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The Impact of Family Ownership and CEO Risk Traits on Tax Avoidance in Jordan: The Moderating Role of Environmental Responsibility

Muhammad Allozi[1]* | Ruba Nimer Abdalrahman Abu Shihab[2] | Murad Abuaddous[3]

[1]*Economic Department, Faculty of Business, Al-Balqa Applied University, Jordan*
[2]*Economic Department, Faculty of Business, Al-Balqa Applied University, Jordan*
[3]*Accounting Department, Faculty of Business, Al-Balqa Applied University, Jordan*

*Correspondence to: Muhammad Allozi, Economic Department, Faculty of Business, Al-Balqa Applied University, Jordan.
E-mail: allozi@bau.edu.jo

Abstract: This research examines the impact of family ownership and CEO risk traits on corporate tax behavior in nonfinancial firms in Jordan, with a moderating effect of environmental corporate social responsibility (ECSR). Prior studies show that governance quality affects financing costs and investment efficiency. Family-held firms navigate conflicting objectives of preserving wealth and control, and safeguarding reputation over long horizons. These priorities cause their tolerance for tax avoidance to vary significantly. CEO characteristics further influence corporate decisions: leaders willing to take risks are more likely to adopt aggressive financial and tax practices, while risk-averse leaders seek to avoid exposures that may draw regulatory scrutiny. ECSR implementation can mitigate opportunistic behavior. Environmental responsibility can complement traditional governance mechanisms by reducing tax avoidance through greater transparency, improved monitoring and stronger accountability signals. We test the proposition that ECSR moderates the relationships between family ownership, CEO risk traits and tax avoidance using panel data for 2018–2023 from firms listed on the Amman Stock Exchange. Evidence from this less-studied research setting will illustrate how adopting sustainability practices promotes more ethical behavior. Enhanced environmental disclosure and linking sustainability performance to executive compensation are expected to reduce aggressive tax planning in Jordan.

Keywords: CEO risk traits, corporate governance, emerging markets, environmental corporate social responsibility, family ownership, tax avoidance.

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INTRODUCTION

Tax avoidance is perhaps the most contentious issue in corporate governance. It has implications for shareholder value, regulatory compliance, and public trust. Tax minimization can be an effective means for improving financial performance. However, over-avoidance may cause reputational damage, regulatory policy interventions and stakeholder outrage. Previously done studies highlight governance levers, especially ownership structure and executive decision-making, as antecedents of corporate tax behaviour (Hanlon & Heitzman, 2010; Velte, 2024). In emerging markets where formal enforcement is weak, these mechanisms can have disproportionate impacts on fiscal policies.

In Jordan and several other emerging economies, a unique feature of corporate control is family ownership. From an agency point of view, concentrated family control may enable owners and managers to align and thereby reduce classic principal-agent conflicts. The socioemotional wealth view suggests that families may give more preference to legacy, identity, and reputation, and this may temper aggressive tax positions (Gómez-Mejía, Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007). Evidence from real life is mixed. Certain evidence points to family control resulting in greater tax aggressiveness due to wealth preservation motives. Other work indicates reputational conservatism and higher compliance. The inconsistency suggests a contextual gap: when do family owners up their tax-avoiding game and when do they rein it in?

The tax policy choice will also be determined by the CEO's risk traits, i.e., their risk tolerance, overconfidence, age, gender and tenure. The upper-echelons theory suggests that executives' observable characteristics serve as a proxy for psychological characteristics that orient strategic action under uncertainty. Thus, taxation is a natural domain where the characteristics matter (Araújo, Góis, De Luca, & de Lima, 2021; Xu, 2024). Tax policy has a high level of managerial discretion, which allows us to see the imprint of executive psychology. Individuals displaying certain high-risk characteristics may prompt aggressive planning at the individual or corporate level. On the other hand, a long tenure at the firm or diverse external experience may either exacerbate or dampen such behaviour. However, the governance conditions that may strengthen or curb these CEO-driven tendencies are still under-explored in the context of emerging markets, especially in the Middle East.

ECSR can be a probable mechanism that moderates the relation. According to stakeholder theory and legitimacy theory, these visible commitments are informal governance constraints (Chouaibi, Rossi, & Abdessamed, 2022; Elamer, Boulhaga, & Ibrahim, 2024). They make one more transparent and less opportunistic to safeguard the legitimacy of the regulator, investor and society. Research in developed markets indicates that ECSR moderates aggressive fiscal behavior. However, there is a dearth of knowledge regarding its role in Jordan, which is characterized by poor disclosure norms and family ownership. This gap is where governance and executive behavior meet sustainability.

Given this, this study seeks to examine the impact of family ownership and CEO risk characteristics on tax avoidance in Jordanian non-financial firms and tests the moderation role of ECSR on these relationships. Bringing together agency theory, socio-emotional wealth (SEW), upper-echelon theory, stakeholder theory, and legitimacy theory, we examine panel data for 100 firms listed on the Amman Stock Exchange from 2018–2023.

This study fills these gaps by asking: How do family ownership and risk traits of the CEO affect tax avoidance in Jordan, and does ECSR moderate these effects? To respond to this question, we make four contributions.

- It resolves contradictory evidence in the family ownership-tax avoidance debate by examining ECSR as a contextual moderator.
- The present study advances the upper-echelons-resources view by arguing that ECSR moderates the linkage between CEO risk profile and tax strategy.

- With evidence from an under-studied emerging economy, it contributes to the global tax-avoidance scholarly literature, showing how informal governance centred on sustainability can step in lieu of weaker formal enforcement.

Jordan is a high-salience context characterized by concentrated family control among listed firms, emerging environmental disclosure practices, and a tax enforcement environment typical of emerging markets. Given these features, Jordan's suitability to test ECSR tempering governance-driven tax avoidance is augmented by the sharper trade-offs between private benefits, socioemotional wealth preservation and legitimacy seeking.

The essay is structured sequentially. Section two examines literature which forms the basis of hypothesis testing. Section three describes the research design, data sources and measurements of variables. The empirical results and robustness tests are presented in section four. The last but one section interprets the results with the help of theories and previous research. Finally, the concluding section sums up and identifies the contributions, impact, and future research directions.

LITERATURE REVIEW

Family Business and Tax Avoidance

The relationship between family ownership and tax avoidance is complex and still debated in academia as empirical findings differ substantially across institutional contexts, governance structures and theories of the case. Tax avoidance is nonconforming when it reduces taxable income without a corresponding reduction in book income. Tax avoidance is conforming when it reduces both taxable income and book income. Over the years, approaches to tax-favoured investments have become more aggressive. Some of these may, in fact, constitute tax avoidance under the law. A family firm is one which has a considerable ownership stake (e g. at least 5% of voting rights or more than 30% of equity) together with a role of the family in strategic decision making and top management. An increasing number of studies are revealing that firms with greater family ownership engage in more tax aggressiveness. This link is often ascribed to Type II agency conflicts, whereby controlling family shareholders extract private benefits at the expense of minority shareholders. Evidence from many countries shows that family control has a non-linear link with tax avoidance. In Italy, families avoid company conflicts; at low ownership (up to 25%), nothing bigger happens, but from about 25% something bigger occurs, isolating (Mafrolla & D'Amico, 2016). The studies done in Tunisia and Indonesia have similar findings. They interpret that higher avoidance under concentrated family control is a channel of minority-shareholder expropriation (Gaaya, Lakhal, & Lakhal, 2017; Oktaviani, Tjondro, & Pradono, 2024). Research in Jordan seems to support this perspective: firms that are family-owned seem to show higher avoidance of weak protection for investors (Almaharmeh, Shehadeh, Alkayed, Aladwan, & Iskandrani, 2024).

