

**Political ties and corporate tax burden in Spain  
(Conexiones políticas y presión fiscal empresarial en España)**

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**ABSTRACT**

This work examines the relationship between political ties and tax burden in a sample of non-financial Spanish-listed firms during the period 2003–2013. Moreover, we analyse whether such incidence is dependent upon family control. In a context where political ties exist for business strategy reasons rather than for public policy ones, our results reveal that politically connected boards reduce tax burden. Thus, for politically connected firms, the benefits of tax avoidance strategies outweigh their associated costs and risks. Furthermore, our results also show that politically connected family firms increase tax burden. These results are consistent with family firms' distinctive features, increasing the costs and risks derived from strategies aimed at decreasing the tax burden in the presence of political ties. Alternatively, this latter result might also be explained by a greater need to legitimise corporate behaviour using tax policy for politically connected family firms.

**RESUMEN**

El trabajo analiza la incidencia de la presencia de conexiones políticas en la presión fiscal de las empresas no financieras cotizadas españolas durante el período 2003-2013. Adicionalmente, analizamos si dicha incidencia viene condicionada por la naturaleza familiar del propietario controlador. En un contexto en el que la presencia de conexiones políticas está justificada por razones de estrategia empresarial más que por el cumplimiento de objetivos estatales, los resultados revelan que los lazos políticos reducen la carga fiscal. De esta manera, para las empresas políticamente conectadas los beneficios de la adopción de estrategias fiscales orientadas a la disminución de la presión fiscal superan los costes y riesgos asociados a las mismas. Además, nuestros resultados revelan que las empresas conectadas bajo control familiar soportan mayor presión fiscal. Estos resultados son consistentes con las características distintivas de las empresas familiares, que incrementan los costes y riesgos derivados de la adopción de estrategias fiscales tendentes a la reducción de la presión fiscal en presencia de conexiones políticas. Alternativamente, nuestros resultados podrían venir explicados por una mayor necesidad de legitimar el comportamiento corporativo mediante el pago justo de impuestos en el caso de las empresas familiares políticamente conectadas.

## 1. INTRODUCTION

International tax scandals, such as those experienced by Starbucks, Apple, Amazon or Google, have increased the interest of media, professionals and academics in the different factors that might affect corporate tax planning. In the Spanish context, studying the determinants of tax planning becomes even more important because, according to the Global Competitiveness Report 2016–2017 (World Economic Forum, 2017), taxation is considered as one of the main problems of doing business in Spain. Additionally, recent scandals such as ‘Operation Lezo’ have revealed dubious activities between political and corporate elites. In this sense, according to Transparency International’s (2016) report, Spain and Italy are among the European countries with the highest levels of political corruption. All the above scandals have revived social and media interest in the potential consequences of political ties on firm performance, and particularly on their ability to affect corporate tax strategies.

However, in Spain, previous knowledge is anecdotal and mainly focused on scandals with relevant media attention. In this sense, Hanlon and Heitzman (2010) point out the need to analyse the causes and consequences of tax avoidance, in order to understand the role of taxes in corporate strategies. Previous studies have analysed the relationship between political ties and corporate tax policies in East Asia (Adhikari, Derashid, & Zhang, 2006; Wu, Wu, Zhou, & Wu, 2012; Zhang, Zhang, & Yi, 2016), showing lower levels of tax burden in politically connected firms. However, these results cannot be directly extrapolated to the continental European setting where the existence of links between firms and politicians is explained by unique factors that could differently shape insiders’ incentives regarding tax strategies.

In this context, using a sample of Spanish non-financial-listed firms in the 2003–2013 period, we analyse the relationship between the presence of ex-politicians on the board of directors and the corporate tax burden. Additionally, considering the importance of family control in continental European-listed firms (e.g. Anderson & Reeb, 2003; Claessens, Djankov, & Lang, 2000; Faccio & Lang, 2002; La Porta, López-de-Silanes, Shleifer, & Vishny, 1999; Shleifer & Vishny, 1997), we also analyse whether the relation between political ties and corporate tax burden might be affected by family control. Our results reveal a negative relationship between political ties and corporate tax burden, so that in politically connected firms, the adoption of strategies aimed at the reduction of the tax burden that entails more benefits than costs. Additionally, we find that those politically connected firms controlled by families show higher levels of tax burden than politically connected firms which are not under family control. These results could be explained by the distinctive features of family firms, increasing the risks and costs derived from the adoption of strategies aimed at the reduction of the tax

burden in the presence of political ties. Alternatively, these results could also be explained by a higher need to legitimise corporate behaviour using tax policy in politically connected family firms.

