

# Book-Tax Alignment in Family Firms: Evidence from Taiwan

Jung-Hsin Chang<sup>1</sup>, Ming-Hsiu Tsai<sup>1</sup>, Yuan-Sheng Lin<sup>1\*</sup>, Kuo-Chih Cheng<sup>2</sup>

<sup>1</sup>Department of Finance, National Changhua University of Education, Taiwan

<sup>2</sup>Department of Accounting, National Changhua University of Education, Taiwan

Email: cj120829@gmail.com, tms2109@yahoo.com.tw, \*lin92025@gmail.com, h1234356@ms46.hinet.net

**How to cite this paper:** Chang, J.-H., Tsai, M.-H., Lin, Y.-S., & Cheng, K.-C. (2021). Book-Tax Alignment in Family Firms: Evidence from Taiwan. *Journal of Financial Risk Management*, 10, 153-171. <https://doi.org/10.4236/jfrm.2021.102009>

**Received:** November 30, 2020

**Accepted:** June 12, 2021

**Published:** June 15, 2021

Copyright © 2021 by author(s) and Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

## Abstract

This paper examines the differences in aggressive tax sheltering between family firms and non-family firms and the effects of family succession on tax sheltering. Additionally, we investigate whether the separation of control rights and ownership is the main driver for tax sheltering activities. Using data from Taiwanese firms during a period from 2002-2009, the results show that family firms are more aggressive in tax sheltering as compared to non-family firms. Finally, we provide evidence that the divergence between control and ownership is a key driver for tax sheltering activities.

## Keywords

Tax Sheltering, Family Firms, Controlling Shareholders, Entrenchment Effect

## 1. Introduction

It is a common practice for family firms to use overseas tax havens and to transfer pricing between affiliated parties to hide wealth, transfer capital, evade taxes and transfer wealth to the next generation (William, 2006). However, there are few academic papers dealing with the tax sheltering of family firms. Family firms are frequently seen, especially in East Asia (Claessens, Djankov, Fan, and Lang, 2002; Fan and Wong, 2002), including Taiwan. More than 60% of the listed companies on both the Taiwan Stock Exchange and in Over-The-Counter markets are family firms. The controllers of family firms usually cannot differentiate between the interests of shareholders and the wealth of the families concerned (Hillier and McColgan, 2009). In comparison to non-family firms, family firms are less open and transparent. They tend to be more private and secretive (Fan and Wong, 2002). Controlling families reduce the disclosure of timely information in order to keep privately beneficial activities away from the public. Tunne-

ling among the related party transactions of family firms accompanies earnings manipulation for the purpose of reducing information transparency (Boubaker and Labégorre, 2008). The non-disclosure of taxation information and the secrecy of tax sheltering activities provide family firms a shelter to divert rents and extract private benefits. Controlling families are more likely to exhibit aggressive tax activities, and yet this issue has rarely been addressed by relevant studies.

Family firms often have poor corporate governance (Hillier and McColgan, 2009). In order to maintain family control and family wealth, the board is controlled by family members. The percentage of external and independent directors is often lower than is the case with other firms, and the CEOs/presidents are usually family members (Smith & Amoako-Adu, 1999; Hillier and McColgan, 2009; Morck, Stangeland, and Yeung, 2000; Pérez-González, 2006). Fan and Wong (2002) suggested that firms with controlling shareholders have poor governance mechanisms. They have limited information disclosure to the public and increase information opacity to avoid public or political scrutiny. Meanwhile, family firms pass down wealth from one generation to the next. The succession of family members continues the prosperity in the family. Many family firms also seek appropriate channels to transfer wealth to other family members at the lowest possible costs (Handler, 1994; Chrisman, Chua, and Sharma, 2003; Smith & Amoako-Adu, 1999).

Methods for hiding wealth or transferring wealth to the next generation via tax sheltering channels and overseas tax havens, without the scrutiny of other shareholders, the public or the authorities, may be unique to family owned businesses. Tax sheltering activities may provide a means of transferring private benefits to other family members. The succession of family members as CEOs/presidents may be related to aggressive tax sheltering, despite very little evidence and research in this regard. The second issue this paper intends to examine is the correlation between tax sheltering and the succession of family members as CEOs/presidents.

Dyck and Zingales (2004) indicated that concentration of ownership is positively associated with private control benefits. Controlling families can extract private benefits at the expense of minority interests. Desai and Dharmapala (2006) indicated that when the agency problems of insiders and other shareholders are serious, firms are more likely to go through complicated tax sheltering transactions for the purpose of diversion of rents and earnings management. There are positive feedback effects between tax sheltering and the diversion of rents (Desai and Dharmapala, 2006, 2009; Desai, Dyck, & Zingales, 2007). It is obvious that tax sheltering has a relationship to private control benefits, especially in the case of firms in areas with poor law enforcement (Hanlon and Slemrod, 2009; Desai and Dharmapala, 2009; Wilson, 2009; Dyck and Zingales, 2004). Controlling shareholders use divergence between control rights and ownership to engage in expropriating the interest of minority shareholders (Sa-

cristán-Navarro and Gómez-Ansón, 2007). Mystical and complex tax sheltering activities may be a channel in which controlling shareholders expropriate the interest of minority shareholders. Finally, we examine whether the entrenchment effect between controlling shareholders to minority shareholders is an important driver of aggressive tax sheltering.

The purposes and contributions intended by this paper are as follows: Some papers have argued that tax sheltering is relevant to private control benefits (Desai and Dharmapala, 2006, 2009; Wilson, 2009; Frank, Lynch, & Rego, 2009). Other studies have suggested that the concentration of ownership of family firms is related to control benefits (Claessens et al., 1999, 2000, 2002; La Porta et al., 1999, 2000, 2002). While tax sheltering may be related to diversion of rents by family members, there have been few papers addressing the correlation between tax sheltering and family firms. This paper reviews the literature concerning family firms and tax sheltering and explores the correlations between these two. Meanwhile, although the issues of family firm performance, shareholding structure and market responses to family succession have been dealt with in literature (Hillier and McColgan, 2009; Hamadi, 2010; Oswald, Muse and Rutherford, 2009), this paper intends to explore the methods by which secretive family firms extract private wealth and transfer wealth to other family members and the relationship between such phenomenon and tax sheltering. Finally, if tax sheltering is related to the entrenchment effects of large shareholders at the expense of minority shareholders, this paper hopes to identify the main drivers for tax sheltering and to examine whether the divergence between ownership and control rights is highly correlated to the level of tax sheltering. The results should shed light on the controlling behavior of family firms and enrich the literature concerning family firms and tax sheltering. It should also provide extra evidence supporting previous arguments that conclude that tax sheltering is related to managerial opportunism and diversion of rent by insiders (Desai and Dharmapala, 2006, 2009; Desai et al., 2007; Wilson, 2009; Frank et al., 2009).

The paper proceeds as follows: We review the prior literature and develop the hypotheses in Section 2. The research data, research design and methodology are described in Section 3. The analysis of the empirical results is shown in Section 4. In the final sections, we conclude the paper, and discuss and suggest the implications of the study results.

