# How Does Corporate Governance Affect Tax Aggressiveness? Evidence from Finland

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#### **Abstract**

Using data from Finnish private firms, we examine the association between corporate governance and tax aggression in a high tax alignment environment. We find evidence of a non-linear relationship between CEO ownership and tax aggressiveness. Our results indicate that organisations with low levels of CEO ownership are more tax aggressive than those with high levels of CEO ownership when comparing firms with an average degree of CEO ownership. Furthermore, firms with CEO duality are less tax aggressive. This study provides a new perspective on effective corporate governance by suggesting that effective corporate governance systems in private firms lead to more tax aggressiveness. This could be attributed to the fact that cash flow, including tax savings, is critical to survival for private firms, and not even board diversity or CEO gender diminish this effect.

## Keywords:

Tax aggressiveness, corporate governance, a private firm, SMEs, ownership structure, taxation.

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#### 1. Introduction

Corporate social responsibility (CSR) is one of the main aspects of corporate culture that impacts corporate tax avoidance. Higher adverse reporting of CSR activities results in more aggressive tax avoidance (Hoi et al., 2013). However, conflicting findings exist on the relationship between CSR and taxation. Few studies, such as Mickey et al. (2007) and Lev et al. (2010), support the notion that CSR and tax payments are closely associated. Other research contends that no negative relationship exists between CSR and tax payments (e.g. Dhaliwal et al., 2011). This study examines how corporate governance, gender diversity, and tax evasion intersect in private companies. Given the increased focus on corporate sustainability at all societal levels, tax avoidance and corporate governance are themes that are becoming more and more relevant for all businesses. While there is some discussion on whether taxation should be a part of CSR (Ylönen & Laine, 2015), tax-related issues are already being considered in current CSR frameworks, such as the Global Reporting Initiative (GRI).

Private firms constitute a large portion of any economy. Finland's business tax policy is comparable to that of most developed nations. Finland falls in the high book-tax alignment group (Kasanen et al., 1996; Eberhartinger, 1999). High tax alignment describes the high alignment between financial reporting and tax accounting (Steijvers & Niskanen, 2014). Eberhartinger (1999) offers two alternative links between tax accounts and financial accounts: (a) accounting rules and tax rules are independent of one another, and (b) taxation depends on financial reporting, and therefore all entries in the books are relevant for taxation. Finland belongs to the latter of the two alternatives. The Finnish environment can be further characterised as one with high trust in tax authorities, which typically increases voluntary tax compliance (Batrancea et al., 2019). Ojala et al. (2020) state that the Finnish setting allows for large-scale archival studies because all limited liability companies, regardless of size, must prepare detailed and comparable financial statements that comply with therequirements of the Companies Act and file them at the public register of the Finnish Patent and Registration Office (PRH).

Tax avoidance describes the use of system loopholes to reduce corporate tax payments in a legal manner. Tax evasion, in contrast, is considered an outlawed way to slash tax payments by underreporting one's tax income (Kirchler et al., 2003). The term 'tax aggressiveness' refers to a company's tax accounting actions intended to minimise taxable income, regardless of financial accounting objectives (Karjalainen et al., 2020). Aggressive tax planning from a CSR point of view is defined as contrary to regular tax planning, complying with tax law obligations but falling short of stakeholders' expectations and standards (Knuutinen, 2014).

Corporate governance describes the procedures and processes that guide and control a corporation. A critical component of a corporate governance framework is the company's board structure. Board diversity is a current topic in the board structure literature, specifically whether and how the inclusion of women in senior management and firm governance enhances corporate performance (Francoeur et al., 2008). According to various corporate governance recommendations in different countries, board diversity promotes good corporate governance. The value gained from the heterogeneity of ideas, experiences and innovations that individuals contribute to the organisation is critical to how effectively diversity improves firm performance (Fields and Keys, 2003). For example, the Finnish Corporate Governance Code (2020) states that 'diversity also promotes good corporate governance, efficient supervision of the company's directors and executives, as well as succession planning' (p. 26).

According to Chen et al. (2010), our knowledge of the factors that influence tax aggres-

siveness is limited, and there is even less information available regarding its relationship with executive and board member incentives. Steijvers and Niskanen (2014) further suggest that this type of knowledge is even more limited in the case of small private firms. According to (Sundvik, 2017) studies of private companies are few due to the lack of readily available data. Clatworthy and Peel's (2013) study in the context of a UK private firm setting reveals that private companies in the UK are required to publish publicly only a limited set of accounting information, and the financial reporting regime for these organisations is an intriguing one to study. However, many differences in financial reporting procedures exist. Small private companies are generally eligible for audit exemption and must submit a condensed balance sheet (they can omit their income statement). According to Eisenberg et al. (1998), the variables that affect board size and structure in private companies may differ from those that affect big public companies.

