (1) only for firms in the first size quartile. The POST×TAX COMPLIANCE coefficient estimate is -0.028 and it is significant at the 1 percent level. Also, the POST coefficient estimate increases materially to 0.025. These results suggest that the role of regional tax compliance in preventing tax motivated earnings management is relevant for small and very small firms, whereas big firms tend to engage less in tax motivated earnings management and the regional corporate tax compliance is not influential for them.

Control variables present coefficient signs in line with the literature and are consistent across samples (column 1 to 4), with the only exception of SIZE. It is worth noting that abnormal working capital accruals are positively and significantly associated with firm performance, measured by ROA and GROWTH, and LEVERAGE. On the other hand, companies with operating losses tend to have lower abnormal working capital accruals. SIZE is not statistically significant for both the unbalanced and balanced sample, whereas it is significant at the 1 percent level for the small firms and big firms samples, but with an opposite sign. In the small firms sample, SIZE positively affects the dependent variable, while in the big firms sample, it does so negatively. So, it seems that the size effect is not linear in the full samples and this explains why SIZE is not significant in regressions 1 and 2.

Tax Avoidance and Internal Audit Committee

Table 6 reports the regression results from Model (2), which investigates the monitoring role of the audit committee in preventing companies from managing their earnings for tax purposes. The coefficient estimates suggest that the presence of an audit committee does not significantly affect the tax motivated earnings management activity. In three regressions out of four (column 1 to 4), the POST×AUDIT coefficient is negative, as predicted in H2, but it is never statistically significant at conventional levels. For small firms (column 3), the POST×AUDIT coefficient is not far from being significant at the 5 per cent level and its estimate is economically material, but this result must be interpreted with caution. Only 4 per cent of the small firms sample have, in fact, an audit committee and, by construction, this 4 per cent consists of the biggest companies within the small firms sample. For this reason, it is not possible to disentangle the size effect from the monitoring role played by the audit committee. All in all, the multivariate analyses do not support the H2 prediction. Finally, control variables present coefficient estimates in line with those seen for the Model (1).

Table 5. Regional Tax Compliance Regressions

	Unbalanced panel sample	Balanced panel sample	Small firms (2006 total assets<2,134)	Big firms (2006 total assets≥2,134)
	(1)	(2)	(3)	(4)
VARIABLES	DWCA	DWCA	DWCA	DWCA
POST	0.0117^^^	0.0112^^^	0.0155^^^	0.0048
	0.000	0.000	0.001	0.170
TAX COMPLIANCE	0.0091^^^	0.0092^^^	0.0155^^^	0.0049
	0.001	0.002	0.001	0.153
POST×TAX COMPLIANCE	-0.0083^^	-0.0081^^	-0.0142^^	-0.0008
	0.036	0.045	0.027	0.861
SIZE	-0.0003	-0.0003	0.0102^^^	-0.0039^^^
	0.281	0.258	0.000	0.000
ROA	0.3384^^^	0.3366^^^	0.3275^^^	0.3508^^^
	0.000	0.000	0.000	0.000
GROWHT	0.0178^^^	0.0192^^^	0.0245^^^	0.0150^^^
	0.000	0.000	0.000	0.000
LEVERAGE	0.0276^^^	0.0271^^^	0.0149^^^	0.0358^^^
	0.000	0.000	0.000	0.000
TURNOVER	0.0019^^^	0.0018^^^	0.0056^^^	-0.0003
	0.000	0.000	0.000	0.683
LOSS	-0.0200^^^	-0.0196^^^	-0.0221^^^	-0.0164^^^
	0.000	0.000	0.000	0.000
OP_CYCLE	0.0000^^^	0.0000^^^	0.0000^^^	0.0000^^^
	0.000	0.000	0.000	0.000
Constant	-0.0404^^^	-0.0398^^^	-0.1277^^^	-0.0018
	0.000	0.000	0.000	0.760
Industry Fixed Effects	Yes	Yes	Yes	Yes
Observations	293,083	273,306	136,652	136,654
R-squared	0.032	0.033	0.035	0.037

^,^^,^^^ Indicate two-tailed statistical significance at 10, 5, and 1 percent, respectively.
Beneath each coefficient estimate the p-value is reported based on robust standard errors adjusted for clustering by firm. Unreported industry controls are based on the two-digit NACE code.
All variables are defined in Appendix A.