## 2. Literature Reviews and Hypothesis Development

The theory of alignment effects and the theory of entrenchment effects are two opposite theories dealing with the impact of family control on firm value. The theory of alignment effects holds that the greater the ownership stake (in terms of cash flow rights), the better aligned the firm value and the benefits of controlling shareholders. This is because controlling shareholders can effectively supervise the companies (Shleifer and Vishny, 1997). The greater the controlling shareholding, the less incentives for the controlling shareholders to extract pri-

vate benefits from firms (Wang, 2006) and hence the higher the firm value. However, alignment effects only exist when the controlling shareholders have large ownership (cash flow) rights.

Entrenchment effects are the opposite of alignment effects. Fan and Wong (2002) argued that the higher the control rights of controlling shareholders, the more likely they will entrench the benefits of the minority shareholders. They sourced data from East Asian countries, and the research supported the entrenchment theory. Entrenchment effects are based on the large divergence between control rights and cash flow rights. In Taiwan (part of East Asia), the entrenchments of controlling shareholders/families at the expense of the benefits of minority shareholders are commonplace (Claessens et al., 2000; La Porta et al., 1999). The family controlling shareholders extract private benefits from firms and transfer the financial wealth of firms to other affiliated firms owned by the same family (Burkart et al., 2003; De Angelo and De Angelo, 2000; Claessens et al., 2002; Bennedsen, Nielsen, Perez-Gonzalez, and Wolfenzon, 2007). Control rights of families have negative effects on the financial performances and values of firms (Oswald et al., 2009; Baek, Kang, and Park, 2004).

Hillier and McColgan (2009) indicated, that, compared to non-family firms, family firms have poorer governance settings due to a low degree of information transparency and family succession issues (Hillier and McColgan, 2009). Family firms use complicated chains and cascades of intermediate firms, indirect ownerships, pyramids, and cross-shareholdings to construct control chains, causing divergence between control and cash flow rights (Sacristán-Navarro and Gómez-Ansón, 2007).

Complex and secretive tax sheltering activities may be a shelter for family firms to hide self-interests. Family firms tend to use complex and opaque transactions, overseas tax havens and transfer pricing between affiliates to divert earning and avoid tax costs. In poorly-governed firms, tax sheltering activities provide opportunities to divert rents and, in turn, reduce firm values (Desai and Dharmapala, 2006, 2009; Desai et al., 2007; Wilson, 2009; Frank et al., 2009). Based on the viewpoint that supports the entrenchment effect, a lack of information transparency, family succession and the divergence between ownership and control rights provide incentives for controlling family shareholders to utilize resources and influence to be engaged in secretive tax sheltering for the purpose of self-interest.

Dyck and Zingale (2004) argued that higher private benefits of control are associated with less developed capital markets and more concentrated ownership. In the East Asian economy, a lack of strong legal protection of minority shareholders leads to frequent entrenchment of controlling shareholders against minority shareholders (Lemmon and Lins, 2003; Claessens et al., 1999, 2000, 2002; La Porta et al., 1999, 2000, 2002). This paper sources data of family firms in East Asia and applies the entrenchment theory (Oswald et al., 2009) to predict that, compared to non-family firms, family firms have stronger incentive to hide pri-

vate control benefits via tax sheltering (Desai and Dharmapala, 2006, 2009).

This paper thus constructs the first hypothesis as follows:

**H1: Compared to non-family firms, family firms have a higher degree of tax sheltering.**

Countries where the legal protection of investors is weak are more likely to induce the divergence between control rights and ownership. The higher the degree of divergence, the more likely it will be that controlling shareholders will extract private benefits from firms (La Porta et al., 1999; Wolfenzon, 1998; Harris and Raviv, 1988). Firms in East Asia, there is a large divergence between voting rights (control rights) and ownership (cash flow rights) (Claessens et al., 2002; Fan and Wong, 2002; La Porta et al., 1999). The degree of divergence is the main cause inducing an agency problem between controlling families and minority shareholders and hence the entrenchment of the rights of minority shareholders (Claessens et al., 1999, 2000, 2002; Kim and Yi, 2006; La Porta et al., 1999).

Sacristán-Navarro & Gómez-Ansón (2007) and Claessens et al. (2000) found that companies tend to use methods of indirect ownership, pyramids, and cross-shareholdings to construct control chains and cascades of intermediate firms, causing divergence between control rights and cash flow rights. Claessens et al. (2002) and Baek et al. (2004) suggested that the greater the divergence between control and cash flow rights, the lower the firm value and returns. Fan and Wong (2002), Haw, Hu, Hwang, & Wu (2004) and Kim & Yi (2006) argued that the greater the divergence, the more incentives there are to hide the real economic status and to manage earnings. We suggest that when controlling owners effectively control a firm due to divergence between control rights exceeding cash flow rights, controlling owners will have a high level of motivation out of self-interest to hide true underlying economic situations and their private control benefits (Fan and Wong, 2002; Leuz, Nanda, and Wysocki, 2003).

Hanlon and Slemrod (2009), Desai and Dharmapala (2009) and Wilson (2009) provided evidence that tax sheltering promotes opportunistic opportunities in which the management is engaged in the diversion of rents as it was found that aggressive tax sheltering is related to low quality in financial reporting. Tax sheltering through complex transactions that hide and blur the real motive behind the transaction and tax sheltering are the channels extracting private benefits for insiders (Desai and Dharmapala, 2006; Hanlon and Slemrod, 2009; Desai and Dharmapala, 2009; Wilson, 2009).

Accordingly, we suggest that in the case of firms exhibiting a high level of divergence between cash-flow and control rights, controlling firms will have higher motivation to engage in tax sheltering transactions (Desai and Dharmapala, 2006, 2009). The divergence between control rights and ownership is the main driver of tax sheltering activities, and the third hypothesis is thus constructed as follows:

**Hypothesis 2: The higher the divergence between control rights and cash**

flow rights, the more aggressive the tax sheltering is.

### 3. Research Design

#### 3.1. Data

The study sample includes all firm-years (excluding finance firms) in the TSE (Taiwan stock exchange) and the OTC (Over the Counter) markets from 2011 through 2019 using data available in the TEJ (Taiwan Economic Journal) database. The sample selection procedures are shown in **Table 1**. During the sample period, all of the observations in the TEJ database amounted to 18,456 observations, subtracting observations from the financial services industry, observations with zero and negative equity, observations in which it could not be determined whether firms have controlling families or not, observations that cannot be used to compute measures of tax sheltering and the divergence ratio between control rights and ownership, and observations for which the data is insufficient to obtain related control variables. As **Frank et al. (2009)**, we exclude the firms which are a subsidiary of another firm from our research sample. The final number of observations over the period totals 6929. The sample selection procedure is shown in Panel A of **Table 1**. We further separate total observations into two group subsamples, including family firms and nonfamily firm observations, which are presented in Panel B of **Table 1**. Panel C of **Table 1** shows the sample firms (observations) that had been experiencing the replacement of CEOs/presidents from 2011 through 2019, and the entire sample is 318 firm-year observations. Observations that show the appointment of family members as CEOs or presidents total 197 observations (62%), and observations that show the appointment of non-family members as CEOs or presidents total 121 observations (38%).

