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Family Ownership, Corporate Governance Quality and Tax Avoidance: Evidence from an Emerging Market—The Case of Jordan

Mohammad I. Almaharmeh ^{1,*} , Ali Shehadeh ², Hani Alkayed ³, Mohammad Aladwan ¹ and Majd Iskandrani ⁴

¹ Accounting Department, Business School, The University of Jordan/Aqaba Campus, Aqaba 77110, Jordan; msm_adwan@ju.edu.jo

² Finance Department, Business School, The University of Jordan/Aqaba Campus, Aqaba 77110, Jordan; ali.shehadeh@ju.edu.jo

³ Accounting Department, University of Petra, Amman 1196, Jordan; hani.alkayed@uop.edu.jo

⁴ Business School, The University of Jordan, Amman 11942, Jordan; m.iskandrani@ju.edu.jo

* Correspondence: m.almaharmeh@ju.edu.jo

Abstract: This study examines the impact of family ownership on tax avoidance decisions. This study further investigates the effects of corporate governance quality on the relationship between family ownership and tax avoidance. We construct a sample of non-financial firms listed on the ASE for the period 2015–2021. The results demonstrate that family-owned firms have high levels of tax avoidance. This result supports the private-benefit expropriation hypothesis. Regarding the mediating effect of corporate governance variables, the results suggest that large audit committees and audit committees that meet more frequently curb attempts by family owners to avoid paying tax.

Keywords: family ownership; institutional ownership; audit committee; corporate governance; tax avoidance; emerging markets; Jordan



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1. Introduction

Recently, the topic of tax avoidance has attracted a growing body of literature (Khan et al. 2017; Bauer et al. 2018; Zeng 2019; Alkurdi and Mardini 2020; Mouakhar et al. 2020; Jiang et al. 2021; Rahman and Leqi 2021; Zolotoy et al. 2021; Dang and Nguyen 2022). Hanlon and Heitzman (2010) and Christensen et al. (2015) define tax avoidance as the actions that firms perform to reduce their income taxes relative to their income before tax. Owing to recent increases in tax rates, income tax has become a material part of firms' expenses and reduces the amount of available cash flow for firms' owners (Suranta et al. 2020). Therefore, companies may use tax-avoidance strategies to reduce income tax expenses (Chen et al. 2010).

Family ownership plays a crucial role in firms' tax-avoidance decisions. The complex ownership structure of a family-owned firm may affect its tax-avoidance decisions (Lietz 2013), because different owners may have different goals and motivations for corporate decisions (Raimo et al. 2020; Hoskisson et al. 2002). Prior research suggests that family ownership enhances corporate tax avoidance behaviour (Steijvers and Niskanen 2014; Gaaya et al. 2017; Yopie and Elivia 2022). There are conflicts of interest in family-owned firms between family shareholders and minority investors. Family owners are expected to behave as controlling owners and expropriate private benefits at the expense of small shareholders (Shleifer and Vishny 1986).

Referring to the entrenchment hypothesis, families with a significant influence on firms' decisions use their voting rights to entrench themselves and exacerbate the expropriation of minority interests (La Porta et al. 1999). Members of the family involved in firms' management and on the boards of directors tend to increase their power in the firm and affect management decisions. Thus, family members would make corporate decisions

that are in line with their private benefits at the expense of other shareholders. They tend to engage in tax-saving positions to extract higher rents (Steijvers and Niskanen 2014). Regardless of the potential consequences of such aggressive behaviour, firms can use tax-avoidance activities to cover bad performance, hide rent extraction, and mislead minority shareholders (Desai and Dharmapala 2006; Desai et al. 2007; Kim et al. 2011).

Conversely, the opposite view suggests that a high percentage of family ownership curbs tax-avoidance activities. Family-owned firms are characterized by high ownership concentration, leading to lower agency costs between firm management and shareholders (Jensen and Meckling 1976). In line with the alignment hypothesis, Steijvers and Niskanen (2014) suggest that family-owned firms are expected to engage less in tax-avoidance practices because family owners are likely to avoid risky activities and may act less opportunistically. Moreover, family owners hold a significant controlling position over the firm's management and the board of directors, which may lead to the alignment of the interests of firms' management and controlling shareholders (Anderson and Reeb 2003). Family-owned firms are characterized by low agency costs, which make them more efficient than non-family-owned firms (Ang et al. 2000).

In addition, family shareholders are concerned about reputation costs and penalties. In particular, family shareholders are unwilling to make aggressive tax decisions because such activities may affect the owners' family names (Gaaya et al. 2017). They consider their firms as legacies to be passed on to their successors (James 1999). For this reason, family owners concentrate on the long-term value of the business rather than its short-term benefits (Gaaya et al. 2017). Consistent with this assertion, Chen et al. (2010) provide empirical evidence that family-owned firms have lower aggressive tax behaviour than non-family-owned firms. Because the Jordanian market is an emerging market and its legal system is characterised by poor investor-protection regimes, it is expected that the entrenchment hypothesis will be more prevalent in Jordan, suggesting that family-owned firms are associated with more tax-avoidance activities.

We construct a sample of non-financial firms listed on the Amman Stock Exchange for the period from 2015 to 2021. The fixed-effects regression model results suggest that Jordanian family firms are associated with more corporate tax-avoidance activities. These results are in line with the entrenchment hypothesis and suggest that the conflict of interests between family shareholders and small investors and the weak investor-protection regimes of minority shareholders in the developing market enable family owners to use their voting power to entrench themselves and exacerbate the expropriation of minority interests by extracting high rents from tax-saving positions.

In addition, we examine the mediating effect of some corporate governance variables on the relationship between family ownership and tax avoidance, namely, audit committee characteristics. The results suggest that audit committee sizes and audit committee meetings have significant negative effects on firms' tax-avoidance activities. The interaction between these variables and family ownership is positive and significant. These results highlight the important governance role played by audit committees in mitigating family shareholders from performing tax avoidance.