There is a difference in how our study contributes to the previous literature on the relationship between political ties and corporate tax policies. First, previous literature reveals that in East Asia the presence of political ties reduces corporate tax burden. However, in that context, the presence of political ties is mainly explained by the government's tendency to favour certain public policy objectives (industrialisation or social policy) (e.g. Adhikari et al., 2006; Wu et al., 2012; Zhang et al., 2016). Thus, our study adds to the previous literature by revealing a negative association between political ties and corporate tax burden also in a context where political ties exist for business strategy reasons rather than for public policy ones. Additionally, our study also provides novel evidence on the effect of family control on the relation between political ties and corporate tax burden.

The rest of the study is organised as follows. Section 2 provides the theoretical background and hypotheses. Section 3 develops the research design and methodology, and Section 4 provides the results. Finally, Section 5 shows the discussion and main conclusions.

## **2. THEORETICAL BACKGROUND AND HYPOTHESES**

### **2.1. Political ties and corporate tax burden**

Previous studies have analysed the relationship between political ties and corporate tax burden. Thus, considering a sample of firms from Malaysia, Adhikari et al. (2006) reveal that political ties, measured as the percentage of government ownership in a firm, reduce tax burden. These authors conclude that in a country where a 'relation-based' rather than a 'market-based' capitalism exists, political ties shape the corporate tax burden. Additionally, Wu et al. (2012) show that Chinese privately owned firms with a politically connected management exhibit lower corporate tax burden than Chinese privately owned firms without such political ties. Moreover, the authors do not draw the same conclusion for Chinese state-owned firms. Previous results might be explained by the fact that state ownership represents a more direct tie with the government and, consequently, the value of politically connected managers is diluted for state-owned firms. Finally, Zhang et al. (2016) show a negative relationship between state-pyramidal layers and effective tax rates, pointing out that in the Chinese context the pyramids created by the government protect local state-owned firms from political intervention.

However, the conclusions from these studies cannot be extrapolated to the continental European setting, because although in 'relationship-based' economies, political ties arise for a combination of public policy and corporate factors (Adhikari et al., 2006), the relevance of each factor might differentially shape insiders' incentives regarding corporate tax strategies. Hence, in East Asia, the

main reason for the existence of political ties is the government's tendency to favour certain public policy actions, like providing support to strategic industries or certain ethnic groups. Conversely, in continental Europe, the presence of political ties is mainly explained by corporate rather than public policy reasons. More exactly, in this latter context, political ties are conceived as a way to provide strategic resources to the firm, such as knowledge or experience. Moreover, while in East Asia, the existence of state-owned firms is quite common (Adhikari et al., 2016), in continental Europe, it is practically non-existent, so that the political links usually arise when people who were previously engaged in politics are later on appointed as directors, since it is not possible to hold a political position and sit on a company's board of directors at the same time. The above supports the notion that it is corporate rather than public policy factors that explain the existence of political ties in the Spanish case. In the current work, the role of ex-politicians on the board as a source of strategic resources (e.g. Agrawal & Knoeber, 2001; Faccio, 2006; Goldman, Rocholl, & So, 2009) lies within a context characterised by weak investor protection, scarcely developed capital markets, and a significant presence of dominant shareholders with the ability and incentives to actively monitor managers (e.g. Cuervo, 2002; Faccio & Lang, 2002; La Porta et al., 1999; Santana & Aguiar, 2006). Considering these characteristics, both the academic literature (e.g. Cuervo García, 2002; Dahya, Dimitrov, & McConnell, 2008; Durnev & Kim, 2005; Kim, Kitsabunnarat-Chatjuthamard, & Nofsinger, 2007) and the World Bank (World Economic Forum, 2017) point out that in Spain the board of directors is not independent enough to effectively monitor insiders. Thus, dominant owners have the power to influence the composition of the board as well as their functions and, in such a context, the appointment of politically connected directors might shape the dominant owners' incentives regarding corporate tax policy.