#### 3.2. Research Model

Hypothesis 1 examines the relationship between family firms and the level of tax sheltering. We use the tax shelter model suggested by **Frank et al. (2009)** and additionally include the main interest variables. The research model of examining H1 is as follows: If the coefficient of the family firm variable is significantly positive, H1 is supported.

$$\begin{aligned} & TaxShelter_{it} (BTDS; RBTDs; DPDs) \\ & = \beta_0 + \beta_1 Familyfirm_{it} + \beta_2 PTROA_{it} + \beta_3 NOL\_D_{it} + \beta_4 FOR\_D_{it} + \beta_5 DAP_{it} \quad (1) \\ & \quad + \beta_6 LEV_{it} + \beta_7 MTB_{it} + \beta_8 EM1_{it} + \beta_9 EM2_{it} + \beta_{10} \Delta PTCFO_{it} + \beta_{11} SIZE_{it} + \varepsilon \end{aligned}$$

H2 exams whether the divergence between control and ownership is the main driver for tax sheltering. The first step is to compare whether there are significant variances in the level of divergence between family firms and non-family firms and between family succession and non-family succession. The following model is run to test whether the divergence is the main driver for tax sheltering. Finally, this paper performs a robust check on the samples.

**Table 1.** Sample selection procedure.

Panel A Total observations	
	Firm-Years
All observations available on TEJ database from 2011-2019	18,456
Less: Financial services firms	407
Observations with zero and negative equity	1573
Data cannot be used to determine whether or not it is a family firm	3685
Data not available to estimate the measures of tax sheltering	1274
Data not available to estimate the ratio of cash flow rights over control rights of the largest controlling shareholders	1764
Data not available to compute control variables	2316
Subsidiary of another firm	508
Total observations	6929
Panel B Total observations 6929	
Observations belonging to family firms	Observations belonging to nonfamily firms
4235 (61.12%)	2694 (38.88%)
Panel C Firm-year observations of replacing CEOs or presidents during sample period 318	
Family succession (appointing family members as CEOs or presidents)	Non-family succession (not appointing family members as CEOs or presidents)
197 (62%)	121 (38%)

$$\begin{aligned}
& TaxShelter_{it} \text{ (} BTDs; RBTDs; DPDs \text{)} \\
& = \beta_0 + \beta_1 Divergency + \beta_2 PTROA_{it} + \beta_3 NOL\_D_{it} + \beta_4 FOR\_D_{it} \\
& \quad + \beta_5 DAP_{it} + \beta_6 LEV_{it} + \beta_7 MTB_{it} + \beta_8 EM1_{it} + \beta_9 EM2_{it} \\
& \quad + \beta_{10} \Delta PTCFO_{it} + \beta_{11} SIZE_{it} + \varepsilon_{it}
\end{aligned} \tag{2}$$

The variables relating to the analyst forecast are included in the model of Frank et al. (2009). Since there are no earnings data predicted by analysts in the public information provided by Taiwan listed firms and over-the-counter firms, the control variables relating to analyst forecasts are excluded from this study.

### 3.3. Definition of Variable

#### 3.3.1. Tax Shelters Variable (Taxshelter)

In this study, we use three types of measures of the tax sheltering level suggested by earlier studies, including BTDs, RBTDs and DPDs.

**1) Total book-tax differences (BTDs):** BTDs were developed by Frank et al.

(2009) and Wilson (2009). A measure of book-tax difference was used as a proxy of tax sheltering activities. The BTDs are equal to book income less taxable income scaled by lagged total assets. The computation is as follows:

$$\begin{aligned} \text{BTDS} &= (\text{pre-tax book income} - \text{estimated taxable income}) / \text{total assets}_{t-1} \\ &= \left[ \text{pre-tax book income} - (\text{total income tax expense} \right. \\ &\quad \left. - \text{deferred tax expense} - \text{other income tax expense}) \right] / \\ &\quad \text{Taiwan statutory tax rate} / \text{total assets}_{t-1} \end{aligned}$$

**2) Residual book-tax differences (RBTDS):** Based on the suggestion of Desai and Dharmapala (2006), we use the component of book-tax difference which cannot be attributable to earnings management as the second measure of tax sheltering. First, we draw out the components of BTDS that cannot be explained by variations of earnings accruals, which are denoted as  $TS_{i,t}$ . Next, we use panel data to run the  $TS_{i,t}$  regression model with firm fixed effects (please see the following equation). The fixed effect absorbs the time-invariant firm-specific component  $\mu_i$ , and the time-varying residual  $\varepsilon_{i,t}$ , which is used as a measure of tax sheltering and is labeled as residual book-tax differences (RBTDS). Residual  $\varepsilon_{i,t}$  (RBTDS) measures the variations in tax sheltering activity within a firm over time.

$$\begin{aligned} \text{BTD}_{i,t} &= \beta_1 \text{TA}_{i,t} + \mu_i + \varepsilon_{i,t} \\ \text{TS}_{i,t} &= \mu_i + \varepsilon_{i,t} \end{aligned}$$

$\text{BTD}_{i,t}$ : pre-taxbook income less taxable income scaled by lagged total assets. The details of the computation are described in the previous paragraph.

$\text{TA}_{i,t}$ : total accruals for firm  $i$  in year  $t$ , scaled by the total assets at year  $t - 1$ .

$\mu_i$ : the average value of the residual for firm  $i$  over the sample period.

$\varepsilon_{i,t}$  (RBTDS): the deviation in year  $t$  from firm  $i$ 's average residual  $\mu_i$

**3) Discretionary permanent differences (DPDs):** Discretionary permanent difference (DPDs) is the third measure of tax sheltering in this study, which was developed by Frank et al. (2009). DPDs are residuals from the following model of Frank et al. (2009). Due to the fact that the tax system of Taiwan is different from that of the US, state tax expense does not exist in Taiwan, so we exclude the item of current state income tax expense in Frank's model. To avoid a spurious correlation between the two proxy variables-discretionary accruals and the measures of tax sheltering, we use pre-tax total accrual to estimate DPDs, similar to the method of Frank et al. (2009), all variables are scaled by beginning of year total assets. The model to compute DPDs in this study is formalized as follows:

$$\begin{aligned} \text{PERMDIFF}_{i,t} &= \alpha_0 + \alpha_1 \text{INTANG}_{i,t} + \alpha_2 \text{UNCON}_{i,t} + \alpha_3 \text{MI}_{i,t} \\ &\quad + \alpha_4 \Delta \text{NOL}_{i,t} + \alpha_5 \text{LAGPERM}_{i,t} + \varepsilon_{i,t} \end{aligned}$$

$\text{PERMDIFF}_{i,t}$  (Total permanent BTDS): this variable suggested by Frank et al. (2009), presenting total book-tax differences excluding temporary book-tax differences for firm  $i$  in year  $t$ .

$$PERMDIFF_{i,t} = \left\{ BI_{i,t} - \left[ (CTE_{i,t} + FOE_{i,t}) / STR_{i,t} \right] - (DTE_{i,t} / STR_{i,t}) \right\};$$