This study contributes to the literature on tax avoidance and family ownership in several ways. First, this study sheds light on the effects of family ownership and tax avoidance. There is a limited number of studies that examined the effect of family ownership on tax-avoidance activities in developing countries (Chen et al. 2010; Steijvers and Niskanen 2014). Jordan is a developing country with poor investor-protection regimes, which may lead family firms to use tax-saving means to obtain private benefits and avoid the payment of taxes at the expense of other shareholders (Qawqzeh 2023). Second, this study extends prior research by drawing attention to the moderating effect of some corporate governance variables, institutional ownership, and audit committee characteristics on the relationship between family ownership and tax avoidance in an emerging market. One strand of research investigates the effect of governance monitoring devices on corporate tax-avoidance

activities. Audit committee characteristics are important governance features that are likely to moderate the relationship between corporate tax avoidance and family ownership.

The remainder of this paper is organized as follows. Section 2 presents a literature review and hypothesis development. Section 3 presents the sample selection process, variable measurements, and empirical models. Section 4 presents and discusses the descriptive statistics, the correlation matrix, and the empirical regression results. The final section presents the conclusions of this study.

2. Literature Review and Hypothesis Development

2.1. Family Ownership and Corporate Tax Avoidance

Family stockholders are considered an effective organizational structure (Randoy and Goel 2003; Andres 2008). Companies with family ownership are characterized by higher ownership concentration, long-term objectives, lower diversification policies, and greater concern about reputation (Chen et al. 2010). Families may also participate in the management of companies, which may affect their investment decisions.

The literature provides two different explanations regarding the effect of the concentration of family ownership on tax-avoidance activities in companies. The alignment view suggests that family-owned firms act less opportunistically and avoid risky activities, including tax-avoidance activities (Steijvers and Niskanen 2014). Family-owned firms are characterized by a high concentration of ownership, which reduces agency costs between owners and management (Jensen and Meckling 1976). Moreover, family owners may hold significant controlling positions on firms' management and/or on the boards of directors. This significant involvement of family owners in the firm aligns the interests of the firm's owners and management (Anderson and Reeb 2003). For these reasons, Ang et al. (2000) suggest that the low agency cost of family-owned firms makes it the most efficient form of organization. Family ownership is considered an alternative corporate governance tool (Jensen and Meckling 1976). Based on the previous argument of considering family ownership as a corporate governance device, family ownership may mitigate the potential problem of managerial opportunistic behaviour and curb aggressive tax activities.

In addition, family firms are concerned about reputation costs and penalties. In particular, family firms avoid taking aggressive tax positions because they care about their "family reputation" and do not want to face the consequences and cost of tax aggressive positions being detected by tax authorities. Family companies usually avoid risky behaviour that can affect their family's reputation because they consider the company as a legacy to be passed on to their successors (James 1999; Chrisman and Patel 2011). Family owners pay more attention to the long-term value of the company instead of short-term benefits. Consistent with this assertion, Chen et al. (2010) document that family-owned firms perform less aggressive tax behaviour than non-family-owned firms do. In line with these arguments, family-owned firms are expected to have a negative effect on tax avoidance.

However, an opposing view suggests that family ownership is associated with more tax-avoidance practices. However, conflicts of interest between large and minority investors in family firms may enhance their tax-avoidance behaviour. Family owners are then expected to act as controlling owners and expropriate private benefits at the expense of minority shareholders (Shleifer and Vishny 1986). Regardless of the expected consequences of such aggressive behaviour, companies may use tax avoidance to cover losses, hide rent extraction, and mislead minority shareholders (Desai and Dharmapala 2006; Kim et al. 2011).

Desai and Dharmapala (2006) and Desai et al. (2007) suggest that the benefits of tax savings include rent extraction by opportunistic managers and family stockholders. Family-owned firms are expected to increase these benefits and hence expropriate the private benefits of control. As family owners hold large amounts of share capital, rent extraction becomes more opportunistic for owners. This argument is consistent with the hypothesis of private benefit expropriation, or the entrenchment hypothesis.

The entrenchment hypothesis suggests that family members are most likely to take corporate actions consistent with their own interests at the expense of other owners. They

tend to engage in more tax-avoidance activities to extract higher rents (Steijvers and Niskanen 2014).

Additionally, referring to the entrenchment hypothesis, family owners may use their voting power to entrench themselves and exacerbate the expropriation of small shareholders (La Porta et al. 1999). Family owners may use their involvement in management and participation in boards of directors to expand their control of the firm. Burkart et al. (2003) and Gaaya et al. (2017) show that in countries characterized by weak investor-protection regimes, the majority of family-owned firms are managed by a family member. Qawqzeh (2023) finds that in countries with weak investor-protection regimes, family ownership is associated with more tax-avoidance activities.

Based on the prior discussion, we can conclude that the net effect of family ownership on tax avoidance is ambiguous. While one view suggests a positive effect of family ownership on tax-avoidance practices, another view suggests that family owners mitigate tax-avoidance practices.

As in most developing countries, investor-protection regimes in Jordan are weak. Moreover, the Jordanian financial market is developing, and the protection of minority shareholders' rights is weak. For these reasons, we expect Jordanian family firms to engage in more tax-avoidance activities. Therefore, our first hypothesis is as follows:

H1. *Family ownership has a significant positive effect on corporate tax-avoidance activities.*

2.2. The Moderating Effect of Corporate Governance on Tax Avoidance

Corporate governance has a significant effect on tax avoidance. Corporate governance is defined as the system of rules, practices, and processes by which a company is directed and managed. It helps ensure that the company is operating in a responsible manner and that its activities are conducted in a way that benefits the company's stakeholders (Farinha 2003). Corporate governance helps reduce the risk of tax avoidance by increasing transparency and accountability, ensuring that all stakeholders are aware of the company's decisions and actions, and ensuring that all stakeholders are held accountable for their actions. In addition, corporate governance can help ensure that a company is compliant with applicable laws and regulations regarding tax avoidance.