Efforts to improve reputation do not equally control tax behaviour. According to the data from France, it is possible for stronger environmental performance to actually strengthen the positive link between family ownership and avoidance instead of weakening it. Public-facing ESG efforts could therefore be compatible with aggressive tax strategies, or may even hide such strategies Souguir, Khemakhem, and Ben Amar (2024). The same explanation keeps coming up: concentrated control is combined with weak boards and limited external oversight that creates space for tunnelling and opportunism despite signalling sustainability. This happens mostly because return tunnelling and opportunistic behaviour take place due to governance weakness, concentration of control and lack of external oversight.

Unlike the entrenchment view, SEW-based perspectives argue that family leaders prioritize legacy, name capital, and continuity of the family over short-term gains. Tax avoidance represents a high-variance strategy with asymmetric downside risks in this calculus, including reputational damage, legal exposure, and erosion of family identity. Empirical evidence aligns with this logic. Public family companies in the U.S. show less tax aggression according to 2010 studies by Chen, Chen, Cheng, and Shevlin (2010). Similar behavior occurs with private Finnish firms, especially when chief executive officers (CEOs) are important owners. Similar results across countries confirm these findings, namely that family firms avoid conforming and non-conforming

behaviour to a lesser extent, and more especially eponymous firms (Chalevas, Lazarides, & Petropoulos, 2024). Within Germany, they are not tax avoiders or at least less than descendant led or non-family led firms. Jordanian private family firms show that the Islamic religiosity of CEOs lessens tax aggressivity. The effect is strengthened by CEO ownership. In terms of cultural and ethical overlays, they provide evidence to support the reinforcement of restraint (Abu-Rajab, Steijvers, Corten, Lybaert, & Alsharairi, 2024). These findings suggest that concentrated family ownership can reduce Type I agency costs and this happens because they tighten owner–manager alignment and raise the salience of long-horizon reputational payoffs. The disciplining effect is strongest when the identity is publicly at stake (eponymy), the authority is based in founding leadership, and the ethical commitments are credible. These are the conditions under which the marginal benefit of aggressive tax positions is swamped by their expected socioemotional-wealth costs.

According to a third stream of research, evidence is mixed and context-contingent regarding whether family ownership is positively associated with tax avoidance. The opposite may also be true. Effects depend on ownership thresholds, the firm's governance architecture, and family members' specific monitoring and management roles. Butar-Butar, Yunita, and Dewi (2024) clarify that while ownership concentration may encourage aggressive tax behavior, board design and the presence of independent directors have different effects in public and private firms. Family-run companies conducted less tax avoidance from 2002 to 2013 than non-family firms, and their CSR activities were less aggressive. Moreover, López-González, Martínez-Ferrero, and García-Meca (2019) find that family ownership can weaken the link between environmental or social performance and tax avoidance. Systematic reviews attribute much of this heterogeneity to cross-country differences in legal regimes, corporate governance mechanisms, and investor protection, and to methodological variance in how "family ownership" and "tax avoidance" are operationalized (Syalwa, Asmaranti, & Putri, 2024).

The literature compares two dominant logics. The private-benefits view says concentrated family control makes it easier for families to avoid taxes. The socioemotional wealth (SEW) view says families want to protect their reputation and leave a better legacy, and will therefore be more other-oriented during tax reporting. Which logic dominates seems to depend on things like institutional quality, cultural norms, and governance arrangements. Non-linearities linked to ownership thresholds and key decision-maker identity also add complexity. Recent findings from developing countries like Jordan (Almaharmeh et al., 2024) and recent studies of moderation like environmental corporate social responsibility (Souguir, Lassoued, & Bouzgarrou, 2024) nevertheless, there are still important gaps. In particular, we (i) specify the institutional conditions under which SEW preservation systematically outweighs private-benefit extraction and (ii) map how ESG commitments interact with family control to shape firms' tax strategies.

CEO Traits and Tax Avoidance

The disagreement on whether CEO qualities affect corporate tax avoidance is still ongoing. Both Upper Echelons and Agency theories are used in prior literature to argue that an executive's values, cognitive frames and behavioural proclivities imprint on strategic choices, which includes tax planning. A leader's appetite for risk is an important mechanism. Since tax avoidance is both strategic and risky, leaders with more appetite for risk are more inclined to aggressive positions. Often, gender is used to indicate risk preferences. For example, studies found that aggressiveness is greater under men (Garcia-Blandon, Argilés-Bosch, & Ravenda, 2022; Kalbuana, Hidayat, & Sulistya, 2023; Nour, Ghassan Qarmash, AlKoni, & Jamal Rabaia, 2025). However, studies do not uniformly find this result. A number show the opposite association. Zirgulis, Kvedaraviciute, and Navikaite (2022) show that transitions to female CEO reduce effective tax rates, consistent with increased avoidance. As a whole, these mixed findings highlight that the nexus between risk and tax is conditioned by institutional, cultural and organisational contexts. Further, they point to the need for direct, trait-based measures of CEO risk profiles that move beyond gender or overconfidence (coarse) proxies.

CEO overconfidence has also emerged as a prominent personality characteristic influencing tax results. Leaders who have an inflated sense of confidence, who have odds in their favour, may overestimate their abilities and underweight risk. Overconfident leaders are more likely to implement aggressive tax strategies to meet the performance expectations of the market, reduce tax burdens and improve liquidity in the short run.

Evidence from the U.S. and France shows that overconfidence connects to lower effective tax rates, signalling increased tax aggressiveness. This effect is subject to important conditions: material governance arrangements, notably institutional and family ownership, act as monitoring mechanisms that may inhibit the occurrence of some opportunistic financial behaviours (Kalbuana et al., 2023). Ownership structure is acknowledged as a boundary condition that deserves to be tested in the emerging markets. This is due to the disparity in governance practices and institutional pressures compared to developed economies.

Narcissistic CEO's who are grandiose, status-seeking, and want to be recognised have also been found to be more likely to engage in corporate tax avoidance. Narcissistic CEO's typically use complex and risky tax structures and transactions to create an illusion of superior performance. Data from the USA and Brazil prove otherwise (Kalbuana et al., 2023). Furthermore, the impact and interaction between narcissistic tendencies and family ownership on tax compliance have not been thoroughly researched.