$BI_{i,t}$ : pre-tax book income for firm  $i$  in year  $t$ ;

$CTE_{i,t}$ : current tax expense firm  $i$  in year  $t$ ;

$FOE$ : current foreign tax expense for firm  $i$  in year  $t$ ;

$DTE_{i,t}$ : deferred tax expense firm  $i$  in year  $t$ ;

$STR_{i,t}$ : statutory tax rate in year  $t$ ;

$INTANG_{i,t}$ : goodwill and other intangibles at year  $t$  divided by total assets at year  $t - 1$  for firm  $i$ ;

$UNCON_{i,t}$ : income (loss) reported under the equity method at year  $t$  divided by total assets at year  $t - 1$  for firm  $i$ ;

$MI_{i,t}$ : income (loss) attributable to minority interest at year  $t$  divided by total assets at year  $t - 1$  for firm  $i$ ;

$\Delta NOL_{i,t}$ : change in net operating loss carryforwards at year  $t$  divided by total assets at year  $t - 1$  for firm  $i$ ;

$LAGPERM_{i,t}$ : PERMDIFF at year  $t - 1$  divided by total assets at year  $t - 1$  for firm  $i$ ;

$\varepsilon_{it}$  (DPDs): discretionary permanent differences for firm  $i$  in year  $t$ .

### 3.3.2. Family Firms

This paper refers to Villalonga & Amit (2006) and Anderson & Reeb (2003) regarding the definitions of family firms. The following are three proxy variables of family firms:

#### 1) Family firm 1

Anderson & Reeb (2003) and Villalonga & Amit (2006) used this definition. At least one family member serves as an officer, director or blockholder. This definition does not set up the minimum threshold of family ownership or control rights. In Villalonga & Amit (2006), the number of samples compliant with this definition is the highest. It is the laxest definition.

#### 2) Family firm 2

The family is the largest voting shareholder, with over 20% voting rights. Meanwhile, at least one family member serves as an officer, and one family member serves as a director. In Villalonga & Amit (2006), the number of samples compliant with this definition is the smallest. It is the most stringent definition.

#### 3) Family firm 3

At least one member of the 2<sup>nd</sup> or later generation serves as an officer, a director or large shareholder. In Villalonga & Amit (2006), the number of samples compliant with this definition is the median. It is between the laxest and the most stringent definition.

### 3.3.3. Divergence<sub>it</sub> (Ratio)

Claessens et al. (2000, 2002) suggested that when the magnitude of control rights exceeding cash flow rights is larger, this means that the entrenchment effect is larger, while in cases where the magnitude of divergence is smaller, the entrenchment effect is smaller.

chment effect is smaller. The measure of divergence is suggested by Fan and Wang (2002) as follows:

Divergence ratio = the ratio of cash flow rights (ownership) over control rights (voting rights) of the largest controlling shareholders. This ratio ranges from zero to one.

When the ratio is closer to 0, the divergence between control rights and cash flow rights is larger, and the entrenchment effect by controlling shareholders is greater, while when the ratio of cash flow rights (ownership) over control rights is closer to 1, the control rights and cash flow rights are closer, and the entrenchment effect by controlling shareholders is less. This ratio of divergence has negative relationship with the entrenchment effect (Fan and Wang, 2002). Due to the fact that we expect the entrenchment by controlling families to have a positive impact on the level of tax sheltering, accordingly, in Hypothesis 2, we predict that the relationship between the divergence ratio and the level of tax sheltering will be significantly negative.

### 3.3.4. Other Control Variables

$NOL\_D_{i,t}$ : 1 if the net operating loss carryforwards for firm  $i$  at year  $t - 1$  are greater than 0; 0 otherwise.

$FOR\_D_{i,t}$ : 1 if foreign income of firm  $i$  is not equal to 0 at year  $t$ , and 0 otherwise;

$DAP_{i,t}$  (Discretionary accruals): We estimate a performance-adjusted accrual model suggested by Kothari, Leone, and Wasley (2005) that is similar to the Jones and modified-Jones models except that it is augmented to include  $ROA_{i,t}$ . The accruals model is computed as follows:

$$DAP_{i,t} = TACC_{i,t} - \left[ \hat{\alpha}_0 + \hat{\alpha}_1 (1/A_{i,t-1}) + \hat{\alpha}_2 (\Delta REV_{i,t}/A_{i,t-1}) + \hat{\alpha}_3 (PPE_{i,t}/A_{i,t-1}) + \hat{\alpha}_4 ROA_{i,t} \right];$$

$TACC_{i,t}$ : (income before extraordinary items-cash flows from operations)/ $A_{i,t-1}$ ;

$A_{i,t-1}$ : Total assets for firm  $i$  in year  $t - 1$ ;

$\Delta REV_{i,t}$ : Change in operating revenue of firm  $i$  between years  $t$  and  $t - 1$ ;

$PPE_{i,t}$ : Gross property, plant and equipment of firm  $i$  in year  $t$ ; and

$ROA_{i,t}$ : Net income scaled by lagged total assets.

$MTB_{i,t}$ : Market value of common equity for firm  $i$  at year  $t - 1$ , divided by book value of common equity for firm  $i$  at year  $t - 1$

$EM1_{i,t}$ : 1 if net income in year  $t$ , divided by the market value of common equity at year  $t - 1$ , is greater than 0 and less than or equal to 0.01 for firm  $i$ , and 0 otherwise.

$EM2_{i,t}$ : 1 if the change in net income from year  $t - 1$  to year  $t$ , divided by the market value of common equity at year  $t - 2$  is greater than 0 and less than or equal to 0.01 for firm  $i$ , and 0 otherwise.

$\Delta PTCFO_{i,t}$ : Change in pre-tax cash flow from operations for firm  $i$  in year  $t$ ,

divided by total assets for firm  $i$  at year  $t - 1$ ; and

$PTROA_{it}$ : is defined as the ratio of pretax income at  $t$  year to total assets at year  $t - 1$  for  $i$  firm, which is used to control the effect of change in book income (Frank et al., 2009; Gupta and Newberry, 1997).

$Size_{it}$ : the natural logarithm of total assets at book value at  $t$  year for  $i$  firm.

$Lev_{it}$ : the ratio of long-term debt to total assets at book values at  $t$  year for  $i$  firm.

## 4. Results

### 4.1. Descriptive Statistics of Interest Variables

**Table 2** shows the descriptive statistics of the variables of main interest during the sample period. The means of the measures of tax sheltering (BTD, RBTDS and DPDs) separately are  $-0.009$ ,  $0.005$  and  $0.013$ , respectively. The medians individually are  $0.008$ ,  $0.006$  and  $0.001$ . The BTD and DPDs are larger than those provided by Frank et al. (2009), the possible reason perhaps being that we use East Asian data, while Frank et al. (2009) used data from Western countries. Due to poorer tax law enforcement, East Asian countries show a greater level of tax sheltering. The mean of divergence is  $0.854$ , and its median is  $1$ , which is similar to the results of Fan and Wong (2002). The possible reason for this is that Fan and Wong (2002) used a similar sample—East Asian economies, including Hong Kong (China), Indonesia, Thailand, Malaysia, Singapore, South Korea, and The Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu (TPKM).