With this study, we respond to Hanlon and Heinzman's (2010) call for further research on privately held firms beyond using them as a benchmark for publicly traded companies. We address the following two research questions: (1) Is there a connection between CEO ownership and the level of tax aggressiveness? (2) Is there a connection between efficient corporate governance and tax aggressiveness?

The number of shares the CEO of a company owns is referred to as CEO ownership. Some CEOs are either full or partial proprietors of the business. We use survey data from Finnish private firms regarding ownership and CEO and board characteristics and integrated financial data from databases collected between 2000 and 2011 to examine research questions 1 and 2. Our findings suggest that as CEO ownership increases, tax aggressiveness reduces. Companies with a dual CEO are less tax aggressive, whereas companies with external board members are more tax aggressive. In contrast to earlier research, we discover no link between female leadership and tax aggression. This is valid for both CEOs and board members.

This study makes four contributions to the previous literature. First, to our knowledge, Steijvers and Niskanen (2014) are among the few studies addressing the connection between tax aggressiveness and corporate governance in a private firm context. While Steijvers and Niskanen (2014) investigated the role of governance-related factors on tax aggressiveness in a subsample of family firms, the current study uses a general sample of private firms. Second, while Steijvers and Niskanen (2014) showed that in a family firm context, there is a linear connection between CEO ownership and the level of tax aggressiveness, the current study addresses private companies in general and provides evidence of a non-linear relationship between CEO ownership and tax aggressiveness. Furthermore, we expand the results from Steijvers and Niskanen (2014) by including gender-related governance variables. Third, previous studies (e.g. Lanis et al., 2017; Richardson et. al., 2016) on the connection between tax aggressiveness and corporate governance have investigated the situation in non-tax-alignment countries or within family firm tax-high tax alignment countries (Steijvers & Niskanen, 2014). Fourth, few previous studies (e.g. Lanis et al., 2017; Richardson et al., 2016) investigated female managers' or board members' roles in the firm tax aggressiveness of listed companies. We extended analyses provided by Lanis et al. (2017) and Richardson et al. (2016) to private firms.

This paper proceeds as follows: Chapter 2 presents the institutional setting and hypothesis development for our study; Chapter 3 describes the data, variables, and models used in our empirical analysis; Chapter 4 presents and discusses the empirical results; and Chapter 5 provides our conclusion.

# 2. Institutional Setting and Hypothesis Development

Atwood et al. (2012) examined tax avoidance across several countries by focusing on the effects of the tax system characteristics of a firm's home country. Their empirical results revealed that firms in home countries with higher required book-tax conformity exhibit lower tax avoidance. Their results show that tax alignment (or book-tax congruence) is associated with tax avoidance. While high tax alignment leads to the same net income in financial reports and tax returns, it is essential to note that tax aggressiveness appears equally in the financial statements of high- and low-tax alignment countries. In Finland, expenses are deductible in tax returns only if they have also been recognised in financial statements. This requirement is based on the Finnish Business Tax Law (EVL 1968/360), §54 (1976/1094), which states that for all expenditures incurred, expensing in financial statements is a prerequisite for tax deductibility. In keeping with this requirement, depreciation in tax returns cannot exceed what the firm's financial statements report.

Regarding permanent tax-avoiding strategies, non-tax-deductible expenses include fines, penalties and bribes. In terms of temporary tax-avoiding plans, Finnish firms can use depreciation reserves and depreciation adjustments (e.g. Niskanen & Keloharju, 2000). Regarding permanent tax-avoiding plans on the revenue side, the most critical non-taxable revenues are those from the sales of shares listed in long-term assets and dividends received from other companies (Steijvers & Niskanen, 2014). Tax avoidance also relates to other aspects of tax system features, such as how much management remuneration comes from variable pay (bonuses, stocks and stock options) (Atwood et al., 2012).

In the context of the current study (i.e. in Finland), listed firms follow the Finnish corporate governance code provided by the Securities Market Association. Finnish Corporate Governance Code 2020 recommends that most board members be independent of the company and at least two independent of the company's significant shareholders. An alternative corporate governance code designed for private companies exists, the Agenda for Improving the Corporate Governance of Unlisted Companies by the Chamber of Commerce, Finland. In Finland, private companies can choose which code to apply voluntarily. According to the Companies Act of Finland, a board shall have one to five members if not stipulated differently in the company's bylaws. Regardless of the code the company chooses to follow, the selection of board members remains vital for every company.