Institutional ownership is considered to be the main mechanism of corporate governance that monitors management decisions and practices (Gillan and Starks 2003). Graham and Tucker (2006) suggest that this governance tool reduces agency problems and monitors manager behaviour. Institutional investors are usually associated with fewer tax-avoidance practices (Jiang et al. 2021). Because of many institutional ownership control pensions and other public funds, tax shaming may adversely affect the managers of these funds. However, Khan et al. (2017) show that a high level of institutional ownership is significantly associated with a high level of tax avoidance through the use of tax shelters. Jiang et al. (2021) showed that a high percentage of institutional shareholdings is likely to encourage tax avoidance in the Chinese market. They justify their results based on the characteristics of institutional shareholders who concentrate on short-term goals, which enhance tax-avoidance practices. Additionally, companies with a high proportion of institutional ownership record high levels of tax-avoidance practices (Ying et al. 2017; Bird and Karolyi 2017; Widyastuti 2018). Because of the conflicting expectations regarding the direction of association between institutional ownership and corporate governance quality, and hence the effect of institutional ownership on tax-avoidance activities, in this paper, we opt to make use of institutional ownership as a control variable.

Prior research suggests that the audit committee is one of the most important corporate governance mechanisms with respect to firms' tax aggressiveness and earnings management (Xie et al. 2003; Davidson et al. 2005; Badolato et al. 2014; Deslandes et al. 2020). Klein (2002) states that audit committees are designed to act autonomously and settle conflicts between firm management and outside investors regarding financial information and accounting choices. Audit committees provide supervisory management to protect

and safeguard owners' wealth and are able to constrain, monitor, and prevent earnings management decisions (Xie et al. 2003; Yang and Krishnan 2005; Piot and Janin 2007; Sun et al. 2011). Moreover, Thiruvadi and Huang (2011) mention that audit committees have played a crucial role in avoiding, or limiting, accounting scandals and discretionary management practice. In addition, Richardson et al. (2013) highlight the importance of the monitoring role played by audit committee effectiveness on firm tax planning.

Forker (1992) and Beasley and Salterio (2001) suggest that the audit committee is considered an effective monitoring device, which may improve the quality of information disclosure and the company's internal control system. Nguyen (2021a, 2021b) argues that the characteristics of the audit committee, such as the expertise of audit committee members, the meeting frequency of audit committees, and the size of the audit committee, may affect its effectiveness. Dalton et al. (1999) evidenced that larger boards are more operative in monitoring management. As Xie et al. (2003) summarized, it is true that smaller boards can benefit from fewer administrative difficulties and can work more efficiently, but larger boards can solve conflicts of interest with a wider range of experience.

Accordingly, we predict that good corporate governance practices, as measured by institutional ownership and audit committee characteristics, may reduce family firms' propensity to engage in tax-avoidance activities. Indeed, well-monitored family decisions will have a negative impact on tax avoidance levels, leading these firms to be less opportunistic and align their interests with those of minority shareholders. Thus, we formulate the second hypothesis.

H2. *"Corporate governance quality weakens the positive association between tax avoidance and family ownership."*

3. Research Design

3.1. Sample Selection and Data Collection

Our sample includes all firms listed on the Amman Stock Exchange (ASE) for the period from 2015 to 2021. The data used to calculate the independent variable (tax avoidance) and control variables were extracted from the annual reports of listed companies available on the website of the Jordan Securities Commission. The independent variable (family ownership) data were hand-collected from the annual reports of listed companies available on the Jordan Securities Commission website. We excluded observations for companies without sufficient data to calculate the study variables. Additionally, we excluded firms in the financial sector. The final sample consists of 660 firm-year observations collected from 68 listed firms.

3.2. Corporate Tax-Avoidance Measures

Lin et al. (2014) suggest that there is no single measure that is likely to capture all tax-avoidance practices. For this reason, the extant literature has developed many different measures of corporate tax avoidance (Dyreng et al. 2008, 2010; Frank et al. 2009).

Following Dyreng et al. (2008), our first measure of tax avoidance is a firm's long-run effective tax rate (ETR). This measure is calculated by summing corporate income tax expenses and dividing by the sum of the company's income before tax for the preceding five years. A high ETR indicates a low corporate tax avoidance.

Firm management may find it difficult to avoid corporate income tax without detection in consecutive years. Hence, volatility in tax position can be a reflection of the tax planning strategy. Where the one-year effective tax rate is applied to measure the extent to which corporate tax avoidance has occurred, measurement errors will occur. This problem is avoided by considering the long-term effective tax rate. In addition, applying tax rate measurements over a five-year horizon will help avoid the yearly volatility of the effective tax rate (Goh et al. 2016). Moreover, the long-run measurement is in line with the premise that management will probably opportunistically apply tax avoidance and earnings management in alternate years (He et al. 2020).

Effective tax rate measures are widely used in the extant literature (Khelil and Khelif 2023; Guo et al. 2023; Sutrisno et al. 2023; Gaaya et al. 2017; Dang and Nguyen 2022; Lanis and Richardson 2011; Minnick and Noga 2010; Chen et al. 2010). ETR is considered an appropriate tax-avoidance measure for several reasons. First, ETR is an inverse function of tax avoidance, as lower values of effective tax rate imply greater involvement in corporate tax avoidance (Frank et al. 2009). Second, ETR can capture any form of tax reduction through tax shelters and loopholes present in tax laws (Dyrend et al. 2017).

In line with the existing literature, we adopt the cash effective tax rate (cash ETR) as a second metric of tax avoidance. This measure is widely recognized as the most direct gauge of a firm's tax burden and has been extensively used in prior research; (Lanis and Richardson 2011; Richardson et al. 2013; Firmansyah et al. 2022; Wongsinhirun et al. 2023). We also use the cash flow effective tax rate (CFETR) as the second measure of corporate tax avoidance. To calculate this variable, we divide the total tax expenses by the cash flow from operations. This measure is based on information from cash flow statements that can exclude the impact of earnings management (Chen et al. 2014).