**Table 3** lists the means and standard deviations of all the variables. Meanwhile, this paper divides the samples into two groups, i.e. family firms and non-family firms and compares the differences of these two groups. **Table 3** uses definition 3 (family firm 3) for family firms because it is a balance between the most stringent and most relaxed definitions. The results suggest that the level of tax sheltering (i.e. BTD, RBTDS and DPDs) is higher in family firms than it is in the case of non-family firms. This supports the expectation of H1. Additionally, **Table 3** shows that the mean of divergence is  $0.854$  for the full sample. The divergence in family firms is also significantly greater than that of non-family firms. The result is also in line with the entrenchment theory hypothesis.

**Table 2.** Descriptive statistics for interest variables.

	N	Mean	Median	Std. Dev.	Q1	Q3
BTD	6929	$-0.009$	$0.008$	$0.287$	$-0.021$	$0.041$
RBTDS	6929	$0.005$	$0.006$	$0.091$	$0.003$	$0.008$
DPDs (Discretionary Permanent Differences)	6929	$0.013$	$0.001$	$0.321$	$-0.012$	$0.046$
Divergence	6929	$0.854$	$1.000$	$0.298$	$0.698$	$1.000$
Family succession	318	$0.58$	$1$	$0.475$	$0$	$1$

**Table 3.** Descriptive statistics for all variables and difference analysis between family firms and non-family firms.

	All firms		Family firms (Family firm 3)		Non-family firms		Diff in Means	t-stat.
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.		
BTD	-0.009	0.287	0.002	0.251	-0.026	0.316	0.028	3.93**
RBTDs	0.005	0.091	0.007	0.093	0.002	0.087	0.005	2.34*
DPDs (Discretionary Permanent Differences)	0.013	0.321	0.019	0.329	0.004	0.318	0.015	1.94*
Divergence	0.854	0.376	0.876	0.314	0.819	0.398	0.057	6.25**
PTROA	0.015	0.089	0.016	0.093	0.013	0.082	0.003	1.21
NOL_D	0.397	0.412	0.401	0.326	0.391	0.451	0.010	1.03
FOR_D	0.401	0.375	0.414	0.328	0.381	0.431	0.033	3.44**
DAP	-0.040	7.53	0.120	7.01	-0.292	8.14	0.412	2.16*
LEV	0.853	1.853	0.784	0.846	0.961	1.961	-0.177	-4.44**
MTB	1.581	1.547	1.618	1.528	1.523	1.562	0.095	2.49**
EM1	0.089	0.488	0.083	0.476	0.098	0.492	-0.015	-1.29
EM2	0.000	0.424	0.001	0.429	-0.002	0.413	0.003	0.25
ΔPTCFO	0.002	0.134	0.002	0.156	0.002	0.112	0.001	0.16
SIZE	11651	25111	10945	24045	12761	29452	-1815.84	-2.68**
Number of observations	6.929		4235 (61.12%)		2694 (38.88%)			
BTDs	The book income less taxable income scaled by lagged total assets;							
RBTDs	The portion of book-tax gap not explained by earnings accruals, which was developed by Desai and Dharmapala (2006);							
DPDs	The discretionary permanent difference is the measure of tax sheltering developed by Frank et al. (2009);							
Famfirm3	At least one member of the 2 <sup>nd</sup> or later generation serves as an officer, a director or large shareholder (Villalonga & Amit, 2006).							
PTROA	Pre-tax income at $t$ year divided by total assets at year $t - 1$ ;							
NOL_D	1 if the net operating loss carryforwards for firm $i$ at year $t - 1$ are greater than 0; 0 otherwise;							
FOR_D	1 if foreign income for firm $i$ at year $t$ is not equal to 0; 0 otherwise;							
DAP	The performance-adjusted discretionary accruals suggested by Kothari et al. (2005);							
LEV	Total debt for firm $i$ at year $t$ , divided by total assets at year $t$ ;							
MTB	Market value of common equity for firm $i$ at year $t - 1$ , divided by book value of common equity for firm $i$ at year $t - 1$ ;							
EM1	1 if net income in year $t$ , divided by the market value of common equity at year $t - 1$ , is greater than 0 and less than or equal to 0.01 for firm $i$ , and 0 otherwise;							
EM2	1 if the change in net income from year $t - 1$ to year $t$ , divided by the market value of common equity at year $t - 2$ is greater than 0 and less than or equal to 0.01 for firm $i$ , and 0 otherwise;							
ΔPTCFO	Change in pre-tax cash flow from operations for firm $i$ in year $t$ , divided by total assets for firm $i$ at year $t - 1$ ; and							
SIZE	The natural logarithm of total assets at book value for firm $i$ at year $t$ .							

\*, \*\*significant at the 5% and 1% levels, respectively.

**Table 4.** Regression analyses for the relation between family firms and tax sheltering.

$$\text{TaxShelter}_{it} (\text{BTDs}; \text{RBTDs}; \text{DPDs}) = \beta_0 + \beta_1 \text{Familyfirm}_{it} + \beta_2 \text{PTROA}_{it} + \beta_3 \text{NOL\_D}_{it} + \beta_4 \text{FOR\_D}_{it} + \beta_5 \text{DAP}_{it} + \beta_6 \text{LEV}_{it} \\ + \beta_7 \text{MTB}_{it} + \beta_8 \text{EM1}_{it} + \beta_9 \text{EM2}_{it} + \beta_{10} \Delta \text{PTCFO}_{it} + \beta_{11} \text{SIZE}_{it} + \varepsilon$$