#### 2.1. CEO Ownership

Agency theory suggests that agency costs decrease when the CEO's ownership share increases. More specifically, it is assumed that the more shares (s)he has, the less (s)he will be inclined towards consuming perquisites to maximise their personal benefit, as the fraction of the costs the CEO must bear for consuming these perquisites relates positively with the percentage of ownership (Jensen & Meckling, 1976). The challenging trade-off between internal efficiency loss and potential gains is likely to reduce the attractiveness of tax evasion even when the principal is risk neutral. A CEO with a lower ownership share may be more inclined to engage in tax activities, as doing so may enhance rent extraction by the CEO, leading to, for example, increased perquisite consumption and additional remuneration (Fama & Jensen, 1983). The CEO might be more inclined to improve financial results and engage in tax aggressive activities, such as setting up group structures abroad that enable tax savings from transfer pricing

(Baldenius et al., 2004). Additionally, (s)he may increase the company's free cash flow through tax planning by engaging in tax aggressive behaviours, such as using depreciation reserves and adjustments to invest in pet projects or pursue personal objectives (Jensen, 1986). It can also be argued that the reputation-related effects of tax aggressive behaviours are likely to be important for a CEO with a higher equity stake in the firm. If a firm experiences a loss of efficiency, firms compensating managers via after-tax earnings must pay them a risk premium because after tax compensation appears riskier than pre-tax compensation from a manager's perspective (Carnes & Guffey, 2000; Gaertner, 2014; Newman, 1989). Höglund and Sundvik (2016) report evidence that firms for which the CEO is a board member exhibit lower financial reporting quality.

Another view of the association between tax aggressiveness and risk taking behaviour. Prior theoretical work on tax evasion (Allingham & Sandmo, 1972; Chen & Chu, 2005) suggests that the risk of detection by the tax administration deters tax aggressiveness most significantly, and aggressiveness is articulated by the decision-maker's subjective view of the probability of detection. Smaller entrepreneurial firms tend to seek to exploit opportunities in the market and demonstrate a greater inclination towards risk-taking than their larger, more established counterparts (Lumpkin & Dess, 1996).

Previous studies, such as that by Dyreng et al. (2010), have shown that CEOs play an economically significant role in deciding the degree of tax avoidance. Desai and Dharmapala (2006) found that firms with managers with high equity shares are less tax aggressive, and vice versa. Steijvers and Niskanen (2014) found similar evidence within family firms, namely that family firms with lower CEO ownership are more tax aggressive than those with higher CEO ownership. Thus, we set the first hypothesis as follows:

H1: There is a negative association between CEO ownership and the level of tax aggression.

#### 2.2. Efficient Corporate Governance

Board members and CEOs play a crucial role in determining a tax management strategy, given that they are accountable for resource allocation, performance and maximising shareholders' wealth (Minnick & Noga, 2010). Dyreng et al. (2010) found that CEOs impact tax avoidance substantially more than CFOs. To protect the interests of shareholders, a board of directors harmonises the firm's managers' interests with those of the shareholders (Johannisson & Huse, 2000). The board of directors is also legally responsible for monitoring and evaluating the senior management for the firm's welfare (Forbes & Milliken, 1999). In cases of effective corporate governance, the directors should detect any rent extraction behaviour and report it to the shareholders. In the case of tax-related lawsuits, the board may be legally liable, and their reputation capital may be threatened (Carcillo et al., 2002). Demonstrably, the relationship between tax avoidance and agency conflicts seems vital for firms with low levels of CEO monitoring (Chyz & White, 2014). Creditor interventions also increase borrowers' tax avoidance, mainly when shareholder governance falls short (Cook et al., 2020). In order to o mitigate the reputational risk the board of directors may abridge shareholder–manager agency problems and restrict aggressive tax behaviours undertaken by the CEO.

From a traditional agency perspective, the presence of outside board members can signal effective monitoring by the board of directors (Harford et al., 2008). (Jensen, 1993; Fama & Jensen, 1983) suggest that if the CEO is also the chairman of the board,i.e. if CEO duality exists,

the considerable concentration of power could be adverse. Contrary to the study we argue that this leads to effective corporate governance in private firms. We also predict minimal agency costs if the CEO owns a significant portion of the company.

Using Australian empirical data, Lanis and Richardson (2011) found that external director presence has a negative relationship with the potential for tax aggressiveness; this suggests that independent boards have a lower level of tax avoidance. Minnick and Noga (2010) used S&P 500 data to investigate the connection between efficient corporate governance measures and tax aggressiveness. They found no significant results for traditional corporate governance measures, such as external board members or CEO duality. Based on these views, we hypothesise that an external board member constrains a firm's management from aggressive tax behaviours, while CEO duality increases tax aggressiveness.

H2: Efficient corporate governance decreases tax aggressiveness.

## 2.3. Female CEO or Chairman of the Board and Tax Aggressiveness

It is well documented in the accounting and finance literature that female decision-makers take fewer risks than their male counterparts. For example, Faccio et al. (2016) found that firms with female CEOs have lower leverage, fewer volatile earnings and a higher chance of survival than similar firms with male CEOs. Using US commercial banks, Palvia et al. (2015) documented that banks with female CEOs hold more conservative capital levels after controlling for the bank's asset risk and other attributes. Adams and Ferreira (2009) offer evidence that gender-diverse boards have pros and cons: gender-diverse boards allocate more effort to monitoring, but the average effect of gender diversity on firm performance is negative. Recent US studies find a positive association between female directors on the board, board monitoring and earnings quality (Adams & Ferreira, 2009; Srinidhi et al., 2011).