Table 6. Audit Committee Regressions

	Unbalanced panel sample	Balanced panel sample	Small firms (2006 total assets<2,134)	Big firms (2006 total assets≥2,134)
	(1)	(2)	(3)	(4)
VARIABLES	DWCA	DWCA	DWCA	DWCA
POST	0.0066^^^	0.0061^^^	0.0061^^^	0.0036^^^
	0.000	0.000	0.000	0.009
AUDIT	0.0018	0.0019	0.0094^^	0.0022^
	0.104	0.100	0.021	0.091
POST×AUDIT	-0.0023^	-0.0020	-0.0108^	0.0011
	0.072	0.140	0.057	0.497
SIZE	-0.0004	-0.0005	0.0102^^^	-0.0046^^^
	0.297	0.225	0.000	0.000
ROA	0.3390^^^	0.3373^^^	0.3296^^^	0.3528^^^
	0.000	0.000	0.000	0.000
GROWHT	0.0178^^^	0.0192^^^	0.0244^^^	0.0151^^^
	0.000	0.000	0.000	0.000
LEVERAGE	0.0278^^^	0.0274^^^	0.0160^^^	0.0366^^^
	0.000	0.000	0.000	0.000
TURNOVER	0.0019^^^	0.0019^^^	0.0057^^^	-0.0003
	0.000	0.000	0.000	0.586
LOSS	-0.0200^^^	-0.0195^^^	-0.0221^^^	-0.0165^^^
	0.000	0.000	0.000	0.000
OP_CYCLE	0.0000^^^	0.0000^^^	0.0000^^^	0.0000^^^
	0.000	0.000	0.000	0.000
Constant	-0.0341^^^	-0.0331^^^	-0.1186^^^	0.0057
	0.000	0.000	0.000	0.329
Industry Fixed Effects	Yes	Yes	Yes	Yes
Observations	293,083	273,306	136,652	136,654
R-squared	0.032	0.033	0.035	0.037

^,^^,^^^ Indicate two-tailed statistical significance at 10, 5, and 1 percent, respectively.
Beneath each coefficient estimate the p-value is reported based on robust standard errors adjusted for clustering by firm. Unreported industry controls are based on the two-digit NACE code.
All variables are defined in Appendix A.

Table 7. Interaction between Tax Compliance and Audit Committee

	Unbalanced panel sample	Balanced panel sample	Small firms (2006 total assets<2,134)	Big firms (2006 total assets≥2,134)
	(1)	(2)	(3)	(4)
VARIABLES	DWCA	DWCA	DWCA	DWCA
POST	0.0155^^^	0.0148^^^	0.0165^^^	0.0079
	0.000	0.000	0.001	0.160
TAX COMPLIANCE	0.0109^^^	0.0109^^^	0.0147^^^	0.0064
	0.002	0.003	0.002	0.247
POST×TAX COMPLIANCE	-0.0127^^	-0.0125^^	-0.0149^^	-0.0061
	0.010	0.016	0.023	0.435
AUDIT	0.0069^	0.0063	-0.0063	0.0041
	0.080	0.124	0.665	0.421
POST×AUDIT	-0.0144^^	-0.0131^^	-0.0196	-0.0053
	0.011	0.024	0.340	0.458
AUDIT×TAX COMPLIANCE	-0.0072	-0.0062	0.0234	-0.0026
	0.180	0.266	0.265	0.709
POST×AUDIT×TAX COMPLIANCE	0.0171^^	0.0158^^	0.0126	0.0091
	0.026	0.046	0.672	0.355
SIZE	-0.0005	-0.0006	0.0101^^^	-0.0046^^^
	0.226	0.165	0.000	0.000
ROA	0.3385^^^	0.3368^^^	0.3289^^^	0.3524^^^
	0.000	0.000	0.000	0.000
GROWHT	0.0178^^^	0.0192^^^	0.0245^^^	0.0151^^^
	0.000	0.000	0.000	0.000
LEVERAGE	0.0277^^^	0.0274^^^	0.0159^^^	0.0367^^^
	0.000	0.000	0.000	0.000
TURNOVER	0.0018^^^	0.0018^^^	0.0056^^^	-0.0005
	0.000	0.000	0.000	0.476
LOSS	-0.0200^^^	-0.0196^^^	-0.0222^^^	-0.0165^^^
	0.000	0.000	0.000	0.000
OP_CYCLE	0.0000^^^	0.0000^^^	0.0000^^^	0.0000^^^
	0.000	0.000	0.000	0.000
Constant	-0.0408^^^	-0.0398^^^	-0.1273^^^	0.0021
	0.000	0.000	0.000	0.768
Industry Fixed Effects	Yes	Yes	Yes	Yes
Observations	293,083	273,306	136,652	136,654
R-squared	0.032	0.033	0.035	0.037