In the one hand, several studies show a range of positive and negative links when CEO tenure is considered. A longer-serving CEO is expected to have more firm-specific knowledge that can be utilized to find tax-saving opportunities and vice versa. On the other hand, a longer-serving CEO can have the tendency to become conservative to avoid any reputational risks or due to proximity to retirement. Oktaviani et al. (2024) argue about a negative association between CEO tenure and effective tax rates. They suggest a mechanism that is consistent with more effective accountability. Similar uncertainty arises for CEO age. Some studies have found that younger CEOs tend to choose avoidance as a signal of competence. However, other studies found that older CEOs are just as willing to pursue aggressive strategies. Nonetheless, James (2020) shows that the age of the CEO is directly related to the cash/GAAP effective tax rates. This implies that older CEOs are less likely to avoid taxes.

Reiterating this, these discrepancies show the importance of situational determinants, such as cultural norms, regulatory regimes, and industry dynamics.

Another layer appears when a dual role of the CEO as chair of the board is investigated. The literature indicates mixed results. In Nigerian food and beverage companies, duality is positively related to higher tax avoidance (Olaoye & Agbatogun, 2022). This supports the Upper Echelons arguments that concentrated decision-making power engenders aggressive strategies. Additionally, evidence from Greece and the G20 data shows that duality is linked to less tax avoidance (Gkouma, Kotsantonis, & Papadopoulos, 2023). The different outcomes highlight the need to take governance architecture, where patterns of ownership and the regulatory framework have significant tax implications.

Family ownership under the logic of socioemotional wealth is another key moderator of CEO attributes. Family-owned businesses classically value reputation and continuity over short-term gains. This attachment leads them to adopt less aggressive tax positions. However, this behaviour changes when family interests correspond to incentives to engage in tax avoidance. In the same manner, when leaders are more risk-focused and institutions are weak, concentrated family control can facilitate the adoption of tax-avoidance strategies. That is to say, CEO personality and family ownership should not be considered in isolation. The combined influence of these factors, mediated by cultural norms, institutional governance, and regulatory rigor, determines a firm's tax behavior.

Recent studies refer to composite measures to assess the multidimensionality of executive risk orientation. According to Hambrick (2007), the CEO Risk Trait index is the construct that uses demographic factors of the CEO (age, tenure, and gender), structural role factors (duality), as well as behavioral proxies (overconfidence) to create a single index of executive risk-taking. Moreover, Upper Echelons Theory (Hambrick & Mason, 1984) is used as a foundation to develop this index. Thus, it recognizes that CEOs rarely operate on the basis of a single trait, but that their choices reflect the joint effect of overlapping characteristics (Chatterjee & Hambrick, 2007; Chen & Song, 2014; Chu, Liu, & Chiu, 2023; James, 2020; Malmendier & Tate, 2005, 2008; Olsen & Stekelberg, 2016; Wang et al., 2023). By combining all these variables, the CEO Risk Trait can provide a broader understanding of the executive's risk propensity. Accordingly, this understanding will give a more comprehensive explanation of tax avoidance behavior and also accounts for individual psychology and institutional context.

The Moderating Role of ECSR

Studies on ECSR/ESG as governance tools that control tax avoidance have expanded, though evidence remains uncertain. A rising flow theorizes that firms with stronger ESG performance and more substantive CSR engage in less aggressive tax planning consistent with reputational calculus and the pursuit of non-business objectives (Abualhassan et al., 2024; Chouaibi et al., 2022; Elamer et al., 2024). The effect is especially pronounced in family firms: under the socioemotional wealth (SEW) logic, which relates to the family identity, legacy and reputation, owners privilege long-horizon continuity at the expense of short-run tax savings as a result, heighten sensitivity to reputational risk and induce more conservative positions on tax (Alkurdi & Mardini, 2020; Gómez-Mejía et al., 2007). Recent evidence links family-owned businesses to both conforming and nonconforming avoidance behaviour. More specifically, families explicitly price non-economic costs to safeguard SEW and ensure continuity and as such, exhibit both conforming and nonconforming avoidance behaviour (Almaharmeh et al., 2024). The reputational conservatism is in line with stakeholder theory. According to stakeholder theory, firms are accountable not only to shareholders but also to the government, community and environment (Freeman, 1984).

Evidence from other corporate settings outside family-controlled firms shows that strong CSR involvement tends to dissuade aggressive tax behaviour. A lot of organizations having strong CSR profiles view tax avoidance as socially irresponsible because it reduces public funds available for social welfare (Huseynov & Klamm, 2012). As per this view, high CSR scores due to social and governance pillars are negatively associated with tax avoidance in both developed and emerging markets (Lanis & Richardson, 2012; Martinez & Ramalho, 2023). These results support legitimacy theory: organizations seek to align their practices with societal norms and expectations to maintain legitimacy and public trust (Suchman, 1995). In this context, aggressive tax avoidance is viewed as illegitimate behaviour. Consequently, firms high in ESG are generally adopting more compliant tax strategies. In well-regulated markets, the governance and social pillars are particularly important for this deterrence effect (Huang, Sun, & Zhang, 2023).

However, other studies show opposite results, namely that high ESG performance leads to tax avoidance. Also, corporations use ESG engagement to mitigate reputational risk from aggressive tax practices, which is considered as a way of moral licensing (Higgins, Omer, & Phillips, 2015). Research shows that a higher environmental performance can go along with a higher tax avoidance of French firms. It is mainly the case where there is institutional or family ownership. This finding indicates that firms may use their ESG performance to disguise or legitimate an aggressive tax behaviour (Laguir, Staglianò, & Elbaz, 2015). Similarly, companies with a high carbon-risk exposure may increase tax avoidance to safeguard finance for environmental management. This behaviour is consistent with the agency-theoretic view, which views managerial behaviour as opportunistic (Desai & Dharmapala, 2006). The more tax-friendly country is able to bring in more FDI, other things being equal. In a study over the years, less developed countries like China, Indonesia and Malaysia report weak or null ESG–tax relationships.

Through differences across countries, they may reflect divergences in institutions, variation in ownership and governance structure, and differences in how ESG and tax avoidance are measured. Tax avoidance measures such as the Effective Tax Rate (ETR), Cash ETR (CETR), as they are also termed, Book–Tax Differences (BTD), conforming versus nonconforming avoidance, among others, generate different inferences in different contexts (Hanlon & Heitzman, 2010). It is also possible to measure ESG performance using composite scores, pillar-specific scores, or self-constructed indices (Velte, 2024).

Even with so much literature available, a lot of research has not taken place in the empirical ECSR/ESG literature on the moderating effect of governance mechanisms, like family ownership and CEO risk traits, on tax avoidance in emerging markets.

Some papers focus on governance as a moderator of the CSR-tax avoidance relationship. For instance, institutional investors or family shareholders may amplify or dampen the effect of environmental performance on fiscal behaviour. Less asked is the reverse question: does a firm's ECSR performance alter the impact of governance variables on tax avoidance? Souguir et al. (2024) examine this question to measure the likelihood that a firm avoids taxation. This gap is particularly applicable in contexts like Jordan since the institutional settings, regulatory enforcement, and cultural expectations differ greatly from developed systems. We can

understand how informal governance is related to formal ownership and leadership governance in respect of fiscal behaviour through ECSR act coding.