3.3. Empirical Analysis

The first step of our empirical analysis is to examine the impact of family ownership on corporate tax avoidance. To this end, we estimate the following fixed-effects regression model with robust standard errors clustered at the firm level:

$$TAX_{i,t} = \alpha_1 + \alpha_2 F_OWN_{i,t} + \alpha_3 SIZE_{i,t} + \alpha_4 LEV_{i,t} + \alpha_5 ROA_{i,t} + \alpha_6 M/B_{i,t} + \alpha_7 INS_OWN_{i,t} + Year\ Fixed\ Effect \quad (1)$$

where:

$TAX_{i,t}$ is either the firm's effective tax rate (ETR) or its cash flow effective tax rate (CFETR), both of which are defined in Section 3.2.

F_OWN refers to family ownership measured as the percentage of ownership by shareholders belonging to the same family.

$SIZE$ is the natural logarithm of total assets of firm i in year t . Prabowo (2020), Jarboui et al. (2020), Mouakhar et al. (2020), and Riguen et al. (2021) suggest that larger firms engage in more corporate tax-avoidance activities compared to smaller firms because of their social and economic power.

LEV represents the ratio of total debts to total assets of firm i in year t . Richardson et al. (2015), Mulyani et al. (2017), and Firmansyah et al. (2022) document a positive relationship between leverage and tax avoidance given tax deductible interest payments. Firmansyah et al. (2022) suggest that financial leverage (LEV) needs to be used as a control variable because interest expense is a deduction from operating income. Thus, it needs to be controlled so that tax savings does not come from high debt.

ROA is the return on assets ratio calculated by dividing income before interest and tax by total assets of firm i in year t . Lanis and Richardson (2012), Minnick and Noga (2010), Mafrolla and D'Amico (2016), Salhi et al. (2019), and Rahman and Leqi (2021) suggest that profitable firms have more incentives to engage in corporate tax-avoidance activities. In addition, Firmansyah et al. (2022) state that firm profitability needs to be controlled because company performance can cause taxes to change from year to year.

M/B is the ratio of the market value of equity to the book value of equity for firm i in year t . We used this variable to control for growth opportunities. Growth opportunities are expected to have a significantly positive effect on a firm's tax-avoidance activities (Richardson et al. 2015).

INS_OWN refers to institutional investors' ownership in the firm as measured by the percentage of the total number of shares held by institutional investors.

Year Fixed Effect is the year fixed effect and is included in the regression model to control for the year fixed effect. We did not control for industry fixed effect in the regression model because the Jordanian market is an emerging market and there is limited industry variation within the Jordanian market.

The next step of our empirical analysis is to examine the possible moderating effects of corporate governance quality on the relationship between tax-avoidance activities and family ownership. To this end, we first examine the relationship between tax-avoidance practices and corporate governance quality apart from family ownership. We proxy corporate governance quality through three audit committee-related variables, namely, the frequency of audit committee meetings (AC_MEET), audit committee expertise (AC_EXPERT), and audit committee size (AC_SIZE). For each variable, we estimate a “straw man” model. Specifically, we estimate the following fixed-effects regression models with robust standard errors clustered at the firm level:

$$TAX_{i,t} = \alpha_1 + \alpha_2 SIZE_{i,t} + \alpha_3 LEV_{i,t} + \alpha_4 ROA_{i,t} + \alpha_5 M/B_{i,t} + \alpha_6 INSOWN_{i,t} + \alpha_7 AC_MEET_{i,t} + Year\ Fixed\ Effect \quad (2)$$

$$TAX_{i,t} = \alpha_1 + \alpha_2 SIZE_{i,t} + \alpha_3 LEV_{i,t} + \alpha_4 ROA_{i,t} + \alpha_5 M/B_{i,t} + \alpha_6 INSOWN_{i,t} + \alpha_7 AC_EXPERT_{i,t} + Year\ Fixed\ Effect \quad (3)$$

$$TAX_{i,t} = \alpha_1 + \alpha_2 SIZE_{i,t} + \alpha_3 LEV_{i,t} + \alpha_4 ROA_{i,t} + \alpha_5 M/B_{i,t} + \alpha_6 INSOWN_{i,t} + \alpha_7 AC_SIZE_{i,t} + Year\ Fixed\ Effect \quad (4)$$

We then move to test the main research hypotheses, that is, the relationship between tax-avoidance practices and family ownership, and the possible moderating effects of corporate governance quality on this relationship. To this end, we estimate a set of full models which include the variable of family ownership along with corporate governance quality variables and the variables of interaction between each corporate governance quality variable and family ownership. We estimate the following fixed-effects regression models with robust standard errors clustered at the firm level:

$$TAX_{i,t} = \alpha_1 + \alpha_2 SIZE_{i,t} + \alpha_3 LEV_{i,t} + \alpha_4 ROA_{i,t} + \alpha_5 M/B_{i,t} + \alpha_6 INSOWN_{i,t} + \alpha_7 AC_MEET_{i,t} + \alpha_8 F_OWN_{i,t} + \alpha_9 F_OWN_ACMEET_{i,t} + Year\ Fixed\ Effect \quad (5)$$

$$TAX_{i,t} = \alpha_1 + \alpha_2 SIZE_{i,t} + \alpha_3 LEV_{i,t} + \alpha_4 ROA_{i,t} + \alpha_5 M/B_{i,t} + \alpha_6 INSOWN_{i,t} + \alpha_7 AC_EXPERT_{i,t} + \alpha_8 F_OWN_{i,t} + \alpha_9 F_OWN_ACEXPERT_{i,t} + Year\ Fixed\ Effect \quad (6)$$

$$TAX_{i,t} = \alpha_1 + \alpha_2 SIZE_{i,t} + \alpha_3 LEV_{i,t} + \alpha_4 ROA_{i,t} + \alpha_5 M/B_{i,t} + \alpha_6 INSOWN_{i,t} + \alpha_7 AC_SIZE_{i,t} + \alpha_8 F_OWN_{i,t} + \alpha_9 F_OWN_ACSIZE_{i,t} + Year\ Fixed\ Effect \quad (7)$$

where F_OWN_ACMEET is the term of interaction between family ownership and the frequency of audit committee meetings, F_OWN_ACEXPART is the term of interaction between family ownership and audit committee expertise, and F_OWN_ACSIZE is the term of interaction between family ownership and audit committee size.