However, few studies have investigated the association between gender and earnings quality in positively impacting firms' financial quality. Ho et al. (2015) provide evidence that female CEOs' conservative and ethical inclinations lead to accounting conservatism, and this association is more potent in firms with high litigation and takeover risks. They also offer evidence that smaller banks with female CEOs and board chairs are less likely to fail during financial crises. Niskanen et al. (2011) found that firms with female auditors are more conservative in their reporting practices, and Barua et al. (2010) found that firms with female CFOs have higher-quality accruals. Glickman et al. (2001) used data from a survey targeted at accounting students. They investigated potential gender effects on earnings management methods without finding evidence of gendered practices. Krishnan and Parsons (2008) investigated actual earnings management behaviours in a sample of large, listed companies and found that earnings quality is positively associated with gender diversity. Srinidhi et al. (2011) used data on S&P 500 companies and found that firms with female directors exhibit significantly lower earnings management and higher accruals quality than firms with no female directors.

Other studies address the association between female gender and tax aggressiveness in listed firms. Francis et al. (2014) found that female CFOs are associated with less tax aggressiveness than their male counterparts. Using US-listed company data from 2006 to 2009, Lanis et al. (2017) reported a negative association between female representation on boards and tax aggressiveness. Using Australian data, Richardson et al. (2016) also found evidence supporting the claim that firms experience lower levels of tax aggression when they have female board

members. A literature review by Khalif and Achek (2017) suggests that a female CFO or CEO leads to more conservative reporting, higher social and environmental disclosure levels, less tax aggressiveness and higher audit fees.

Even though several studies have documented that female decision-makers are more risk-averse (e.g. Faccio et al., 2016) than their male counterparts and are less tax aggressive (Francis et al., 2014), other evidence suggests that gender distinction in terms of ethics is vague. Zalata et al. (2019) findings suggest that observable differences in financial reporting behaviours between male and female CEOs exist because female CEOs are more risk-averse but not necessarily more ethically sensitive. Adams and Funk (2012) further suggest that having a woman on a firm's board does not lead to more risk-averse decision-making. Based on these views, we set the third hypothesis:

H3: Firms with a female CEO or a female chairman of the board are less tax aggressive than maleled firms.

## 3. Data and Variables

The data used in this study was taken from a sample of Finnish private firms for the fiscal years 2000 to 2011. The data on CEO ownership, board structure, and control variables were collected through a private survey. The first questionnaire was sent to all private limited companies with at least two employees in eastern Finland. The first survey covered the period between 2000 and 2005, and the second questionnaire covered between 2006 and 2011. The questionnaire was sent to the same respondents from the first survey round.

The questionnaire was circulated to the firms via email. The target firms for the survey were selected from the Voitto database maintained by Asiakastieto, a Finnish financial and credit information company. The survey covered all limited liability firms with at least two employees. Out of 3,262 questionnaires, 756 responses were collected, resulting in a response rate of 23 percent. Of these, 681 recipients responded to the questions on boards and ownership. In both questionnaire rounds, the respondents were asked to answer corporate governance questions related to the six years in their assigned data period. There was no change in the data during the overall survey period (2000 to 2011), indicating that were no changes in payment patterns in Finland. The laws that govern SMEs (Small and Medium-sized enterprises) and institutional settings also did not change during the period. In 2008, audits were made voluntary in Finnish SMEs, the change having been recorded in 2007 (Auditing Act 13.4.2007/459) (Niemi et al., 2012). There is no effect of this change in auditing law on our data set. The firms surveyed in the present study cover all industries in Finland, except primary production. The data were amended using financial statements from the Voitto and Amadeus databases. In the non-respondent bias tests, the firms that responded to the survey did not differ from those that did not respond.

After removing outliers at five and 95 percent for the effective tax rate (ETR) and one and 99 percent for other continuous variables, the final panel dataset of 650 private firms included 2,545 to 4,324 firm-year observations, depending on the variables used in the models. These models were estimated based on robust ordinary least squares (OLS) estimation and robust standard errors. The variable definitions are shown in Table 1.