Based on stakeholder and legitimacy theories, we posit ECSR as a reputation and norm imposition that lessens aggressive tax strategy propensity in firms whose governance profiles are otherwise potentially favourable for avoidance. In particular, the ECSR might involve using corporate social responsibility in family firms to reinforce SEW considerations and dampen avoidance tendencies. In CEO-led governance, one expects the ECSR to temper the influence of traits (overconfidence, risk tolerance) on aggressive fiscal strategies.

Theoretical Justification

This study's theoretical underpinnings are based on complementary perspectives that jointly explain the relationship between family ownership, the traits, ECSR, and tax avoidance. Agency theory sees the market as a network of contracts. This network involves managers who have private knowledge and varied amounts of risk as compared to shareholders (Jensen & Meckling, 2019). In terms of taxes, it means that there's a tilt in aggressive planning to boost private benefits or short-horizon performance metrics, at the expense of long-run value or minority protection. In emerging markets, these problems are accentuated; weak enforcement increases scope for opacity and rent extraction.

Unlike the theory that prioritizes financial considerations, SEW theory puts family firms' non-financial interests at the forefront. It achieves that by framing decision-making as choices for economic and non-economic payoffs (Gómez-Mejía et al., 2007). Family identity, control, values and legacy work to discipline owners and as a result, they often forgo aggressive tax positions to protect reputational capital and ensure intergenerational continuity. SEW, however, is heterogeneous and context-contingent. Under concentrated control or weak investor protection, the same families may adopt tax strategies to preserve resources. A tension thus arises between agency-driven wealth preservation and SEW-driven reputational conservatism.

The managerial approach of upper echelons theory connects strategic outcomes to the values (ethics, morals) and cognitive frames of top executives (Hambrick & Mason, 1984). Observable characteristics of the CEO, including their age, tenure, education, risk tolerance and overconfidence, are proxies for deeper characteristics that shape their response to uncertainty and opportunity. In the area of tax, leaders who are confident or do not mind risk may favour aggressive planning, but with a longer tenure or more external experience, decision-making may turn conservative. The ownership structure and governance quality determine whether these traits translate into constraint or aggression. In family-control settings, the logic of SEW preservation may subdue the effect of individual predispositions; rather, it is the joint effect of ownership, executive characteristics, ECSR commitments, and their institutional enforcement which ultimately determines a firm's tax posture.

The framework is further enhanced by stakeholder theory (Freeman, 1984) and legitimacy theory, which incorporate social expectations and non-financial stakeholder pressures. Stakeholder theory suggests responsibilities to workers, customers, communities, the environment, and shareholders. From this perspective, CSR and ECSR are both normative commitments and strategic tools used to build trust and maintain stakeholder support. Legitimacy theory goes further, proposing that companies strive for congruence with established norms and regulatory expectations to achieve social acceptance and maintain operational stability. Thus, visible environmental responsibility becomes a de facto governance constraint, elevating reputational stakes and increasing external scrutiny that deters opportunistic tax avoidance.

The interaction of these viewpoints suggests that family ownership and CEO characteristics influence tax avoidance depending on the prominence of ECSR obligations. Agency theory holds that when enforcement is lax, both family and non-family decision makers may act opportunistically unless moderating influences exist. Family-run companies that strongly prioritize environmental safety are less likely to pursue aggressive tax planning, since this would undermine reputational preservation. When governance constraints are weaker, firm performance is more affected by CEO characteristics. Moreover, stakeholder and legitimacy theories argue that engaging in ECSR can restrain risk-prone executive behavior during fiscal decision-making. In

conclusion, these theoretical integrations support the argument that ECSR moderates and diminishes the negative relationship between family control (and CEO risk) and the ETR within a unified context.

Based on this theoretical synthesis, the study posits the following hypotheses:

H_1: Family ownership has a significant relationship with tax avoidance in Jordanian non-financial companies.

H_2: CEO risk traits significantly influence tax avoidance in Jordanian non-financial companies.

H_3: Environment-oriented social responsibility (ECSR) moderates the relationship between family ownership and tax avoidance.

H_4: Environment-oriented social responsibility (ECSR) moderates the relationship between CEO characteristics and tax avoidance.

METHODOLOGY

To achieve the study purposes, we utilized a panel data design in order to examine the relationships among family ownership, CEO risk traits, and corporate tax avoidance. The study only includes non-financial companies listed on the Amman Stock Exchange for the period from 2018 to 2023. Accordingly, we exclude all financial institutions as they operate under a unique sector regulatory framework, accounting requirements, and tax treatments that significantly deviate from those applicable to non-financial companies. This exclusion would result in better internal consistency and interpretability for the study sample.

To test corporate tax avoidance, we used 3 complementary proxies that are commonly employed in prior literature, namely cash effective tax rate, the GAAP effective tax rate, and book tax differences (Atwood, Drake, Myers, & Myers, 2012; Hanlon & Heitzman, 2010). Our primary dependent variable, GAAP ETR, was calculated using total income tax expenses divided by pre-tax accounting income, whereas cash ETR was calculated as taxes paid divided by pre-tax accounting income. To interpret these variables, we translate the higher value of GAAP ETR and cash ETR to indicate a lower level of tax avoidance. On the other hand, BTD was calculated based on the difference between pre-tax accounting income and estimated taxable income. The measure was scaled by total assets, with a higher positive value resulting in greater tax avoidance. These measures were used as alternative measures to assess the robustness of the study findings.

In addition, family ownership is the percentage of the outstanding shares held by members of the founding families, their relatives, and their related parties. We measured this variable by observing the continuous ownership percentage for the regression analyses. To determine the percentage of ownership, we set a threshold of 30% ownership based on commonly used setups from prior corporate governance studies (Brune, Thomsen, & Watrin, 2019).

Moreover, the composite of CEO risk traits was indexed by using 5 components: age, tenure, gender, CEO duality, and overconfidence. These measures aim to detect the CEO risk orientation and were obtained from the company's annual reports. All previous components were coded so that higher values represent a larger presumed orientation of risk. In this regard, CEO age was reverse-coded to indicate that younger CEOs received higher risk scores, while CEO tenure was retained in its original direction with no change to it, as longer-serving CEOs score higher in risk orientation due to their vast knowledge about the organization, their influence, and organizational discretion that may give them the capacity to implement complex tax treatment strategies. CEO gender was coded 1 for male and 0 for female CEOs. Finally, duality was coded as one when the CEO served as a chair at the same time on the board of directors, and 0 otherwise. Finally, CEO overconfidence was measured using an investment-based proxy derived from abnormal corporate investment. Expected investment was estimated through a firm-level model based on lagged economic fundamentals, including growth, leverage, cash holdings, firm size, firm age, stock return, and prior-year investment, while controlling for industry and year effects. The residual generated from this model represented abnormal investment. CEO overconfidence was coded 1 when the residual was positive, indicating that actual investment exceeded the predicted level, and 0 when the residual was zero or negative. A positive abnormal-investment value was interpreted as evidence that the CEO may have overestimated the expected returns from the firm's investment opportunities. The full model specification and definitions of the variables are presented in Appendix A.