Variables	Expected sign	Taxshelter = BTDs			Taxshelter = RBTDs			Taxshelter = DPDs		
		Coeff (t-stat)	Coeff (t-stat)	Coeff (t-stat)	Coeff (t-stat)	Coeff (t-stat)	Coeff (t-stat)	Coeff (t-stat)	Coeff (t-stat)	Coeff (t-stat)
Intercept		0.034**	-0.018**	0.057**	0.046**	-0.016**	0.057**	0.087**	0.045**	0.063**
Famfirm1	+	0.014*			-0.008			0.019**		
Famfirm2	+		0.021**			0.003**			0.034*	
Famfirm3	+			0.015*			0.001*			0.051**
PTROA	+	0.315*	0.287*	0.328**	0.234**	-0.298	0.417*	0.512**	0.499*	0.298**
NOL_D	+	0.028	0.087*	-0.045	0.022	0.087*	0.057**	-0.069	0.035	0.065*
FOR_D	+	0.064	0.072**	0.093*	0.121*	0.009*	0.233**	-0.321	0.388*	0.219**
DAP	+	0.132*	0.041**	0.054**	0.219*	0.156**	0.033*	-0.045	0.419**	0.132**
LEV	+	0.004*	-0.101	0.051**	-0.003	0.067*	0.102**	0.045*	0.318**	0.019**
MTB	+	0.003	0.101	-0.298*	0.017*	-0.009	0.061	0.019	0.006	0.004
EM1	+	-0.051	0.019**	0.015	0.046*	0.029	0.011*	0.007*	0.034	0.027
EM2	-	0.001	-0.031	0.005**	0.108	-0.008	-0.021	-0.037	0.004*	0.027
ΔPTCFO	-	0.038*	-0.012	0.039**	-0.028	0.016	0.045*	0.034	-0.051**	0.028
SIZE	-	-0.005	0.003*	-0.008*	0.006	-0.011*	0.003**	0.006	0.021**	-0.009*
N		6929	6929	6929	6929	6929	6929	6929	6929	6929
Adj R <sup>2</sup>		0.275	0.137	0.045	0.298	0.182	0.038	0.301	0.165	0.042
BTDs	The book income less taxable income scaled by lagged total assets;									
RBTDs	The portion of book-tax gap not explained by earnings accruals which was developed by <a href="#">Desai and Dharmapala (2006)</a> ;									
DPDs	The discretionary permanent difference is the measure of tax sheltering developed by <a href="#">Frank et al. (2009)</a> ;									
Famfirm1	At least one family member serves as an officer, director or blockholder ( <a href="#">Anderson &amp; Reeb, 2003</a> ; <a href="#">Villalonga &amp; Amit, 2006</a> ).									
Famfirm2	Family is the largest voting shareholder, with over 20% voting rights. Meanwhile, at least one family member serves as an officer, and one family member serves as a director ( <a href="#">Villalonga &amp; Amit, 2006</a> ).									
Famfirm3	At least one member of the 2 <sup>nd</sup> or later generation serves as an officer, a director or a large shareholder ( <a href="#">Villalonga &amp; Amit, 2006</a> ).									
PTROA	Pre-tax income at $t$ year divided by total assets at year $t - 1$ ;									
NOL_D	1 if the net operating loss carry forwards for firm $i$ at year $t - 1$ are greater than 0; 0 otherwise;									
FOR_D	1 if foreign income for firm $i$ at year $t$ is not equal to 0; 0 otherwise;									
DAP	The performance-adjusted discretionary accruals suggested by <a href="#">Kothari et al. (2005)</a> ;									
LEV	Total debt for firm $i$ at year $t$ , divided by total assets at year $t$ ;									
MTB	Market value of common equity for firm $i$ at year $t - 1$ , divided by book value of common equity for firm $i$ at year $t - 1$ ;									
EM1	1 if net income in year $t$ , divided by the market value of common equity at year $t - 1$ , is greater than 0 and less than or equal to 0.01 for firm $i$ , and 0 otherwise;									
EM2	1 if the change in net income from year $t - 1$ to year $t$ , divided by the market value of common equity at year $t - 2$ is greater than 0 and less than or equal to 0.01 for firm $i$ , and 0 otherwise;									
ΔPTCFO	Change in pre-tax cash flow from operations for firm $i$ in year $t$ , divided by total assets for firm $i$ at year $t - 1$ ; and									
SIZE	The natural logarithm of total assets at book value for firm $i$ at year $t$ .									

\*, \*\*significant at the 5% and 1% levels, respectively.

## 4.2. The Results of the Regression Analyses for the Relation between Family Firms and Tax Sheltering

**Table 4** lists the regression results for Equation (1). Equation (1) is mainly used to examine the relationship between family firms and tax sheltering. This paper uses three definitions (see the definitions of variables) for family firms that include the laxest, the most stringent and the measure that is in-between. The results show that after the other variables related to tax sheltering are controlled, the coefficients of the three definitions of family firms are significantly positive. Generally speaking, family firms and tax sheltering activities are positively correlated. The empirical finding supports H1. The results of the control variables show that, overall, profitability (PTROA), discretionary accruals (DAP), foreign income (FOR\_D) and leverage (LEV) have a positive relationship with tax sheltering.

## 4.3. The Results of the Analyses for the Relation between Divergence Ratio and Tax Sheltering

In order to test whether divergence between control and cash flow rights is the main driver of aggressive tax sheltering, we proceed to a univariate of the divergence variable. The results shown on **Table 5** indicate that, compared to nonfamily firms, family firms have a greater level of divergence. Compared to non-family succession, family succession has a higher level of divergence. Family firms compared to nonfamily firm, family succession compared to nonfamily succession have larger level of tax sheltering, the divergence between control right and ownership may be the main driver of tax sheltering.

In order to provide robust evidence to support that the divergence between control and cash flow rights is the main driver for tax sheltering activities, this paper further analyzes the relationship between divergence and tax sheltering by using multivariate regression models. The greater (smaller) the measure of proxy variable of divergence, the less (more) divergence degree between the control right and ownership (Fan and Wong, 2002) (For the reason, please see the variable definition of divergence). H3 expects a negative association between the measure of divergence proxy variable and the level of tax sheltering. **Table 6** lists the result of Equation (3), which shows that the coefficient of the divergence variable is significantly negative, supporting the positive effects of the divergence between control rights and ownership with regard to the degree of tax sheltering.

**Table 5.** The differences of divergence between control and cash flow rights in the analyses for the impact of family control and family succession.

Family firms (n = 4235)	Non-family firms (n = 2694)	Divergence difference (t-stats)
0.876	0.819	0.057 (6.245)**
Family succession (n = 197)	Non-family succession (n = 121)	Divergence difference (t-stats)
0.881	0.862	0.019 (2.68)**

\*\*significant at the 1% level; the numbers in each cell are the mean of divergence.

**Table 6.** Regression analyses for the relation between the divergence ratio and tax sheltering.
$$TaxShelter_{it} (BTDs; RBTDs; DPDs) = \beta_0 + \beta_1 Divergency + \beta_2 PTROA_{it} + \beta_3 NOL\_D_{it} + \beta_4 FOR\_D_{it} + \beta_5 DAP_{it} + \beta_6 LEV_{it} + \beta_7 MTB_{it} + \beta_8 EM1_{it} + \beta_9 EM2_{it} + \beta_{10} \Delta PTCFO_{it} + \beta_{11} SIZE_{it} + \varepsilon_{it}$$

