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The Influence of CEO Power on Tax Avoidance with Board Gender Diversity as a Moderating Variable: A Comparative Study of Asia, Europe, and America

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Abstract. This study examines whether CEO power affects corporate tax avoidance and whether board gender diversity (BGD) moderates this relationship. Using an unbalanced panel of 176 firm-year observations from 36 multinational non-financial firms in the United Kingdom (Europe) and South Korea (Asia) over 2020–2024, we estimate random effects models with firm-clustered robust standard errors, selected on the basis of the Hausman test. Tax avoidance is measured by the effective tax rate (ETR), where a lower ETR indicates greater avoidance, and CEO power is proxied by CEO duality, CEO education and founder status. The results show that CEO duality is positively related to ETR (i.e. lower avoidance) when BGD is zero, and that BGD significantly weakens this relationship, whereas founder-CEOs are associated with lower ETR (greater avoidance). CEO education has no significant effect, and BGD does not moderate the effects of CEO education or founder status. The explanatory power of the model is low ($R^2 = 0.0453$), so the findings should be interpreted with caution. The study suggests that the governance role of board gender diversity is selective and depends on the source of CEO power.

Keywords: CEO power; Tax avoidance; Board gender diversity; Corporate governance; United Kingdom; South Korea

1 Introduction

Corporate tax avoidance remains a major concern in international taxation. Despite the OECD/G20 Base Erosion and Profit Shifting (BEPS) initiatives, multinational firms continue to exploit differences in tax rates and regulatory gaps across jurisdictions, thereby eroding tax bases and weakening fiscal capacity [1]. Tax avoidance is commonly understood as tax planning that reduces tax burdens while remaining within the formal limits of the tax law [2].

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It is therefore not only a technical accounting matter, but also a managerial decision shaped by risk preferences, ethics and corporate governance.

Tax avoidance occurs in both developed and developing economies. In Europe, the United Kingdom hosts many multinational firms whose complex group structures give managers wide discretion over tax planning [1, 3]. In Asia, South Korea has a relatively strong tax system and high compliance, yet corporate tax avoidance, tax risk and governance remain relevant research topics [4]. These contexts differ in institutional quality and enforcement, which may shape how internal governance mechanisms operate [5, 6].

A growing literature identifies top executive power as an internal determinant of tax avoidance. Powerful CEOs, whose power may stem from holding the board chair position, tenure, education or founder status, have broader discretion over corporate policy, including tax policy [7, 3]. Evidence from Malaysia indicates that CEO duality increases tax avoidance and that board gender diversity can moderate this effect [8, 9]. Female directors are often associated with greater caution, stronger ethical orientation and higher sensitivity to reputational risk, which may lower tolerance for aggressive tax positions [10, 11, 12]. However, the effect of board gender diversity is context-dependent [5], and most prior studies rely on a single country or region.

This study contributes by examining the effect of CEO power on tax avoidance, and the moderating role of BGD, using a sample of multinational firms from the United Kingdom and South Korea. It also disaggregates CEO power into three proxies (CEO duality, CEO education and founder status) to test which dimensions of CEO power matter, and whether BGD moderates each of them. The study is framed by upper echelons theory, agency theory and compliance theory.

2 Literature review and hypothesis development

2.1 Theoretical background

Upper echelons theory argues that organizational outcomes reflect the characteristics of top managers [13]. A powerful CEO can translate personal preferences, including risk orientation, into corporate policy, so CEO power is expected to influence tax strategy. Agency theory describes the conflict of interest between managers (agents) and shareholders (principals), and the monitoring and bonding costs that arise from it [14]. Tax avoidance can serve managers' private interests and is difficult for shareholders to observe, which creates room for opportunistic behavior [15]. Monitoring mechanisms such as the board are therefore expected to constrain this behavior, and gender diversity has been argued to improve board monitoring [16].

Compliance theory holds that compliance depends not only on fear of sanctions but also on moral values and the perceived legitimacy of rules [17, 18]. Under this view, a CEO who regards tax avoidance as an efficient, low-risk strategy will tolerate it, whereas a CEO with strong ethical and reputational concerns will favor substantive compliance [19, 20].

2.2 Hypotheses

Powerful CEOs face fewer internal constraints, and prior studies generally associate CEO power with higher tax avoidance, particularly where monitoring is weak [7, 8]. However, the

direction can differ across contexts, because a CEO who holds substantial authority may also be more concerned about reputational and legal risks [19]. We therefore test the effect of each CEO power proxy without imposing a strict directional prediction:

H1: CEO power affects tax avoidance, with H1a (CEO duality), H1b (CEO education) and H1c (founder status) referring to the three proxies.

Women on boards tend to be more risk-averse, to place greater emphasis on ethics and transparency, and to increase board monitoring intensity [16, 11]. Gender-diverse boards have been found to weaken the effect of managerial power on tax aggressiveness [9]. Hence:

H2: Board gender diversity moderates the effect of CEO power on tax avoidance, with H2a, H2b and H2c referring to the interactions of BGD with CEO duality, CEO education and founder status, respectively.