4. Results and Discussion

4.1. Descriptive Statistics

Table 1 reports the summary statistics of our dependent, independent, and control variables. The mean values for ETR and CFETR are 18.6 and 13.2 percent, respectively. These results show a reasonable level of corporate tax avoidance compared to those reported by Minnick and Noga (2010) and Lin et al. (2014) in the US context, suggesting that tax avoidance in developing countries like Jordan may be higher than that in developed countries. The level of corporate tax-avoidance measures varies significantly between our sampled firms. The lowest levels of ETR and CFETR are −16.9, and −16.3 percent, respectively, whereas the highest levels of ETR and CFETR are 95.7% and 99%, respectively. The negative ETR and CFETR values can be explained by the fact that the recognition criteria for some expenses are different between IFRS and Jordanian income tax law. For example, the requirements to recognise the bad debt expense, training expenses, and hospitality expenses in Jordanian tax law is different that the IFRS requirements to recognise

these expenses ([Jordanian Income Tax Law of 2014](#)). The mean value of F_OWN is 20%. Regarding the governance variables, the univariate analysis shows that the audit committee members range from zero to five, and these committees meet about four times a year.

Table 1. Descriptive statistics for the variables.

Variable	Number	Mean	P25	P50	P75	SD	Minimum	Maximum
Size	660	6.96	6.64	6.9	7.29	0.58	5.412	8.788
Leverage	660	0.183	0.17	0.182	0.19	0.02	0.12	0.238
M/B	660	1.37	0.62	0.99	1.615	1.62	−3.12	18.43
ROA	660	0.04	−0.055	0.046	0.122	0.199	−0.597	0.93
ETR	660	0.186	0.093	0.148	0.238	0.156	−0.169	0.957
CFETR	660	0.132	0.025	0.056	0.133	0.169	−0.163	0.99
F_OWN	660	0.2	0	0.162	0.344	0.215	0	0.932
INS_OW	660	0.461	0.283	0.46	0.631	0.267	0	0.99
AC_SIZE	660	2.653	3	3	3	1.145	0	5
AC_MEET	660	3.568	4	4	4	1.598	0	7
AC_EXP	660	0.626	0.333	0.667	1	0.376	0	1

4.2. Correlation Analysis

Table 2 presents the Pearson correlation matrix for the dependent (tax avoidance), independent (family ownership), and all the control variables. The correlation coefficients for all the variables in the correlation analysis matrix are below 80%, suggesting that the multicollinearity issue will not affect the multivariate regression analysis ([Hair et al. 2014](#); [Gujarati and Porter 2009](#)).

Table 2. Pearson correlation coefficients among the variables.

	SIZE	LEV	M/B	ROA	ETR	CFETR	INS_OW	F_OWN	AC_SIZE	AC_MEET	AC_EXP
SIZE	1										
LEV	0.0836 ***	1									
M/B	−0.074 *	−0.053	1								
ROA	0.143 ***	0.039	0.197 ***	1							
ETR	0.062 *	0.038	0.567 ***	0.117 ***	1						
CFETR	0.597 ***	0.410 ***	0.122 **	0.147 ***	0.335 ***	1					
INS_OW	0.106 ***	−0.039	−0.030	−0.026	0.057	0.123 ***	1				
F_OWN	−0.051	−0.019	0.093 **	0.013	−0.142 ***	−0.156 ***	−0.372 ***	1			
AC_SIZE	0.033	−0.063 *	−0.035	−0.012	0.036	0.087 **	0.168 ***	−0.160 ***	1		
AC_MEET	0.118 ***	−0.002	−0.051	−0.019	0.042	0.144 ***	0.181 ***	−0.143 ***	0.0911 ***	1	
AC_EXP	0.112 ***	0.058	0.012	−0.019	0.109 **	0.134 ***	0.081 **	−0.065 *	0.634 ***	0.694 ***	1

Notes: this table presents the Pearson correlation coefficients between key variables. The full sample comprises 660 firm-year observations representing 68 distinct listed firms in ASE during the period from 2015 to 2021. *p*-values appear below the correlations. See Appendix A for variable definitions. Here *, **, and *** indicate the 10%, 5%, and 1% levels of significance, respectively, for a two-tailed test.

The two measures of tax avoidance (ETR and CFETR) were significantly and positively correlated. This finding supports previous studies that show that various measures of corporate tax avoidance are highly correlated ([Dang and Nguyen 2022](#); [Gaaya et al. 2017](#)).

The family ownership variable shows a significant negative correlation with the two measures of tax avoidance. This finding suggests that family-owned firms exercise more tax-avoidance activities than their counterparts. All corporate governance variables have a positive correlation with the CFETR variable, indicating that corporate governance reduces tax-avoidance activities.

Regarding the control variables, the correlation analysis suggest that firm size as measured by the natural logarithm of firms' total asset is negatively correlated with tax avoidance, which is consistent with the suggestion that large firms are subject to more public scrutiny, which may reduce the large firms' tax aggressiveness ([Chan et al. 2013](#)). Contradicting the results of [Richardson et al. \(2016\)](#) and [Chen et al. \(2024\)](#), financial leverage records a positive correlation with CFETR. This results suggest that firms that use more debt are engaging in fewer tax-avoidance activities.