Table 1. Variable Definitions

VARIABLE NAME	DEFINITION	SOURCE	
CEO20	1 = CEO ownership less than 20 percent	Questionary	
CEO50	1 = CEO ownership more than 50 percent	Questionary	
D_CEO_DUAL	1 = CEO is also the chairman of the board; 0 = otherwi	Questionary	
D_EXT_BM	1 = one or more external board members, includi investors; 0 = otherwise	Questionary	
CEO_Female	1 = CEO is female; 0 = CEO is male	Questionary	
Board_Female	1 = at least one female member in the board; 0 = otherwi	Questionary	
ROA_EBIT	EBIT / total assets	VOITTO+	
LNASSETS	Natural logarithm of total assets	VOITTO+	
ASSETS	Total assets	VOITTO+	
LEV	Long term debt/TAt-1	VOITTO+	
TANG	Tangible assets/ TAt-1	VOITTO+	
INTANG	Intangible assets/ TAt-1	VOITTO+	
D_LOSS	1 = Negative profit; 0 = otherwise	Questionary	
D_FAMILY	1 = Family firm; 0 = otherwise	Questionary	
D_NONCERT	1 = Audited by non-certified auditor; 0 = otherwise	Questionary	

## 3.1. Dependent Variable

We use ETR as the dependent variable in our study. ETR is defined as the total tax divided by earnings before tax. It is the average percentage that the company pays in taxes on its taxable income. Hanlon and Heitzman (2010) report that ETR is the most used measure to indicate the degree of tax aggressiveness. Dyreng et al. (2016) explain that ETR measures the extent to which tax avoidance influences a reduction in tax expenses for accounting purposes. Further, Steijvers and Niskanen (2014) report that Finnish firms can achieve lower ETR by increasing their accounting expenses (e.g. by increasing depreciation reserves).

## Hypotheses Variables

To operationalize H<sub>1</sub>, we included two hypothesis variables: CEO<sub>2</sub>o and CEO<sub>5</sub>o. The first variable obtains a code '1' if the CEO's shares are less than 20 percent of the firm's shares (CEO<sub>2</sub>o) and is coded '0' otherwise. The latter variable (CEO<sub>5</sub>o) obtains a code '1' if the CEO's ownership

of the firm's shares is more than 50 percent and '0' otherwise. Here, we enabled the non-linear nature of this relationship using binary variables to represent different levels of managerial ownership. We chose our ownership cut-offs based on previous literature (Lennox, 2005; Niskanen & Niskanen, 2010).

To operationalize H2, two hypothesis variables were created: D\_CEO\_DUAL and D\_EXT\_BM. The former is coded as '1' if the CEO is also the board's chairman and zero otherwise. The latter is coded as '1' if there are one or more external board members and '0' otherwise.

To operationalize H<sub>3</sub>, two hypothesis variables were created: CEO\_Female and Board\_Female. The former is coded as '1' if the CEO is female and zero if otherwise. The latter is coded as '1' if there is at least one female board member and '0' otherwise.

#### 3.2. Control Variables

We controlled for the known effects affecting tax aggressiveness as follows. Following Tanyi et al. (2020), we controlled firm performance using return on assets (ROA) data. We did so because Lisowsky (2010) suggests that tax aggressiveness is positively related to firm performance. We also controlled firm size by including total assets. Each firm's leverage was measured by long-term debt (LEV). We further included tangible assets (TANG) and intangible assets (INTANG) to evaluate the differences in how these asset types generate tax deductions. The descriptive statistics revealed that the average ETR in our sample was relatively lower than the tax rate in Finland, which might suggest that the data included firms with losses. Notably, for the data, firms with negative profits for a given period do not pay taxes (Lanis & Richardson, 2012). Therefore, we controlled for such loss in the study period (D\_LOSS). We also included indicator variables to control for a year of industry-fixed effects.

Table 2a. Descriptive statistics

	N	MEAN	STD. DEV.	MIN	MAX
ETR	5435	.196	0.121	0	.334
CEO	3397	50.299	35.000	0	100
D CEO DUAL	3394	.493	0.500	0	1
DEXTBM2	3246	.217	0.412	0	1
CEO Female	4546	.138	0.345	0	1
Board Female	5435	.851	0.357	0	1
ROA EBIT	5434	.146	0.189	577	.680
ASSETS	5435	2487.550	12492.103	.000	199339.300
LN ASSETS	5435	6.162	1.448	3.174	10.599
LEV	4337	.148	0.222	0	1.053
TANG	5435	.285	0.254	0	.938
INTANG	5435	.019	0.056	0	.367
D LOSS	5435	.142	0.350	0	1
D FAMILY	3160	.738	0.440	0	1
D NONCERT	4409	.159	0.366	0	1

Variable definitions are in Table 1.

Table 2b. CEO ownership frequencies

CEO_C	FREQ.	PERCENT	CUM.
.00%	0.40	04.700	04.700
<20%	842	24.790	24.790
20% – 49%	614	18.070	42.860
≥ 50%	1,941	57.140	100.000
Total	3,397	100.000	100.000

Table 2 presents the descriptive statistics for the variables. The average ETR for all firms was 19.6 percent, which includes all profit- and loss-making firms. When we tested by dropping the loss-making firms from our sample, we found the ETR to be 22.8 percent. We propose that the difference exists due to the loss-making firms in the sample. The corporate tax rate in Finland from 2001 to 2004 was 29 percent, and from 2005 to 2011 it was 26 percent. The average leverage was 14.8 percent, while the average ROA was 14.6 percent. The CEO held less than 20 percent of company shares in 24.79 percent of the sampled firms and more than 50 percent in 57.1 percent of the firms. Roughly 49 percent of the firms had CEO duality, and 21.7 percent included external board members. Only 13.8 percent of the firms had a female CEO, but 85 percent had at least one female board member.