3 Research method

3.1 Sample and data

This quantitative study uses secondary data from annual reports, sustainability reports and international financial databases for multinational firms listed in the United Kingdom and South Korea, which represent OECD members in Europe and Asia respectively. Firms were selected if they (i) are multinational corporations with a one-tier board system, (ii) publish complete annual reports during 2020–2024, (iii) have complete data on board structure (including gender), CEO characteristics and the financial variables needed to compute tax avoidance, and (iv) are not in the financial sector (banks, insurance and other financial institutions), because of their different tax regulation and reporting structure. No firm from Mexico satisfied these criteria, so the comparison covers Europe and Asia only.

3.2 Variables

Tax avoidance is measured by the effective tax rate, ETR = total tax expense / pre-tax income; a lower ETR indicates a higher level of tax avoidance. CEO power is proxied by three indicators: CEO duality (1 if the CEO also chairs the board, 0 otherwise), CEO education (1 if the CEO holds a degree in finance, 0 otherwise) and founder (1 if the CEO is the founder, 0 otherwise). The moderating variable, board gender diversity, is the number of female directors divided by the total number of directors. Moderation is tested by interactions between each CEO power proxy and BGD. Control variables are firm size (natural logarithm of total assets), return on assets (ROA) and leverage.

3.3 Model specification and estimation

We use panel regression with moderated regression analysis (MRA) in Stata 17. The estimation proceeds in three models: Model 1 includes the three CEO power proxies and controls; Model 2 adds BGD; Model 3 adds the interaction terms:

$$ETR_{it} = \beta_0 + \beta_1 DUAL_{it} + \beta_2 EDU_{it} + \beta_3 FOUND_{it} + \beta_4 SIZE_{it} + \beta_5 ROA_{it} + \beta_6 LEV_{it} + \gamma_t + \varepsilon_{it} \quad (1)$$

$$ETR_{it} = \beta_0 + \beta_1 DUAL_{it} + \beta_2 EDU_{it} + \beta_3 FOUND_{it} + \beta_4 BGD_{it} + \beta_5 SIZE_{it} + \beta_6 ROA_{it} + \beta_7 LEV_{it} + \gamma_t + \varepsilon_{it} \quad (2)$$

$$ETR_{it} = \beta_0 + \beta_1 DUAL_{it} + \beta_2 EDU_{it} + \beta_3 FOUND_{it} + \beta_4 (DUAL \times BGD)_{it} + \beta_5 (EDU \times BGD)_{it} + \beta_6 (FOUND \times BGD)_{it} + \beta_7 SIZE_{it} + \beta_8 ROA_{it} + \beta_9 LEV_{it} + \gamma_t + \varepsilon_{it} \quad (3)$$

where i denotes the firm, t the year and γ_t year effects. The choice between fixed and random effects is based on the Hausman test [21]. Multicollinearity is assessed using variance inflation factors (VIF). To address heteroskedasticity and serial correlation in the panel, standard errors are clustered at the firm level. Following the classification of moderator variables [22], a significant interaction term indicates moderation.

4 Results

4.1 Sample and descriptive statistics

The sample covers 39 firms (24 from the United Kingdom and 15 from South Korea) observed over 2020–2024, giving 195 firm-year observations before data cleaning. After cleaning for missing values, 176 observations from 36 firms are used in the regressions. Table 1 reports descriptive statistics.

Table 1. Descriptive statistics

Variable	Obs	Mean	Std. dev.	Min	Max
ETR	176	0.901	15.028	−102.264	161.623
CEO duality	195	0.359	0.481	0	1
CEO education	195	0.138	0.346	0	1
Founder	195	0.308	0.463	0	1
BGD	195	0.185	0.158	0	0.455
Firm size	191	22.925	2.969	16.311	30.543
ROA	191	−0.784	17.460	−99.140	40.750
Leverage	181	0.473	0.248	0.007	1.439

The mean ETR is 0.901 with a very wide range (−102.264 to 161.623). Such extreme values arise because ETR is a ratio whose denominator (pre-tax income) can be very small or negative, so they partly reflect heterogeneous financial conditions rather than actual avoidance. About 35.9% of firm-years have a CEO who also chairs the board, 30.8% have a founder-CEO and 13.8% have a CEO with a finance degree. Female representation on boards is low (mean 18.5%, maximum 45.5%). The negative mean ROA (−0.784) indicates that some firms in the sample reported losses.

4.2 Model selection and diagnostics

The Hausman test yields $\chi^2(9) = 10.79$ with $p = 0.2939$, so the null hypothesis of no systematic difference between fixed and random effects is not rejected, and the random effects model (REM) is used. The VIF values are all below 10 (highest: firm size 7.37 and leverage 6.30; mean VIF 4.05), indicating no serious multicollinearity. Heteroskedasticity and autocorrelation are addressed with firm-clustered robust standard errors.