In addition, the correlation between family ownership and institutional ownership is negative and significant. This could be explained by that each type of those shareholders holding sufficiently large shares to “crowd out” the opportunity for the other shareholders to be a substantial owner.

Table 2 also reveals that all the corporate governance variables are negatively correlated with the family ownership variable, with a p value < 0.10 . One possible explanation for these results is that in the Jordanian market, the management entrenchment hypothesis prevails over the management alignment hypothesis, meaning that family owners exert a significant influence on firms’ decisions through using their voting rights to entrench themselves and exacerbate the expropriation of minority interests.

4.3. Regression Results

4.3.1. The Effect of Family Ownership on Tax Avoidance

Table 3 shows the results of the multivariate fixed-effects regression model. The full sample consist of 660 firm-year observations representing 68 distinct firms listed in ASE during the period 2015–2021. The dependent variable is tax avoidance as measured inversely by ETR and CFETR, where the high levels of these measures represent fewer tax-avoidance activities. The main independent variable is family ownership as measured by the percentage of ownership by shareholders belonging to the same family.

Table 3. Regression results: ETR and CFETR.

Panel A Regression Results: ETR					
Variable	Number	Coef.	Standard Error	T-Value	p_Value
Size	660	0.07	0.063	1.14	0.26
Leverage	660	−0.202	1	−0.2	0.841
M/B	660	0.039	0.009	4.12	0.000 ***
ROA	660	−0.066	0.048	−1.38	0.171
INS_OWN	660	0.064	0.04	1.6	0.114
F_OWN	660	−0.185	0.068	−2.7	0.009 **
Constant	660	−0.262	0.473	−0.55	0.581
R ²			25% ***		
Panel B Regression Results: CFETR					
Variable	Number	Coef.	Standard Error	T-Value	p_Value
Size	660	0.088	0.056	1.56	0.123
Leverage	660	0.143	0.835	0.17	0.864
M/B	660	0.011	0.005	1.91	0.059 *
ROA	660	−0.014	0.039	−0.35	0.729
INS_OWN	660	0.011	0.059	0.18	0.86
F_OWN	660	−0.265	0.087	−3.3	0.00 ***
Constant	660	−0.434	0.329	−0.132	0.191
R ²			33% ***		

Notes: this table present the multivariate regression results for testing H1. The full sample comprises 660 firm-year observations representing 68 distinct listed firms in ASE during the period from 2015 to 2021. The dependent variables in panels A and B are ETR and CFETR, respectively. The main independent variable is family ownership. The first column presents the explanatory variables. The second column presents the number of observations. The third column presents the estimated coefficient change in the dependent variable because of one unit change in the independent variable. The fourth and fifth columns presents t_value and p_value , respectively. Here *, **, *** present 10, 5, 1% levels of significance, respectively, for a two-tailed test.

Panel A of the table presents the results for the effect of family ownership on the first measure of tax avoidance (ETR). The results show a significant negative effect of the percentage of family ownership on the inverse measure of tax avoidance (ETR) variable. This result suggests that family ownership enhances tax avoidance levels, which is consistent with the entrenchment hypothesis. The entrenchment hypothesis suggests that family owners are expected to take corporate actions consistent with their own interests at the expense of other owners. Family members then perform more tax-avoidance activities for

their own benefit at the expense of other shareholders (Steijvers and Niskanen 2014; Gaaya et al. 2017).

For example, family owners may use their voting power to maximize their personal wealth and exacerbate the expropriation of other shareholders (La Porta et al. 1999). In addition, family owners may use their involvement in firm management and participation in the company's boards of directors to encourage their control over the firm's decisions. Burkart et al. (2003) and Gaaya et al. (2017) show that in countries characterized by weak investor-protection regimes, the majority of family-owned firms are managed and controlled by family members.

Panel B of Table 3 reports the robustness test results, where we use the CFETR as an inverse measure of tax avoidance. The results corroborate our main finding that Jordanian family-owned firms are expected to engage in more tax-avoidance activities than other firms. The family ownership variable has a significantly negative effect on the inverse measure of tax avoidance, suggesting that family ownership enhances tax avoidance.

These findings contradict those of Chen et al. (2010). They provide evidence from the US market that family-owned firms have less intensive tax-avoidance activities because they pay more attention to the consequences of such activities being discovered. The contradiction between our results and those of Chen et al. (2010) could be justified by the fact that our research is based on developing countries with poor investor-protection regimes, and the possibility that small shareholders' rights are not well protected. Chen et al. (2010) focus on the US market, which is a developed market characterized by strong investor-protection rights.

With regard to the control variables, Table 3, Panels (A) and (B) show that firms' growth opportunity variables record a significant and positive effect on both inverse measures of tax avoidance, suggesting that firms with higher growth opportunities have fewer incentives to engage in tax-avoidance activities. The other variables show no significant impact on the firm's tax avoidance decision.

4.3.2. The Mediating Effect of Governance Variables

Panel A of Tables 4–6 presents the regression results of the effect of corporate governance variables on tax avoidance measures, while Panel B presents the regression results of the moderating effect of corporate governance quality on the relationship between family ownership and corporate tax avoidance.

Table 4. Regression results using the frequency of audit committee meetings as the measure of corporate governance quality.

Panel A “Straw Man” Model				
Variable	ETR		CFETR	
	Coef.	Standard Error	Coef.	Standard Error
Size	0.058	0.064	0.074	0.056
Leverage	−0.081	0.941	0.412	0.827
M/B	0.038 ***	0.01	0.010 *	0.006
ROA	−0.072	0.048	−0.019	0.046
INS_OWN	0.100 **	0.046	0.061	0.058
Fixed year effects	Included			
AC_MEET	−0.005	0.007	0.002	0.004
Constant	−0.219	0.472	−0.467	0.321
R ²	25% ***		34% ***	

Table 4. Cont.