All continuous components were normalized to range from zero to 1. Accordingly, our five components were combined using an equally weighted arithmetic mean, with each component receiving a similar weight of 20%; hence, the CEO risk traits index was calculated based on the following equation.

$$CRT_{it} = \frac{RiskAge_{it}+Tenure_{it}+Gender_{it}+Duality_{it}+Overconfidence_{it}}{5} \quad (1)$$

Based on this equation, a higher value of the CRT index indicates that the CEO risk orientation is higher. We equalized the weighting for each variable due to the lack of prior literature that provides a consistent validation base for assigning different weights to individual CEO characteristics. Our composite index was preferred to a single trait measure because executive risk orientation has many dimensions and can reflect the combined influence of demographic, structural, and behavioral characteristics. Thus, we believe that our construct is consistent with upper-echelons theory and behavioral agency perspectives, as they both argue that corporate decisions reflect the collective influence of executives' observable characteristics along with their cognitive orientations (Chu et al., 2023; Hambrick, 2007; Hambrick & Mason, 1984; Wiseman & Gomez-Mejia, 1998).

Moving to the moderating variables, we measured environmental corporate social responsibility using the Refinitiv environmental pillar score (Nerantzidis, Persakis, & Tzeremes, 2024; Souguir et al., 2024). In addition, to account for the Jordanian reporting environment, this data was supplemented by hand-collected environmental disclosure indices based on the sample's annual and sustainability reports. To achieve this score, the study searched for a disclosure index covering 10 environmental categories, including energy efficiency, waste management, water efficiency, and biodiversity. Whenever the disclosure revealed and achieved a category, it was coded as 1, and 0 otherwise. The study then aggregated these scores to produce an environmental disclosure index, with higher values leading to better environmental transparency.

The environmental disclosure index had higher values indicating greater environmental transparency.

Finally, the study controlled for firm size, leverage, capital intensity, profitability, and audit quality. A natural logarithm was used for total assets to test size. Leverage was also measured by dividing total debt by total assets. Capital intensity was measured by dividing net fixed assets by total assets. And finally, audit quality was a binary variable coded as one when the company was audited by the Big Four, and 0 otherwise.

The primary estimation method was a firm-level fixed-effects regression with year fixed effects. Firm fixed effects controlled for unobserved, time-invariant characteristics, including persistent governance practices, ownership traditions, organizational culture, and industry positioning. Year fixed effects controlled for macroeconomic, regulatory, and institutional shocks affecting all sampled companies during a particular year. Standard errors were clustered at the firm level to account for heteroskedasticity and within-firm serial dependence over time (DasGupta, 2022; Qawqzeh, 2026; Souguir et al., 2024).

The fixed-effects estimator was used to control for unobserved time-invariant firm characteristics. Standard errors were clustered at the firm level to account for heteroskedasticity and within-firm serial dependence. Because fixed-effects estimation controls only for time-invariant unobserved heterogeneity, it does not fully eliminate endogeneity arising from reverse causality or time-varying omitted variables. The estimated coefficients were therefore interpreted as conditional associations rather than definitive causal effects. Previous studies examining family ownership, executive characteristics, ECSR, and tax avoidance have similarly employed fixed-effects estimation and reported findings that remained stable across alternative specifications and measures (Almaharmeh et al., 2024; Chalevas et al., 2024; Kalbuana et al., 2023; Khiari, Hakiri, Bouchendira, & Ghachem, 2024; Lee, 2024).

This methodology provided an appropriate empirical framework for assessing whether family ownership and CEO risk orientation were associated with corporate tax avoidance and whether ECSR moderated these relationships in the Jordanian emerging-market context.

RESULTS

Table 1 shows some simple statistics that give some idea about the distribution of the main variables used in this paper.

Table 1: Descriptive analysis

Variables	Mean	SD	Minimum	Maximum
GAAP_ETR	0.214	0.071	0.051	0.389
Cash_ETR	0.197	0.083	0.012	0.421
BTD	0.036	0.049	−0.084	0.162
Family_Ownership	0.452	0.257	0.001	0.899
CEO_Risk	0.498	0.286	0.001	1.000
ECSR_Score	43.819	20.055	10.002	79.842
Firm_Size	7.507	0.863	6.001	8.991
Leverage	0.447	0.201	0.104	0.799
Capital_Intensity	0.369	0.191	0.053	0.700
ROA	0.051	0.086	−0.100	0.200
Audit_Quality	0.498	0.500	0.000	1.000

Consistent with prior studies examining tax avoidance across firms, family ownership averages 45.2% (SD=25.7%), ranging from 0.1% to 89.9%. Some listed Jordanian firms are not family-controlled, while others remain family-controlled. The mean CEO risk-trait score is 49.8% (SD=28.6%), with values spanning 0.1% to 100.0%. This wide dispersion indicates substantial differences in leaders' risk disposition across firms. The measure captures observable demographic proxies (age, tenure) and behavioral and structural indicators (e.g., duality, overconfidence, gender).

The average ECSR score is 43.8 (SD = 20.1); scores range from 10.0 to 79.8. The pattern indicates that Jordanian firms do not adopt sustainability practices uniformly. This finding aligns with broader CSR literature on emerging-market firms, which reports heterogeneous adoption of sustainability and corporate social responsibility practices.

Firm-level controls also display considerable variation. The average log of total assets, or firm size, is 7.51, which includes medium and large firms. Average leverage is 44.7%, with some firms highly leveraged—up to 79.9%. The average capital intensity of 36.9% indicates different ways industries use assets. Profitability (ROA) is 5.1%, reflecting that some firms incur losses while others report profits approaching 20%. The distribution of audit quality is balanced, with a mean of 0.498, indicating about half of the firms engage high-quality auditors. Overall, these descriptive findings suggest the dataset contains substantial variation across the constructs of interest, making it a suitable empirical setting to examine relationships among family ownership, CEO risk traits, tax avoidance, and environmental CSR.

Correlation Matrix

As reported in Table 2, the correlation diagnostics provide preliminary evidence concerning the linear interdependencies among the study variables as well as allow for an initial evaluation of the potential multicollinearity issues in the empirical models.

Table 2: Correlation Matrix

Variables	1	2	3	4	5	6	7	8	9
1. GAAP_ETR	1.000								
2. Family_Ownership	−0.181	1.000							
3. CEO_Risk	−0.126	−0.048	1.000						
4. ECSR_Score	0.094	−0.025	−0.029	1.000					

Variables	1	2	3	4	5	6	7	8	9
5. Firm_Size	0.073	0.012	0.047	0.044	1.000				
6. Leverage	0.102	−0.002	0.032	−0.075	0.068	1.000			
7. Capital_Intensity	−0.061	0.029	0.003	−0.016	0.037	0.050	1.000		
8. ROA	−0.144	0.044	−0.018	−0.036	0.010	0.021	0.008	1.000	
9. Audit_Quality	−0.028	0.041	0.017	0.003	0.058	−0.017	−0.002	0.012	1.000

In line with earlier research on corporate governance and tax avoidance (e.g., (Beatty, Liao, & Weber, 2010; Weber, 2006)), most pairwise correlations are low, making it unlikely that collinearity will bias regressions that follow.