## 4. Results

Pearson correlations are presented in Table 3. Per our results, ETR is positively correlated with ROA, EBIT and ASSETS. The highest correlation exists between ETR, ROA and EBIT. None of the correlations are excessively high and thus do not suggest a multicollinearity problem in the analysis. To verify this, we performed an additional untabulated VIF (Variance Inflation Factor) analysis. As no VIF value exceeded five, multicollinearity was determined as not a problem (e.g. Hair et al., 2010).

Table 3. Correlations

VAR	IABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1)	ETR	1.000												
(2)	CEO20	-0.080	1.000											
(3)	CEO50	0.142	-0.608	1.000										
(4)	D_CEO_DUAL	0.061	-0.257	0.397	1.000									
(5)	D_EXT_BM_2	-0.080	0.328	-0.294	-0.329	1.000								
(6)	CEO_Female	-0.039	-0.057	0.058	-0.065	-0.104	1.000							
(7)	Board_Female	0.081	-0.049	0.045	-0.036	-0.054	0.216	1.000						
(8)	ROA_EBIT	0.491	-0.089	0.112	0.048	-0.131	0.038	0.051	1.000					
(9)	LN_ASSETS	0.098	0.359	-0.325	-0.243	0.411	-0.210	-0.178	-0.035	1.000				
(10)	LEV	-0.312	0.033	-0.061	-0.014	0.062	0.038	0.010	-0.257	0.102	1.000			
(11)	TANG	-0.091	-0.033	-0.066	0.018	-0.056	-0.012	0.002	-0.075	0.144	0.384	1.000		
(12)	INTANG	-0.155	0.026	-0.055	-0.149	0.203	0.075	0.043	-0.145	-0.027	0.224	-0.063	1.000	
(13)	D_LOSS	-0.616	0.014	-0.039	0.029	0.018	-0.021	-0.054	-0.558	-0.157	0.211	0.055	0.065	1.000

Variable definitions in Table 1.

To explore the data further, groupwise t-tests were performed for the independent and dependent variables (see Table 4). The results indicate that firms with CEO duality are less tax aggressive than their counterparts and tend to be smaller. Firms with external board members are more tax aggressive, bigger and less profitable. Firms with female CEOs are more aggressive than those with male CEOs, smaller and hold a smaller share of tangible assets. Finally, firms with female board members are smaller and less tax aggressive.

Table 4. Mean values by groups with t-test

		N		MEAN				
GROUP VA	TEST VAR	0	1	0	1	Т	Р	DIFF.
CEO DUA	ETR	1720	1674	.193	.208	-3.85	<.001	015
	ROA EBIT	1720	1674	.143	.161	-2.90	.004	018
	LN ASSET	1720	1674	6.490	5.765	15.05	<.001	.725
	LEV	1359	1328	.151	.135	1.95	.051	.017
	TANG	1720	1674	.284	.284	0.00	.995	.000
	INTANG	1720	1674	.026	.011	8.35	<.001	.015
Board	ETR	812	4623	.189	.197	-1.85	.065	009
Female								
	ROA EBIT	812	4622	.134	.148	-2.10	.035	015
	LN ASSET	812	4623	6.570	6.090	8.75	<.001	.480
	LEV	732	3605	.144	.148	450	.639	004
	TANG	812	4623	.286	.285	.050	.940	.001
	INTANG	812	4623	.013	.020	-2.95	.003	006
CEO	ETR	3897	624	.198	.182	3.05	.003	.015
Female								
	ROA EBIT	3896	624	.142	.152	-1.35	.179	011
	LN ASSET	3897	624	6.381	5.517	13.90	<.001	.864
	LEV	3115	511	.148	.173	-2.30	.022	025
	TANG	3897	624	.289	.255	3.15	.002	.035
	INTANG	3897	624	.019	.030	-4.55	<.001	011
EXT BM	ETR	2541	705	.206	.178	5.30	<.001	.027
	ROA	2541	705	.163	.105	7.70	<.001	.058
	LN ASSET	2541	705	5.895	7.114	-20.90	<.001	-1.219
	LEV	1981	568	.137	.171	-3.25	.001	034
	TANG	2541	705	.292	.276	1.55	.127	.017
	INTANG	2541	705	.013	.037	-10.20	<.001	024

Variable definitions in Table 1.