Panel B Model Testing the Research Hypotheses				
Variable	ETR		CFETR	
	Coef.	Standard Error	Coef.	Standard Error
Size	0.078	0.065	0.086	0.056
Leverage	−0.457	0.88	0.179	0.822
M/B	0.038 ***	0.009	0.011 *	0.006
ROA	−0.074	0.046	−0.013	0.039
INS_OWN	0.057	0.038	0.012	0.059
Fixed year effects	Included			
AC_MEET	−0.022 *	0.011	0.003	0.008
F_OWN	−0.421 **	0.163	−0.218 **	0.091
F_OWN_ACMEET	0.059 *	0.033	0.012	0.019
Constant	−0.165	0.464	−0.439	0.32
R ²	24% ***		33% ***	

This table presents the multivariate regression results for testing the hypotheses. The models were estimated using the full sample which comprises 660 firm-year observations during the period 2015–2021. The dependent variables in Panels A and B are *ETR* and *CFETR*, respectively. The variables are defined in Appendix A. The “straw man” model, reported in Panel A does not include family ownership, the measure of corporate governance quality, or the interaction term. Here *, **, *** present 10, 5, 1% levels of significance, respectively, for two-tailed tests.

Table 5. Regression results using the audit committee expertise as the measure of corporate governance quality.

Panel A “Straw Man” Model				
Variable	ETR		CFETR	
	Coef.	Standard Error	Coef.	Standard Error
Size	0.062	0.063	0.074	0.056
Leverage	0.048	0.974	0.489	0.859
M/B	0.038 ***	0.01	0.010 *	0.006
ROA	−0.068	0.048	−0.017	0.046
INS_OWN	0.100 **	0.047	0.061	0.059
Fixed year effects	Included			
AC_EXPERT	0.035	0.025	0.045 **	0.022
Constant	−0.314	0.473	−0.503	0.317
R ²	25% ***		35% ***	

Panel B Model Testing the Research Hypotheses				
Variable	ETR		CFETR	
	Coef.	Standard Error	Coef.	Standard Error
Size	0.072	0.062	0.091	0.056
Leverage	−0.133	0.97	0.238	0.865
M/B	0.039 ***	0.009	0.011 *	0.006
ROA	−0.065	0.047	−0.01	0.04
INS_OWN	0.063	0.041	0.013	0.061
Fixed year effects	Included			
AC_EXPERT	0.02	0.036	0.063 *	0.33
F_OWN	−0.223 **	0.11	−0.197 *	0.101
F_OWN_ACEXPERT	0.06	0.108	−0.096	0.083
Constant	−0.284	0.459	−0.509	0.317
R ²	25% ***		35% ***	

This table presents the multivariate regression results for testing the hypotheses. The models were estimated using the full sample which comprises 660 firm-year observations during the period 2015–2021. The dependent variables in Panels A and B are *ETR* and *CFETR*, respectively. The variables are defined in Appendix A. The “straw man” model, reported in Panel A does not include family ownership, the measure of corporate governance quality, or the interaction term. Here *, **, *** present 10, 5, 1% levels of significance, respectively, for two-tailed tests.

Table 6. Regression results using the audit committee size as the measure of corporate governance quality.

Panel A “Straw Man” Model				
	ETR		CFETR	
Variable	Coef.	Standard Error	Coef.	Standard Error
Size	0.057	0.064	0.074	0.056
Leverage	−0.147	0.914	0.428	0.827
M/B	0.038 ***	0.01	0.010 *	0.006
ROA	−0.073	0.047	−0.018	0.046
INS_OWN	0.100 **	0.045	0.061	0.058
Fixed year effects		Included		
AC_SIZE	−0.013	0.012	0.003	0.006
Constant	−0.187	0.471	−0.473	0.322
R ²	25% ***		34% ***	
Panel B Model Testing the Research Hypotheses				
	ETR		CFETR	
Variable	Coef.	Standard Error	Coef.	Standard Error
Size	0.079	0.065	0.083	0.056
Leverage	−0.673	0.868	0.277	0.813
M/B	0.039 ***	0.009	0.011 *	0.006
ROA	−0.074	0.045	−0.012	0.04
INS_OWN	0.055	0.037	0.013	0.059
Fixed year effects		Included		
AC_SIZE	−0.041 **	0.019	0.011	0.012
F_OWN	−0.468 ***	0.175	−0.149	0.103
F_OWNACSIZE	0.094 *	0.049	−0.04	0.031
Constant	−0.101	0.465	−0.458	0.316
R ²	24% ***		33% ***	

This table presents the multivariate regression results for testing the hypotheses. The models were estimated using the full sample which comprises 660 firm-year observations during the period 2015–2021. The dependent variables in Panels A and B are *ETR* and *CFETR*, respectively. The variables are defined in Appendix A. The “straw man” model, reported in Panel A does not include family ownership, the measure of corporate governance quality, or the interaction term. Here *, **, *** present 10, 5, 1% levels of significance, respectively, for two-tailed tests.

Panel A of Tables 4–6 reports the “straw man” model regression results, where these models examine the effect of corporate governance variables on tax avoidance measures, namely, audit committee size, meetings, and expertise. Panel B of these tables reports the regression results of examining the effect of the interaction of each of these audit committee characteristics with family ownership on the tax avoidance measure. The variable of interest in Panel B of Tables 4–6 is the interaction term between family ownership and audit committee characteristics. Regarding Table 4, in Panel A, containing the “straw man” models, the coefficients of *AC_MEET* are insignificant. These models do not include *F_OWN* and the interaction term as independent variables. The counterpart models in Panel B contain *AC_MEET*, *F_OWN*, and the interaction term. The coefficients of these variables are significant in four cases out of six, in Panel B. This suggests that the models in Panel B are more correctly specified than their counterparts in Panel A. To a lesser extent, this comment also applies to the models displayed in Tables 5 and 6.