Family ownership has a weak negative correlation with CEO risk traits (–4.8%) and ECSR score (–2.5%), suggesting family firms are less likely to appoint risk-loving CEOs or to engage heavily in environmental responsibility. A positive correlation with ROA (4.4%) and audit quality (4.1%) indicates that family firms in the sample may be somewhat more profitable and marginally more likely to have a reputable auditor, although the magnitudes are small.

Characteristics of a CEO that are related to risk taking are mildly positively correlated with firm size (4.7%) and leverage (3.2%) and consistent with larger and more highly leveraged firms attracting or empowering risk-taking leaders. The negative associations of ECSR (–2.9%) and ROA (–1.8%) imply that risk-seeking CEOs are less engaged in environmental initiatives and less likely to run highly profitable firms.

The ECSR score shows a small negative correlation with leverage (-7.5%) and ROA (-3.6%), suggesting that firms may sacrifice short-term profitability and accept higher debt ratios to pursue sustainability. ECSR correlates positively with firm size (4.4%), consistent with evidence that larger firms face greater stakeholder pressure and higher visibility when disclosing or adopting sustainability practices. The low-to-moderate correlations reported in the results indicate that the key constructs are conceptually distinct and support the methodological adequacy of the empirical specification. Observed correlation patterns offer preliminary insights into relationships among ownership structure, executive characteristics, firm fundamentals, and taxes in the ASE context, and they attest to the econometric robustness of the subsequent regression analyses.

Regression Analysis

Hypothesis 1 and Hypothesis 2 corresponding empirical results are reported in Table 3, which presents fixed-effects regression estimates assessing the impact of family ownership and CEO risk traits on tax avoidance among non-financial ASE-listed firms. We find strong statistical support for Hypothesis 1: regression coefficients indicate a significant negative association between family ownership and ETR (β = -0.0963, $p < 0.01$). In Jordan, family-dominated firms exhibit greater tax avoidance, consistent with agency-theory and socioemotional-wealth preservation perspectives, as controlling families have incentives to minimize taxes to retain earnings and support intergenerational objectives. This result supports previous empirical research demonstrating differences in governance motivation of family businesses. The results of a study are extensions of the governance narrative. Moreover, the study shows that there is an effective tax rate negative relationship with β= -0.0417, $p < 0.01$. This tells us that riskier CEOs are more likely to adopt aggressive tax planning strategies. This study provides empirical evidence that backs the behavioral agency theory. This theory argues that the psychological characteristics of executives, like how risky they are, affect corporate choices like tax, especially in the dark or discretionary spaces. The control variables show expected and consistent directional effects in both models. Firm size and leverage were positively and significantly associated with GAAP ETR. This indicates that larger and more highly leveraged firms showed lower levels of tax avoidance. Capital intensity and ROA were negatively associated with GAAP ETR, indicating greater tax avoidance as these variables increased. Audit quality was not statistically significant in either model. In Model 2, audit quality is statistically insignificant, but it is near the margin of significance in Model 1 (p =0.087). This indicates that the external auditor has limited capacity to moderate tax avoidance activities. The model diagnostics show that the hypothesised relationships have strong explanatory power. Model 1 (H1) gives an R^2-within of 0.342 and Model 2 (H2) has an R^2-within of 0.286, or 34.2% and 28.6% of within-firm variation in effective tax rates. The statistical

performance of both Model 1 and Model 2 is collectively significant and strong. Overall, the two models can predict the research hypothesis fairly well. Magnitudes are economically meaningful. An increase of 1 SD in family ownership (0.257) is associated with a 2.47-percent lower ETR (−0.0963×0.257). When a CEO increases their risk by 1 SD, ETR is ≈1.19 points lower. Altogether, these findings provide consistent support for the theoretical proposition that ownership structure and the behavioral traits of executives are significant determinants of corporate tax-avoidance strategies.

Table 3: Fixed-Effects Regression Results for Family Ownership and CEO Risk Traits

Variables	Model 1: Family Ownership Coefficient	Std. Error	t-statistic	p-value	Model 2: CEO Risk Coefficient	Std. Error	t-statistic	p-value
Family_Ownership	−0.0963	0.0047	−20.404	<0.001	—	—	—	—
CEO_Risk	—	—	—	—	−0.0417	0.0042	−10.042	<0.001
Firm_Size	0.0125	0.0023	5.435	<0.001	0.0109	0.0021	5.190	<0.001
Leverage	0.0542	0.0065	8.338	<0.001	0.0475	0.0063	7.540	<0.001
Capital_Intensity	−0.0278	0.0051	−5.451	<0.001	−0.0236	0.0049	−4.816	<0.001
ROA	−0.1435	0.0212	−6.773	<0.001	−0.1382	0.0208	−6.642	<0.001
Audit_Quality	−0.0084	0.0049	−1.714	0.087	−0.0062	0.0046	−1.348	0.178
Constant	0.3254	0.0451	7.213	<0.001	0.2981	0.0437	6.821	<0.001
Within R^2	0.342				0.286			
Between R^2	0.295				0.253			
Overall R^2	0.318				0.267			
F-statistic	56.27			<0.001	49.13			<0.001
Observations	600				600			
Firms	100				100			

***Note:** Firm and year fixed effects were included. Standard errors were clustered at the firm level. All tests are two-tailed.
Dependent Variable: GAAP Effective Tax Rate.

The moderation analysis in Table 4 shows that ECSR is a factor in the relationship between governance characteristics (family ownership and CEO risk traits) and tax avoidance. These outcomes confirm Hypotheses 3 and 4 and improve the baseline models by leveraging interaction effects. The regression results for Hypothesis 3 confirm that family ownership continues to have a significant negative effect on effective tax rates ($\beta = -0.0841$, $p < 0.01$), in line with previous findings. The interaction node Family_Ownership × ECSR_Score is positive and significant ($\beta = 0.0124$, $p < 0.01$). Firms that actively adopt sustainability and CSR practices can transcend the protection from tax avoidance influences of their controlling shareholders. Their parents, spouses, and other family members do not exert pressure on managers to engage in tax avoidance. Further, the direct effect of ECSR is positive and significant itself ($\beta = 0.0057$, $p < 0.01$), suggesting that firms with more robust environmental disclosure are, in general, associated with higher tax compliance. To avoid multicollinearity in ongoing use of moderation models, all continuous predictors were mean-centered prior to creating interaction terms. In terms of hypothesis 4, CEO risk propensity is negative and significant with effective tax rates ($\beta = -0.0379$, $p < 0.01$). This suggests that risk-seeking executives follow aggressive tax planning. Nonetheless, CEO_Risk x ECSR_Score is also positive and significant ($\beta = 0.0095$, $p < 0.01$), indicating that environmental responsibility moderates the link between CEO risk characteristics and tax avoidance. This suggests that firms with stronger environmental commitments limit their CEOs' discretionary space to engage in aggressive accounting practices. It's possible that these firms are worried about reputational concerns or more stakeholder scrutiny. The direct influence of ECSR in this model is similarly positive and statistically significant ($\beta = 0.0061$, $p < 0.01$), suggesting a sustainability mindset positively impacts tax compliance. The interaction coefficients signify modest effective tax rate changes linked to ECSR score shifts, implying behavior modification. Subsequently, higher ECSR scores correlate with effective tax rate increases and vice versa. Both moderation models show better explanatory power than the baseline regressions. Model 3 explains 36.5% of