4.3 Hypothesis testing

Table 2. Random effects regression results (dependent variable: ETR)

Variable	Model 1	Model 2	Model 3
CEO duality	3.574 (2.858)	2.693 (3.045)	8.287** (3.772)
CEO education	−1.075 (3.615)	−1.018 (3.629)	−0.956 (7.031)
Founder	−5.035* (3.005)	−5.026* (3.017)	−8.202** (4.133)
BGD		−8.715 (10.110)	n.r.
CEO duality × BGD			−45.000** (22.500)
CEO education × BGD			0.240 (25.470)
Founder × BGD			25.430 (22.990)
Firm size	−0.418 (0.542)	−0.145 (0.629)	−0.231 (0.561)
ROA	0.035 (0.074)	0.027 (0.074)	0.012 (0.075)
Leverage	2.357 (5.240)	2.678 (5.274)	1.467 (5.457)
Constant	9.760 (11.970)	5.246 (13.100)	5.694 (12.470)
Year effects	Yes	Yes	Yes
Observations	176	176	176
Number of firms	36	36	36

Notes: Cluster-robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. n.r. = not reported in the estimation output. R^2 of the full model = 0.0453.

Effect of CEO power (H1). CEO duality has a positive coefficient on ETR in all three models, but it is statistically significant only in Model 3 (8.287, $p < 0.05$), where it represents the effect when BGD equals zero. Because a higher ETR means lower tax avoidance, CEO duality is associated with less tax avoidance, so H1a is supported, although the direction is opposite to the conventional expectation. CEO education is not significant in any model (H1b is not supported). Founder status has a negative and significant coefficient (−5.035 and −5.026 at the 10% level in Models 1 and 2; −8.202 at the 5% level in Model 3), indicating that founder-led firms have lower ETR, i.e. more tax avoidance (H1c is supported). None of the control variables is significant.

Moderating effect of BGD (H2). The interaction between CEO duality and BGD is negative and significant (−45.000, $p < 0.05$). Using the Model 3 coefficients, the marginal effect of duality on ETR is $8.287 - 45.000 \times BGD$, which is about 8.3 when BGD is zero, close to zero at the sample mean of BGD (0.185), and negative at higher BGD levels (about −12.2 at the maximum of 0.455). In other words, a higher proportion of women on the board weakens the positive effect of CEO duality on ETR (H2a is supported). The interactions of BGD with CEO education (0.240) and founder status (25.430) are not significant, so H2b and H2c are not supported. BGD therefore moderates only the duality dimension of CEO power. The R^2 of 0.0453 shows that the model explains only 4.53% of the variation in ETR.

5 Discussion

The positive association between CEO duality and ETR differs from studies that link CEO power to higher tax avoidance [7, 8]. Two interpretations are possible. From an agency perspective, concentrating authority in one person may reduce internal friction and strengthen

control, while a powerful CEO who bears greater personal reputational and legal exposure may avoid aggressive tax positions; this is consistent with compliance theory, in which leaders sensitive to reputation favor substantive compliance [19, 20]. Nevertheless, the result should be read with caution: the effect is significant only in Model 3, where it is conditional on BGD being zero, and it disappears at the average level of BGD. The sign pattern of the interaction suggests that the main effect of duality is largely offset as board gender diversity increases.

The negative effect of founder status on ETR is consistent with the view that founder-CEOs, who hold strong control and concentrated ownership, have greater discretion to pursue cost-efficiency strategies, including tax minimization [13, 9]. The insignificance of CEO education suggests that tax decisions are shaped more by the governance system and by collective decision making than by the CEO's individual educational background.

Regarding moderation, BGD weakens the effect of CEO duality, supporting the monitoring role of gender-diverse boards [16, 11, 12]. However, it does not moderate the effects of founder status or CEO education. This suggests that when CEO power is rooted in ownership and control, as for founders, the board's monitoring capacity may be limited [9]. This pattern is in line with the argument that the effect of BGD depends on contextual and structural factors [5].

6 Conclusion

Using 176 firm-year observations of non-financial multinational firms in the United Kingdom and South Korea (2020–2024), this study finds that (i) CEO duality is associated with higher ETR (lower tax avoidance) when BGD is zero, (ii) founder-CEOs are associated with lower ETR (higher tax avoidance), (iii) CEO education has no significant effect, and (iv) BGD moderates only the relationship between CEO duality and tax avoidance. The practical implication is that boards and regulators should not treat CEO power as uniformly harmful, but should strengthen oversight particularly in firms led by founders, and continue to promote female representation on boards as part of broader governance reform.

This study has limitations. The R^2 is low (0.0453), indicating that important determinants of tax avoidance are omitted. The sample is limited to two countries, so the results cannot be generalized widely and the comparison does not extend to the American continent. CEO power is captured by only three proxies, and ETR is sensitive to extreme values when pre-tax income is small or negative. Future research could add countries, particularly from the Americas and developing economies, include other CEO power proxies (tenure, ownership, compensation) and governance variables (independent directors, institutional ownership, audit quality), and use alternative tax avoidance measures such as cash ETR or book-tax differences.

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