Variables	Expected sign	Taxshelter = BTDs	Taxshelter = RBTDs	Taxshelter = DPDs
		Coeff	Coeff	Coeff
Intercept		0.045**	0.121**	0.311**
Divergency	-	-0.379*	-0.245**	-0.111*
PTROA	+	0.314**	0.217**	0.109**
NOL_D	+	0.065*	0.045	0.103**
FOR_D	+	0.035*	0.143**	0.319**
DAP	+	0.121*	0.319*	0.288**
LEV	+	0.056*	0.203**	0.068**
MTB	+	-0.003	-0.121	-0.093
EM1	+	-0.046*	0.042**	0.096**
EM2	-	-0.041	-0.033	-0.101*
$\Delta PTCFO$	+	-0.034	0.038	0.056
SIZE	-	-0.004**	-0.017**	0.067*
N		6929	6929	6929
Adj R <sup>2</sup>		0.217	0.209	0.256
BTDs	The book income less taxable income scaled by lagged total assets;			
RBTDs	The portion of book-tax gap not explained by earnings accruals which was developed by <a href="#">Desai and Dharmapala (2006)</a> ;			
DPDs	The discretionary permanent difference is the measure of tax sheltering developed by <a href="#">Frank et al. (2009)</a> ;			
Divergency	The ratio of cash flow rights (ownership) over control rights (voting rights) of the largest controlling shareholders;			
PTROA	Pre-tax income at $t$ year divided by total assets at year $t - 1$ ;			
NOL_D	1 if the net operating loss carryforwards for firm $i$ at year $t - 1$ are greater than 0; 0 otherwise;			
FOR_D	1 if foreign income for firm $i$ at year $t$ is not equal to 0; 0 otherwise;			
DAP	The performance-adjusted discretionary accruals suggested by <a href="#">Kothari et al. (2005)</a> ;			
LEV	Total debt for firm $i$ at year $t$ , divided by total assets at year $t$ ;			
MTB	Market value of common equity for firm $i$ at year $t - 1$ , divided by book value of common equity for firm $i$ at year $t - 1$ ;			
EM1	1 if net income in year $t$ , divided by the market value of common equity at year $t - 1$ , is greater than 0 and less than or equal to 0.01 for firm $i$ , and 0 otherwise;			
EM2	1 if the change in net income from year $t - 1$ to year $t$ , divided by the market value of common equity at year $t - 2$ is greater than 0 and less than or equal to 0.01 for firm $i$ , and 0 otherwise;			
$\Delta PTCFO$	Change in pre-tax cash flow from operations for firm $i$ in year $t$ , divided by total assets for firm $i$ at year $t - 1$ ; and			
SIZE	The natural logarithm of total assets at book value for firm $i$ at year $t$ .			

\*significant at the 5% level, two tailed; \*\*significant at the 1% level, two tailed.

## 5. Conclusions and Discussion

This paper is based on the entrenchment theory (Claessens et al., 1999, 2000, 2002; La Porta et al., 1999, 2000, 2002) and is used to examine the issue that family firms in East Asia may use tax-sheltering as the channels in which controlling family members are able to extract private benefits and divert rents. First, we examine the differences in aggressive tax sheltering between family firms and non-family firms. Secondly, this paper investigates whether the entrenchment effect as a result of the separation of control rights and ownership is the main driver for tax sheltering activities.

This empirical data is from listed companies on the TSE and OTC markets in Taiwan from 2011 through 2019. The empirical results show that family firms are more aggressive in tax sheltering as compared to non-family firms. Finally, this paper provides evidence that the divergence between control and ownership is the key driver for tax sheltering activities. The results are robust to three measures of tax sheltering and several definitions of family firms suggested by earlier studies. Further, the results by using Fama-MacBeth regressions to control time-series effect of data still support the expectations of this study.

The secrecy of family firms, information opacity, the entrenchment of controlling family shareholders and the nepotism involved in the hiring of relatives as executives are all significantly related to aggressive tax sheltering. Regulators should understand that the ownership structure and family succession are the keys to tax sheltering problems in family firms. The research findings also support the claims of earlier studies that suggest that tax sheltering may signal managerial opportunism and may be a channel for rent diversion (Desai and Dharmapala, 2006, 2009; Desai et al., 2007; Frank et al., 2009; Wilson, 2009). Secretive tax sheltering provides owners and management the way to extract private benefits and serves as a shelter for speculators.

With the exception of the above mentioned contributions, however, there are still some limitations to this study. This study uses three measures of tax sheltering to capture the level of tax sheltering. However, it is still impossible to find which methods and channels are most frequently used by controlling families to engage in tax sheltering. It is suggested that future researchers can examine how changes in tax enforcement and the improvement of corporate governance will influence the level of tax sheltering. It is also worthy to consider exploring which mechanisms of corporate governance are the key to the tax sheltering motives of controlling shareholders. In addition, it is suggested that data of different countries should be sampled to compare the correlation between tax sheltering and family firms among various countries and under different systems. These macro issues offer a potential avenue for future researchers.

## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

## References

- Anderson, R., & Reeb, D. M. (2003). Founding-Family Ownership and Firm Performance: Evidence from the S&P 500. *Journal of Finance*, *58*, 1301-1329. <https://doi.org/10.1111/1540-6261.00567>
- Baek, J.-S., Kang, J.-K., & Park, K. S. (2004). Corporate Governance and Firm Value: Evidence from the Korean Financial Crisis. *Journal of Financial Economics*, *71*, 265-313. [https://doi.org/10.1016/S0304-405X\(03\)00167-3](https://doi.org/10.1016/S0304-405X(03)00167-3)
- Bennedsen, M., Nielsen, K. M., Perez-Gonzalez, F., & Wolfenzon, D. (2007). Inside the Family Firm: The Role of Families in Succession Decisions and Performance. *Quarterly Journal of Economics*, *122*, 647-691. <https://doi.org/10.1162/qjec.122.2.647>
- Boubaker, S., & Labégorre, F. (2008). Ownership Structure, Corporate Governance and Analyst Following: A Study of French Listed Firms. *Journal of Banking & Finance*, *32*, 961-976. <https://doi.org/10.1016/j.jbankfin.2007.07.010>
- Burkart, M., Panunzi, F., & Shleifer, A. (2003). Family Firms. *Journal of Finance*, *58*, 2167-2201. <https://doi.org/10.1111/1540-6261.00601>
- Chrisman, J. J., Chua, J. H., & Sharma, P. (2003). *Current Trends and Future Directions in Family Business Management Studies: Toward a Theory of the Family Firm*. Coleman Foundation White Paper Series.
- Claessens, S., Djankov, S., & Lang, L. (2000). The Separation of Ownership and Control in East Asian Corporations. *Journal of Financial Economics*, *58*, 81-112. [https://doi.org/10.1016/S0304-405X\(00\)00067-2](https://doi.org/10.1016/S0304-405X(00)00067-2)
- Claessens, S., Djankov, S., Fan, J., & Lang, L. (1999). *The Expropriation of Minority Shareholders: Evidence from East Asia*. Washington, DC: World Bank. <https://doi.org/10.2139/ssrn.202390>
- Claessens, S., Djankov, S., Fan, J., & Lang, L. (2002). Disentangling the Incentive and Entrenchment Effects of Large Shareholdings. *Journal of Finance*, *57*, 2741-2771. <https://doi.org/10.1111/1540-6261.00511>
- De Angelo, H., & De Angelo, L. (2000). Controlling Stockholders and the Disciplinary Role of Corporate Payout Policy: A Study of the Times Mirror Company. *Journal of Financial Economics*, *56*, 153-207. [https://doi.org/10.1016/S0304-405X\(00\)00039-8](https://doi.org/10.1016/S0304-405X(00)00039-8)
- Desai, M. A., & Dharmapala, D. (2006). Corporate Tax Avoidance of High-Powered Incentives. *Journal of Financial Economics*, *79*, 145-179. <https://doi.org/10.1016/j.jfineco.2005.02.002>
- Desai, M. A., & Dharmapala, D. (2009). Earnings Management, Corporate Tax Shelters, and Book-Tax Alignment. *National Tax Journal*, *62*, 169-186. <https://doi.org/10.17310/ntj.2009.1.08>
- Desai, M. A., Dyck, A., & Zingales, L. (2007). Theft and Taxes. *Journal of Financial Economics*, *84*, 591-623. <https://doi.org/10.1016/j.jfineco.2006.05.005>
- Dyck, A., & Zingales, L. (2004). Private Benefits of Control: An International Comparison. *Journal of Finance*, *59*, 537-600. <https://doi.org/10.1111/j.1540-6261.2004.00642.x>
- Fan, J., & Wong, T. (2002). Corporate Ownership Structure and the Informativeness of Accounting Earnings in East Asia. *Journal of Accounting and Economics*, *33*, 401-425. [https://doi.org/10.1016/S0165-4101\(02\)00047-2](https://doi.org/10.1016/S0165-4101(02)00047-2)
- Frank, M. M., Lynch, L. J., & Rego, S. O. (2009). Tax Reporting Aggressiveness and Its Relation to Aggressive Financial Reporting. *The Accounting Review*, *84*, 467-496. <https://doi.org/10.2308/accr.2009.84.2.467>
- Gupta, S., & Newberry, K. (1997). Determinants of the Variability in Corporate Effective Tax Rates: Evidence from Longitudinal Data. *Journal of Accounting and Public Policy*,