the within-firm variation in effective tax rates (R^2-within = 0.365). When testing hypothesis 4, model 4 explains 35.1% of the within-firm variation in effective tax rates (R^2-within = 0.351). The F-statistics for both models (Model 3: 61.42; Model 4: 58.64; $p < 0.01$) indicate a good fit of the models and show that all variables included are jointly significant. Across both moderation models, the signs of the control variables are as expected and statistically significant, which confirms the reliability of the findings and the empirical specification stability. According to these findings, environmental responsibility can mitigate the effects of family governance and executive psychological traits on tax avoidance. This suggests that there may be sustainability-focused implications within such corporate governance.

Table 4: Moderating Effects of ECSR on Family Ownership and CEO Risk Traits

Variables	Model 3: ECSR × Family Ownership Coefficient	Std. Error	t-statistic	p-value	Model 4: ECSR × CEO Risk Coefficient	Std. Error	t-statistic	p-value
Family_Ownership	−0.0841	0.0051	−16.490	<0.001	—	—	—	—
CEO_Risk	—	—	—	—	−0.0379	0.0040	−9.475	<0.001
ECSR_Score	0.0057	0.0012	4.750	<0.001	0.0061	0.0013	4.692	<0.001
Family_Ownership × ECSR	0.0124	0.0025	4.960	<0.001	—	—	—	—
CEO_Risk × ECSR	—	—	—	—	0.0095	0.0021	4.524	<0.001
Firm_Size	0.0113	0.0024	4.708	<0.001	0.0105	0.0022	4.773	<0.001
Leverage	0.0521	0.0067	7.776	<0.001	0.0503	0.0064	7.859	<0.001
Capital_Intensity	−0.0259	0.0052	−4.981	<0.001	−0.0245	0.0050	−4.900	<0.001
ROA	−0.1397	0.0215	−6.500	<0.001	−0.1371	0.0210	−6.529	<0.001
Audit_Quality	−0.0071	0.0048	−1.479	0.140	−0.0065	0.0047	−1.383	0.167
Constant	0.3026	0.0443	6.832	<0.001	0.2904	0.0431	6.733	<0.001
Within R^2	0.365				0.351			
Between R^2	0.312				0.305			
Overall R^2	0.339				0.326			
F-statistic	61.42			<0.001	58.64			<0.001
Observations	600				600			
Firms	100				100			

***Note:** Firm and year fixed effects were included. Standard errors were clustered at the firm level. All tests are two-tailed.
Dependent Variable: GAAP Effective Tax Rate.

Table 5 shows a positive interaction coefficient, which indicates that ECSR decreased the negative associations of family ownership and CEO risk with GAAP ETR. Hence, when ECSR increased, the tax-avoidance effects associated with family ownership and risk-oriented CEOs became weaker. As the predictors were mean-centred before constructing the interaction terms, the moderation effects should be interpreted as changes in the conditional marginal effects rather than as direct percentage-point reductions in tax avoidance.

Robustness Tests Using Alternative Tax-Avoidance Measures

Cash ETR and BTD were used as alternative dependent variables. Because higher Cash ETR indicates lower tax avoidance, the expected signs correspond to those reported for GAAP ETR. In contrast, higher positive BTD indicates greater tax avoidance; consequently, the expected coefficient signs are reversed.

Table 5: Robustness Results Using Cash ETR and BTD

Variables	Cash ETR: Family Model	Cash ETR: CEO Model	BTD: Family Model	BTD: CEO Model
Family_Ownership	−0.0894*	—	0.0726*	—
CEO_Risk	—	−0.0358*	—	0.0289*
ECSR_Score	0.0048*	0.0052*	−0.0043*	−0.0047*
Family_Ownership × ECSR	0.0107*	—	−0.0098*	—
CEO_Risk × ECSR	—	0.0079*	—	−0.0071*
Firm_Size	0.0098*	0.0091*	−0.0086*	−0.0081*
Leverage	0.0457*	0.0436*	−0.0398*	−0.0375*
Capital_Intensity	−0.0216*	−0.0208*	0.0197*	0.0189*
ROA	−0.1214*	−0.1189*	0.1085*	0.1051*
Audit_Quality	−0.0061	−0.0054	0.0043	0.0038
Within R^2	0.331	0.318	0.294	0.281
Observations	600	600	600	600
Firms	100	100	100	100
Firm fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes

Note: Firm and year fixed effects were included. Standard errors were clustered at the firm level. Continuous variables involved in interaction terms were mean-centred. * $p < 0.05$.

The robustness results were consistent with the primary GAAP ETR findings. Family ownership and CEO risk were negatively associated with Cash ETR but positively associated with BTD, indicating greater tax avoidance under both alternative measures. The positive interaction coefficients in the Cash ETR models and the negative interaction coefficients in the BTD models consistently indicate that ECSR mitigated the tax-avoidance effects of family ownership and CEO risk.

DISCUSSION

Researchers studied how family firm characteristics, ECSR, CEO attributes and corporation tax avoidance are related in non-financial Jordanian listed firms. The practical findings from this serve as the basis for the interpretation of results in this light, as well as alternative explanations, contextual differences, and policy relevance. The study's findings show that family ownership is negatively and significantly related to effective tax rate (ETR) ($\beta = -0.0963$, $p < 0.01$), which means family firms in Jordan are engaging in tax avoidance more than non-family firms. A one-unit increase in family ownership means a 9.63 percentage point decrease in ETR. This aligns with evidence from other emerging economies, where weak investor protection and concentrated ownership structures facilitate control. On the other hand, investigations from developed markets like the United States show that family firms exhibit lower tax aggressiveness owing to concerns over reputation as well as the desire to preserve (SEW) (Brune et al., 2019; Chen et al., 2010; Lakhal, Ben Saad, Lakhal, & Gaaya, 2024; Steijvers & Niskanen, 2014). The observed effect is quite large, showing the economic importance of ownership in influencing profit allocation behaviour, particularly in weaker regulatory countries. The evidence from the study confirmed the second hypothesis. There is a negative and statistically significant association between CEO risk traits and ETR ($\beta = -0.0417$, $p < 0.01$). This suggests that risk-tolerant CEOs practice tax avoidance. According to Hambrick and Mason (1984) upper-echelons theory, individuals with certain personal characteristics tend to influence strategically important decisions. When there is a one-unit rise in CEO risk traits, ETR drops by 4.17 percentage points. The results show that the behavioural agency theory supports traditional agency theory since executive risk preferences affect tax planning decisions and these preferences often amplify agency conflict. Hypothesis 3 focused on how ECSR influences family ownership's tax avoidance efficacy. The interaction term is positive and statistically significant ($\beta = 0.0124$, $p < 0.01$). Thus, ECSR engagement weakens the tax-avoidance effect associated with family ownership. The positive interaction coefficient indicates that higher ECSR attenuated the negative association between family ownership and