Table 5 presents the results of the multivariate regression analysis. All five regression models were estimated with OLS and robust standard errors. The results indicate that firms with less than 20 percent CEO ownership have lower ETR and are thus more tax aggressive than firms with intermediate levels of CEO ownership (the control group). This result is significant at the five percent level in models 1 and 5. CEO50 exhibited positive and statistically significant coefficients. This suggests that firms with high levels of CEO ownership are less tax aggressive than

the control group. These results are effective at the one percent level in most models, and the results on CEO ownership confirm H1. The results also indicate that when CEOs have a high share in the company, they have more responsibility of maintaining the firm's reputation and thus prevent any decision that may harm it.

Table 5. OLS regression, dependent variable (ETR), regression coefficients and standard errors

	(1)	(2)	(3)	(4)	(5)
	ETR	ETR	ETR	ETR	ETR
CEO20	018***	008	009	016**	018**
	(.007)	(800.)	(.009)	(800.)	(.007)
CEO50	.012***	.015**	.018***	.012***	.012***
	(.004)	(.007)	(.007)	(.004)	(.004)
D_CEO_DUAL	_	.012**	_	_	-
	_	(.005)	_	_	-
D_EXT_BM_2	_	_	012	_	-
	_	_	(800.)	_	_
CEO_Female	_	_	_	011	_
	_	_	_	(.007)	_
Board_Female	_	_	_	_	.002
	_	_	_	_	(.006)
ROA_EBIT	.083***	.101***	.096***	.081***	.083***
	(.014)	(.017)	(.017)	(.016)	(.014)
LN_ASSETS	.008***	.010***	.010***	.008***	.008***
	(.002)	(.002)	(.003)	(.002)	(.002)
LEV	079***	087***	082***	077***	079***
	(.012)	(.014)	(.015)	(.013)	(.012)
TANG	005	006	008	.001	005
	(.011)	(.014)	(.014)	(.011)	(.011)
INTANG	114***	129**	15***	108***	114***
	(.039)	(.05)	(.05)	(.038)	(.039)
D_LOSS	169***	167***	17***	171***	169***
	(.006)	(800.)	(800.)	(.007)	(.006)
Intercept	.220***	.187***	.195***	.223***	.218***
	(.016)	(.018)	(.019)	(.019)	(.018)
Industry dummies	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes
Observations	4324	2683	2545	3613	4324
R-squared	.502	.495	.487	.500	.502

Standard errors in parentheses
\*\*\* p<.01, \*\* p<.05, \* p<.1

When we investigated the connection between tax aggressiveness and efficient corporate governance with CEO duality and the presence of external board members, we found that firms with CEO duality are less tax aggressive and firms with outside board members are more tax aggressive. The coefficient on CEO duality was positive and significant at the five percent level. The coefficient for EXT\_BM\_2 was not significant in the main analysis. The results regarding CEO duality contradict those of previous studies and H2 by suggesting that private firms with efficient corporate governance structures are more tax aggressive. Karjalainen et al. (2020) provide one explanation for the current study's findings. They suggest that earnings management in private companies is driven by the willingness to avoid unnecessary company income taxes. We can assume that external board members have a role based more on consulting (i.e. maximising the firm's cash flow by avoiding unnecessary tax payments using legal means) than monitoring (i.e. avoiding excessive tax aggressiveness, eventually leading to tax penalties and reputational damages).

The results regarding the presence of a female CEO or female board members were not significant. Thus, our evidence does not support H<sub>3</sub>.

#### 4.1. Robustness Tests

To confirm our empirical results, we ran several robustness tests with our data. The results of this analysis are presented in Table 6. First, we considered the possibility that audit quality is associated with tax aggressiveness, as suggested by Kanagaretnam et al. (2016). We added a control variable for audit quality into our analysis. During the sample period, audit laws in Finland changed. We use a dummy for an uncertified auditor to measure audit quality in our analysis. After including audit quality, the results remained qualitatively the same. Second, since our sample included several family firms in which management and ownership coincide, we ran our analysis also with a dummy variable for family firms. The results remained similar, with the exception of an insignificant result for 50 percent CEO ownership (CEO50). This result is likely because the CEO of a family firm is typically also the major shareholder. In our sample, this was the case in 65 percent of the observations. As for H2, we found that previously insignificant D\_EXT\_BM, which measures governance efficiency, took a significant negative coefficient in the model when CEO ownership was not controlled for. This gives some support for H2.