- 16, 1-34. [https://doi.org/10.1016/S0278-4254\(96\)00055-5](https://doi.org/10.1016/S0278-4254(96)00055-5)
- Hamadi, M. (2010). Ownership Concentration, Family Control and Performance of Firms. *European Management Review*, 7, 116-131. <https://doi.org/10.1057/emr.2010.9>
- Handler, W. C. (1994). Succession in Family Business: A Review of the Research. *Family Business Review*, 7, 133-157. <https://doi.org/10.1111/j.1741-6248.1994.00133.x>
- Hanlon, M., & Slemrod, J. (2009). What Does Tax Aggressiveness Signal? Evidence from Stock Price Reactions to News about Tax Shelter Involvement. *Journal of Public Economics*, 93, 126-141. <https://doi.org/10.1016/j.jpubeco.2008.09.004>
- Harris, M., & Raviv, A. (1988). Corporate Governance: Voting Rights and Majority Rules. *Journal of Financial Economics*, 20, 203-235. [https://doi.org/10.1016/0304-405X\(88\)90045-1](https://doi.org/10.1016/0304-405X(88)90045-1)
- Haw, I. M., Hu, B. B., Hwang, L.-S., & Wu, W. (2004). Ultimate Ownership, Income Management, and Legal and Extra-Legal Institutions. *Journal of Accounting Research*, 42, 423-462. <https://doi.org/10.1111/j.1475-679X.2004.00144.x>
- Hillier, D., & McColgan, P. (2009). Firm Performance and Managerial Succession in Family Managed Firms. *Journal of Business Finance & Accounting*, 36, 461-484. <https://doi.org/10.1111/j.1468-5957.2009.02138.x>
- Kim, J.-B., & Yi, C. H. (2006). Ownership Structure, Business Group Affiliation, Listing Status, and Earnings Management: Evidence from Korea. *Contemporary Accounting Research*, 23, 427-464. <https://doi.org/10.1506/7T5B-72FV-MHJV-E697>
- Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance Matched Discretionary Accrual Measures. *Journal of Accounting and Economics*, 39, 163-197. <https://doi.org/10.1016/j.jacceco.2004.11.002>
- La Porta, R., Lopez-de-Silanes, F., Schleifer, A., & Vishny, R. (1999). Corporate Ownership around the World. *Journal of Finance*, 54, 471-517. <https://doi.org/10.1111/0022-1082.00115>
- La Porta, R., Lopez-de-Silanes, F., Schleifer, A., & Vishny, R. (2000). Investor Protection and Corporate Governance. *Journal of Financial Economics*, 58, 3-27. [https://doi.org/10.1016/S0304-405X\(00\)00065-9](https://doi.org/10.1016/S0304-405X(00)00065-9)
- La Porta, R., Lopez-de-Silanes, F., Schleifer, A., & Vishny, R. (2002). Investor Protection and Corporate Valuation. *Journal of Finance*, 57, 1147-1170. <https://doi.org/10.1111/1540-6261.00457>
- Lemmon, M. L., & Lins, K. V. (2003). Ownership Structure, Corporate Governance, and Firm Value: Evidence from the East Asian Financial Crisis. *Journal of Finance*, 58, 1445-1468. <https://doi.org/10.1111/1540-6261.00573>
- Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earnings Management and Investor Protection: An International Comparison. *Journal of Financial Economics*, 69, 505-527. [https://doi.org/10.1016/S0304-405X\(03\)00121-1](https://doi.org/10.1016/S0304-405X(03)00121-1)
- Morck, R. K., Stangeland, D. A., & Yeung, B. (2000). *Inherited Wealth, Corporate Control and Economic Growth: The Canadian Disease?* NBER Working Paper 6814.
- Oswald, S. L., Muse, L. A., & Rutherford, M. W. (2009). The Influence of Large Stake Family Control on Performance: Is It Agency or Entrenchment? *Journal of Small Business Management*, 47, 116-135. <https://doi.org/10.1111/j.1540-627X.2008.00264.x>
- Pérez-González, F. (2006). Inherited Control and Firm Performance. *American Economic Review*, 96, 1559-1588. <https://doi.org/10.1257/aer.96.5.1559>
- Sacristán-Navarro, M., & Gómez-Ansón, S. (2007). Family Ownership and Pyramids in the Spanish Market. *Family Business Review*, 20, 247-265. <https://doi.org/10.1111/j.1741-6248.2007.00100.x>

- 
- Shleifer, A., & Vishny, R. W. (1997). A Survey of Corporate Governance. *Journal of Finance*, 52, 737-783. <https://doi.org/10.1111/j.1540-6261.1997.tb04820.x>
- Smith, B. F., & Amoako-Adu, B. (1999). Management Succession and Financial Performance of Family Controlled Firms. *Journal of Corporate Finance*, 5, 341-368. [https://doi.org/10.1016/S0929-1199\(99\)00010-3](https://doi.org/10.1016/S0929-1199(99)00010-3)
- Villalonga, B., & Amit, R. (2006). How Do Family Ownership, Management, and Control Affect Firm Value? *Journal of Financial Economics*, 80, 385-417. <https://doi.org/10.1016/j.jfineco.2004.12.005>
- Wang, D. (2006). Founding Family Ownership and Earnings Quality. *Journal of Accounting Research*, 44, 619-656. <https://doi.org/10.1111/j.1475-679X.2006.00213.x>
- William, B.-C. (2006). *Offshore: The Dark Side of the Global Economy*. New York: St. Martin's Press.
- Wilson, R. J. (2009). An Examination of Corporate Tax Shelter Participants. *The Accounting Review*, 84, 969-999. <https://doi.org/10.2308/accr.2009.84.3.969>
- Wolfenzon, D. (1998). *A Theory of Pyramidal Ownership*. Mimeo, Cambridge, MA: Harvard University.