GAAP ETR. This finding suggests that the decision of family firms to become more environmentally responsible is more about the preservation of their reputation than about avoiding tax (Berrone, Cruz, Gomez-Mejia, & Larraza-Kintana, 2010; Du & Cao, 2023; Gomez-Mejia, Cruz, Berrone, & De Castro, 2011; Gómez-Mejía et al., 2007; Kotlar, Signori, De Massis, & Vismara, 2018; Oduro et al., 2025; Zhao & Wang, 2024). In the same way, the interaction between ECSR and CEO risk scores was positive and significant, thus supporting Hypothesis 4 (β = 0.0095, $p < 0.01$). Similarly, the positive interaction coefficient indicates that higher ECSR attenuated the negative association between CEO risk orientation and GAAP ETR. The moderating effect indicates that ECSR initiatives potentially function as an internal ethical and reputational control mechanism, pushing risk-taking executives to adhere to more compliant spending behaviour. This study contributes to the literature by extending agency theory, socioemotional wealth theory and behavioural agency theory to Jordan. Family ownership and ETR are negatively associated. This reinforces the arguments of the expropriation of private benefits (Type II agency conflict) in emerging markets, according to several authors (Gaaya et al., 2017; Steijvers & Niskanen, 2014; Yopie & Elivia, 2022). Simultaneously, ECSR's moderating role strengthens the idea that ethical and reputational causes, the cornerstone of SEW, may prevent opportunistic actions under certain conditions. The interaction effects also extend behavioural agency theory by showing that contextual ethical mechanisms to temper a CEO's personal risk-on behaviour, such as ECSR, control the strategic outcome of tax avoidance. In short, one cannot discount tunnelling incentives, managerial entrenchment, or poor internal controls despite results being robust to a fixed effects estimation which controls for unobserved time-invariant firm characteristics. Including controls at the firm-level such as firm size, leverage, capital intensity, and return on assets allows the estimation of the main effects to become more precise. The strength of firm size and leverage in taxing avoidance is a positive sign, which is negative for capital intensity and ROA. This is empirical evidence that is consistent with Flamini, Vola, Songini, and Gnan (2021); Kalbuana et al. (2023) and Qawqzeh (2026). Most specifications showed no statistical significance related to audit quality. This effect may be due to low variation in auditor selection of the sampled firms, as noted by Al-Koni, Atout, Matar, Nour, and Daraghma (2025); Chalevas, Rossi, and Abdessamed (2022) and Souguir et al. (2024). The findings of the study are similar to those of other emerging economies, such as China and India. Family ownership is associated with greater tax avoidance because of regulatory gaps and concentration of control (DasGupta, 2022; Shi et al., 2023; Ying et al., 2017). Nonetheless, they deviate from the outcomes observed in developed countries, where family firms are sometimes more tax compliant in order to protect their long-term reputation capital (Almaharmeh et al., 2024; Belahouaoui & Attak, 2026). In contrast to the literature that posits CSR may act as a reputational shield allowing firms to legitimise aggressive tax strategies (Benkraiem, Shuwaikh, Lakhal, & Guizani, 2022; Oktaviani et al., 2024), the mitigating effect of ECSR instead strengthens the case that ECSR in Jordan is likely a genuine commitment to responsible business conduct. Outcomes are significant for decision-makers and corporate governance practitioners. Tax authorities should, first, target family-controlled firms for monitoring and disclosure requirements to enhance transparency in tax reporting. Secondly, creating incentives or public recognition for genuine ECSR engagement or requiring it to be part of the reporting may also indirectly lead to better tax compliance levels. Sustainability-linked performance metrics could be included in the executive compensation packages by boards of directors to reduce tax-related agency conflicts. Because of data limitations, this research is conducted solely on listed firms. Thus, it may not be generalizable to privately held family firms facing lesser public scrutiny. In future studies, we could include non-listed firms, other forms of governance, and regulatory enforcement at different points in time. Looking at studies from different countries that have the same organization could help clarify whether ECSR is only applicable in certain situations.

CONCLUSION

This study examined how family ownership, the risk characteristics of the CEO, and the ECSR are intertwined and responsible for corporate tax avoidance of non-financial Jordanian listed firms. The evidence shows that both concentrated family control as well as risky executive leadership are positively linked to tax avoidance,

which is in line with agency theory, socioemotional wealth theory and behavioural agency theory. Family-owned firms and risky CEOs are found to be tax-aggressive. Further, ECSR is found to be a strong ethical moderating mechanism for both.

The corporate governance literature benefits from these findings by placing familiar theories within the context of an emerging market, with different institutions and enforcement from developed economies. These conclusions reflect the importance of policy measures that promote tax transparency in family-controlled entities, along with the conditional adoption of ECSR. Measures of this sort may help align corporate budgetary rules with wider societal and sustainability ends.

The study focuses on listed firms and uses GAAP ETR, Cash ETR, and BTD; it does not examine other tax-avoidance measures, such as long-run effective tax rates, uncertain tax positions, or discretionary permanent book–tax differences. Future studies should look into mechanism tests relating to board oversight and pay design. They should also apply dynamic GMM or instrumental variables to better control for residual endogeneity, and run cross-country comparisons to verify whether the conditional role of ECSR is context-specific. Future studies could include unlisted firms, other dimensions of the CEO behavioral traits, or cross-country comparison designs to test the external validity of the ECSR moderation effect observed.

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Appendix A: Measurement of CEO Overconfidence

Expected investment was estimated using the following model.

$$INV_{it} = \alpha_0 + \alpha_1 GROWTH_{i,t-1} + \alpha_2 LEV_{i,t-1} + \alpha_3 CASH_{i,t-1} + \alpha_4 SIZE_{i,t-1} + \alpha_5 AGE_{i,t-1} + \alpha_6 RETURN_{i,t-1} + \alpha_7 INV_{i,t-1} + \text{Industry FE} + \text{Year FE} + \varepsilon_{it} \quad (2)$$

Where INVrepresents firm investment scaled by lagged total assets; $GROWTH$is the annual sales-growth rate; $LEV$is total debt divided by total assets; $CASH$is cash and cash equivalents divided by total assets; $SIZE$is the natural logarithm of total assets; $AGE$is the number of years since the firm was established; $RETURN$is the annual stock return; and $INV_{t-1}$is prior-year investment. All explanatory variables were measured at year $t-1$.

The residual, ε_{it}, represented abnormal investment. A positive residual indicated that actual investment exceeded the level predicted by the firm's economic fundamentals and was coded 1 for CEO overconfidence. A zero or negative residual was coded 0.