In Table 4, Panel A, the family ownership variable shows a significant positive impact on a firm’s tax avoidance. Audit committee meetings and size record a significant negative effect on tax avoidance, suggesting that a bigger size of the audit committee and more frequent meetings of the audit committee lead to more tax-avoidance activities. These results are consistent with those of [Dang and Nguyen \(2022\)](#), [Nguyen \(2021a, 2021b\)](#), and [Nguyen and Dang \(2020\)](#), who find that the effectiveness of audit committees may be reduced by the large size of the audit committee.

Table 5, Panel B, documents an insignificant coefficient of *AC_EXP* in the model with *ETR* as the dependent variable. The coefficient of *AC_EXP*, in the model with *CFETR* as

the dependent variable, is positive and marginally significant. The coefficients of *FAM-ACEXP* are uniformly insignificant. Hence, our results do not suggest that audit committee expertise ameliorates tax avoidance in Jordanian companies.

In Panel B of Table 6, after controlling for family ownership and including the interaction term (between family ownership and audit committee size), the coefficient of the interaction term is positive and significant. This result suggests that a bigger size of the audit committee deters family firms from performing more tax-avoidance activities. A larger audit committee may strengthen its discussion in the audit committee. In addition, [Kalbers and Fogarty \(1993\)](#) reported that a large audit committee will improve the audit committee's power within the organization and enhance their participation in the decision-making process. Moreover, [García-Meca et al. \(2021\)](#) record that larger audit committees are considered as a governance instruments able to monitor managerial decisions and limit the effect of tax aggressiveness promoted by a firm's management.

Panel B of Tables 5 and 6 also shows that the firms with an audit committee that holds more meetings during the year and the firms with audit committee members who have more accounting expertise engage less in tax-avoidance activities. These results suggest that more frequent audit committee meetings and the greater expertise of audit committee members mitigate the role played by family shareholders in performing more tax-avoidance activities. This significant negative effect of audit committee variables on tax avoidance, even after controlling for family ownership, highlights the importance of these variables and provides a strong recommendation for firms to choose bigger audit committees, to encourage audit committees to perform more meetings during the year, and to choose audit committee members who have a strong accounting expertise.

Finally, the results presented in Tables 4–6 reveal that the support for the hypotheses is weaker in the models with CFETR than in the models with ETR. This suggests that in the Jordanian context, tax avoidance occurs via accrual manipulation.

The negative values of the M/B variable could be artificially inflated by low denominators. We screened the data and found that there are only eight observations with a negative M/B value. Hence, we set the negative values of M/B to zero, and re-computed the empirical results, using the truncated values of M/B. The adjusted-data un-tabulated results are consistent with the main results.

5. Conclusions

This paper conducted an empirical study using data from 660 firm-year observations of publicly listed Jordanian companies from 2015 to 2021. A fixed-effects regression model was used to measure the effect of family ownership concentration on corporate tax avoidance based on two measurements of the degree of corporate tax avoidance.

Using different measures of tax avoidance, the results suggest that the concentration of family ownership has a significantly positive effect on a company's tax-avoidance activities. More concentrated family ownership is expected to enhance tax-avoidance behaviour within companies. This result is consistent with the view that family members are likely to behave as controlling stockholders and expropriate private benefits at the expense of minority investors. Therefore, companies may use tax-avoidance strategies to cover losses, hide rent extraction activities, and mislead minority shareholders without considering the expected costs resulting from such aggressive activities.

In addition, we examined the mediating effects of some corporate governance variables on the relationship between family ownership and tax avoidance. The results suggest that two of our corporate governance quality measures, namely, the frequency of audit committee meetings and the audit committee size, ameliorate tax avoidance in Jordanian family companies.

Regarding the Jordanian context, our results are interesting. Jordan is a unique setting characterized by weak investor-protection regimes and well-developed markets. These two features of the Jordanian market encourage family-owned firms to use tax-saving activities

to extract private benefits at the expense of small investors. Controlling families would then benefit from these activities despite the high costs generated by such behaviour.

The results suggest that under circumstances of low ownership concentration, an increase in family ownership may increase a firm's tax-avoidance activities. One possible explanation for why family ownership leads to more tax-avoidance practices is that family owners can effectively manage their agency conflicts with controlling stockholders. This situation provides a possible mechanism for the impact of family shareholdings on corporate tax avoidance. This mechanism restricts the majority shareholders.

This study should be relevant to regulators and authorities charged with improving corporate taxation environments and, more generally, disclosure transparency in the financial marketplace. As suggested by Kuo and Lee (2016), regulators and tax authorities may enforce an increase in book–tax conformity by managers to reduce the likelihood and extent of tax avoidance or earnings management.

This study had some limitations which need to be considered. First, the research findings may not be generalized to developed countries because it is important to consider the Jordanian institutional setting. By contrast, the Jordanian market is an emerging market with weak investor-protection regimes. Second, following prior research, this study does not include the book–tax difference as a measure of tax avoidance. Future studies should consider these limitations with a broader sample from the Gulf Cooperation Council or MENA regions.

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Appendix A

TAX	is either the firm's effective tax rate (ETR) or its cash flow effective tax rate (CFETR), both of which are defined in Section 3.2.
F_OWN	refers to family ownership measured as the percentage of ownership by shareholders belonging to the same family.
SIZE	is the natural logarithm of total assets of firm <i>i</i> in year <i>t</i>
ROA	is the return on assets ratio calculated by dividing income before interest and tax by total assets of firm <i>i</i> in year <i>t</i> .
M/B	is the ratio of the market value of equity to the book value of equity for firm <i>i</i> in year <i>t</i>
LEV	represents the ratio of total debts to total assets of firm <i>i</i> in year <i>t</i>
Audit committee size	The number of members in the audit committee.
Audit committee meetings	The number of meetings the audit committee holds per annum.
Audit committee expertise	A dummy variable given the value of 1 if all audit committee members are qualified and at least one of them has an accounting professional certificate (based on the corporate governance code for Jordan), 0 otherwise.

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