^,^^,^^^ Indicate two-tailed statistical significance at 10, 5, and 1 percent, respectively.
Beneath each coefficient estimate the p-value is reported based on robust standard errors adjusted for clustering by firm. Unreported industry controls are based on the two-digit NACE code.
All variables are defined in Appendix A.

Interaction between Tax Compliance and Audit Committee

Table 7 reports the regression results from Model (3), which investigates the interaction between regional tax compliance and the presence of an audit committee in restraining tax motivated earnings management. The POST×AUDIT×TAX COMPLIANCE variable loads positive coefficients in all regressions, but is statistically significant at the 5 percent level only for the whole samples (column 1 and 2). The lack of statistical significance for the small and big firms sub-samples is not surprising. Within the small firms, the variable POST×AUDIT×TAX COMPLIANCE assumes values different from (and greater than)

zero only for 2 per cent of the sample, since only 4 per cent of the sub-sample have an audit committee. On the other hand, we have already seen that neither AUDIT nor TAX COMPLIANCE are relevant variables in explaining the dependent variable's variance for the big firms sample. On the whole, these findings tend to be consistent with H3 prediction, since the positive and statistically significant estimate of the POST×AUDIT×TAX COMPLIANCE coefficients in the whole samples suggests that the regional tax compliance is less relevant in moderating income shifting when an audit committee has been appointed. In other words, the regional tax compliance and the presence of an audit committee do not reinforce

each other as monitoring mechanisms, rather there is a substitution effect.

Interestingly, the POST×AUDIT coefficients are negative in all regressions and statistically significant at the 5 percent level for both the whole samples (column 1 and 2), whereas in the Model's (2) estimations POST×AUDIT coefficients were at best statistically significant at the 10 percent level. This result seems in line with the H2 prediction according to which the presence of an audit committee reduces earnings management for tax purposes. However, untabulated analyses show that the statistical significance of POST×AUDIT in the Model's (3) estimations is conditional on the presence of the interaction variables with regional tax compliance (i.e. AUDIT×TAX COMPLIANCE and POST×AUDIT×TAX COMPLIANCE). When estimating Model (3) without AUDIT×TAX COMPLIANCE and POST×AUDIT×TAX COMPLIANCE variables, the POST×AUDIT coefficient significance drops again at the 10 percent level.

Conclusions

I investigate whether the regional tax compliance affects earnings management activity in response to a decrease in the corporate tax rate using a large sample of public and private Italian companies. Multivariate analyses provide evidence that regional tax compliance has a significant role in reducing tax motivated earnings management. However, this role is much more relevant for small firms. Firms above the asset-size median of the whole sample seem to engage less in earnings management for tax purposes and for those firms the corporate tax compliance of the region is not influential. On the other hand, in contrast to my expectation, empirical results do not support any monitoring role of the audit committee in preventing companies from managing their earnings to minimize their tax burden.

Finally, the analysis of the interaction between the regional corporate tax compliance and the presence of an audit committee suggests the existence of a substitution effect. The regional tax compliance is less relevant in moderating tax motivated earnings management when an audit committee has been appointed.

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