Table 6. Robustness tests, OLS regression, dependent variable (ETR), coefficients and standard errors

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO20	029***	-	019***	008	-	020 *	021**	017
	(.009)	-	(.007)	(.009)	-	(.011)	(.01)	(.012)
CEO50	-	.023***	.010**	.013*	-	.011	.011	.007
	-	(.007)	(.004)	(.007)	-	(.009)	(800.)	(.011)
D_CEO_DUAL	-	_	_	.013**	-	-	-	.011
	-	-	-	(.006)	-	-	-	(.008)
D_EXT_BM_2	-	-	-	-	017**	-	-	006
	-	-	-	-	(800.)	-	-	(.010)
CEO_Female	-	-	-	-	-	004	-	.000
	-	-	-	-	-	(.01)	-	(.011)
Board_Female	-	-	-	-	-	-	002	.009
	-	-	-	-	-	-	(800.)	(.009)
D_FAMILY	008	010	-	-	-	009	009	008
	(.006)	(.007)	-	-	-	(.007)	(.007)	(800.)
D_NONCERT_P	.010	.010	.011*	.012*	.011	.012	.010	.006
	(800.)	(800.)	(.006)	(.007)	(800.)	(.009)	(800.)	(.01)
ROA_EBIT	.081***	.08***	.086***	.100***	.094***	.07***	.080***	.081***
	(.021)	(.021)	(.015)	(.018)	(.019)	(.024)	(.021)	(.023)
LN_ASSETS	.010***	.009***	.008***	.009***	.007***	.011***	.010***	.011***
	(.003)	(.003)	(.003)	(.003)	(.003)	(.003)	(.003)	(.004)
LEV	074***	074***	078***	082***	077***	079***	074***	090***
	(.017)	(.017)	(.014)	(.016)	(.017)	(.018)	(.017)	(.020)
TANG	007	003	008	007	006	.006	006	.010
	(.016)	(.016)	(.012)	(.015)	(.015)	(.018)	(.016)	(.019)
INTANG	139**	135**	135***	149***	168***	129*	136**	101
	(.066)	(.067)	(.045)	(.055)	(.056)	(.070)	(.067)	(.073)
D_LOSS	181***	183***	173***	171***	176***	181***	181***	175***
	(.009)	(.009)	(.007)	(.009)	(.009)	(.01)	(.009)	(.01)
_cons	.219***	.209***	.220***	.193***	.218***	.204***	.214***	.189***
	(.019)	(.021)	(.018)	(.019)	(.018)	(.025)	(.024)	(.03)
Observations	2067	2067	3495	2234	2121	1730	2067	1453
R-squared	.481	.479	.491	.490	.475	.484	.482	.497

<sup>\*\*\*</sup> *p*<.01, \*\* *p*<.05, \* *p*<.1. Variable definitions in Table 1.

# 5. Conclusions

In this study, we examined the previously under-researched relationship between corporate governance characteristics and tax aggressiveness in Finnish private firms using a sample from 2000 to 2011. Our broad research question was whether a connection exists between CEO ownership, efficient corporate governance, and tax aggression. First, we found a non-linear connection

tion between CEO ownership and tax aggressiveness. When comparing firms with an average level of CEO ownership to those with low or high levels, we found more tax aggressiveness in firms with low levels of CEO ownership and vice versa. Regarding efficient corporate governance, firms with CEO duality exhibit less tax aggressiveness, while firms with external board members are more tax aggressive. Contrary to previous studies, our results do not support any connection between gender and tax aggressiveness for CEOs or board members.

Prior literature relies on the role of corporate governance in listed companies, where reputation capital plays a decisive role because a firm's reputation influences its market value. This study provides a new perspective on efficient corporate governance by providing evidence that efficient corporate governance structures in private companies result in more tax aggressive behaviour. This can be seen as an indication that cash flow, including tax savings, is critical to survival for most private firms; not even board diversity or CEO gender diminish this effect.

This study contributes to the existing literature by being one of few studies to address the connection between tax aggressiveness and corporate governance in a private firm context. Further, this is the only study to do so outside the family firm context. Our study is also among the few to address the association between female CEOs, female representation on boards and tax aggressiveness in private firms. While most previous studies on the connection between tax aggressiveness and corporate governance use data from low tax alignment countries, this study is among the few to do so in a high tax alignment environment.

The findings of this study have implications that will be of interest to owners and board members of private companies and tax authorities. Our findings can be of value to shareholders, stakeholders and the academic community. First, our results suggest that shareholder monitoring that attempts to prevent excessive tax aggressiveness is especially important when a CEO has a low amount of ownership. Second, the role of external board members as maximisers of cash flow (including tax savings) appears accentuated in small private firms.

This study has several limitations. First, the data comes from one country. Even if our study is among the few to address the connection between various corporate aspects in private firms, future research could benefit from a similar study using data from other countries with different governance structures. We used similar measures as in the prior literature to enable comparability, but future research could benefit from detailed governance measures such as board diversity (cultural or educational background, experience, etc.) or measures for board activities, such as meeting frequency or board busyness. Future research might also investigate whether these dimensions yield similar results regarding the efficiency of corporate governance and tax aggressiveness. Finally, as it can be argued that the willingness to pay dividends and tax avoidance concur in SMEs (Karjalainen et al., 2020), future research could benefit from including dividend-related measures as additional factors that influence the relationship between governance and tax aggressiveness. Our data from private SMEs did not include a direct measure for dividends.

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