To be more precise, political ties could provide experience and knowledge about certain tax policies, herein creating opportunities to reduce the corporate tax burden. In addition, since tax laws are not easy to understand due to their complexity and the existence of alternative interpretations (Slemrod, 2004), the presence of political ties could provide an important safeguard against future sanctions and the risk of litigation. Moreover, political connections could provide the firm with access to public contracts and alternative sources of capital (e.g. bank financing) under favourable conditions (Faccio, 2006). This would reduce the ability of capital markets to discipline insiders who adopt risky strategies aimed at reducing the corporate tax burden. All the above could lead to an increase in the benefits and a decrease in the risks and costs associated with the adoption of these tax strategies, increasing politically connected firms' tendency to adopt them. Therefore, we predict a reduction in the corporate tax burden for those politically connected firms.

However, agency theory may not completely explain all the dynamics underlying the political ties–tax burden relation. Thus, considering the stakeholder and legitimacy theories, Lanis and Richardson (2011) argue that firms seek to legitimise and sustain their relationships in order to survive. Following this argument, since the presence of political ties increases scrutiny from investors and the media (e.g. Boubakri, Guedhami, Mishra, & Saffar, 2012; Chaney, Faccio, & Parsley, 2011; Fan & Wong, 2002; Riahi-Belkaoui, 2004), politically connected firms could be more interested than unconnected ones in legitimising their corporate behaviour through the fair payment of taxes. By so doing, these firms would avoid both legal actions and the loss of reputation, which could compromise the benefits derived from the existence of political ties (e.g. Chen, Chen, Cheng, & Shevlin, 2010; Hanlon & Slemrod, 2009; Slemrod, 2004). As a consequence, politically connected firms might be less likely to adopt strategies aimed at reducing the corporate tax burden. Thus, considering that the agency theory predicts a negative incidence of political ties on corporate tax burden and the stakeholder and legitimacy theories predict a positive relationship, we test the following hypotheses:

*H1. Political ties affect corporate tax burden.*

*H1a. Political ties positively affect corporate tax burden.*

*H1b. Political ties negatively affect corporate tax burden.*

## **2.2. Political ties and tax burden in family firms**

According to Shleifer and Vishny (1997), La Porta et al. (1999), and Anderson and Reeb (2003), an important percentage of continental European-listed firms are controlled by families that retain high ownership stakes, poorly diversified portfolios, have long investment horizons, and actively participate in the firm management. Thus, previous literature has pointed out that the identity of large family owners has important implications for corporate strategy and performance (e.g. Galve & Salas, 1995; Thomsen & Pedersen, 2000). Moreover, in an institutional setting where ownership concentration is prevalent, as occurs in continental Europe, main differences arise because of the type of controlling owner rather than ownership concentration (Cascino, Pugliese, Mussolino, & Sansone, 2010).

Compared to non-family firms, family firms are more likely to establish political ties for several reasons. Thus, oligarchic families have innate advantages as political rent-seekers due to blood links with political elites (e.g. Bertrand & Schoar, 2006; Morck & Yeung, 2004). Moreover, the controlling families consider their firms as an asset that is not to be consumed within their lifetimes but is to be passed on to their descendants (Anderson & Reeb, 2003). Thus, political elites may prefer dealing with family firms, due to the potential stability attributable to this kind of relationship (Morck & Yeung, 2004).

Moreover, previous literature has pointed out that special features of family firms might determine corporate tax planning. Thus, Chen et al. (2010) show that family firms are less tax aggressive than non-family firms, since family owners prefer to avoid the non-tax costs associated with tax avoidance strategies. Monterrey, Sánchez & Fernandez (2010) reveal that, also in the Spanish context, family firms are less tax aggressive. Thus, these authors consider family firms to be risk-averse, consequently adopting more conservative tax strategies to avoid potential tax inspections and sanctions. On the other hand, Badertscher, Katz, and Rego (2013) show that firms with less-diversified portfolios and greater ownership concentration are less likely to adopt risky tax policies.

Hence, the increase in scrutiny over managers' behaviour which causes the existence of political ties (e.g. Boubakri et al., 2012; Chaney et al., 2011; Fan & Wong, 2002; Riahi-Belkaoui, 2004), together with the special features of family firms (poorly diversified portfolios and long-term investment horizons), could lead these firms to be more vulnerable to political costs and a loss of reputation derived from the adoption of strategies aimed at reducing the corporate tax burden. Since this reputation loss could jeopardise the advantages of political ties consequently affecting the firm survival, in politically connected family firms, the costs and risks derived from the adoption of strategies aimed at reducing the corporate tax burden are greater than their benefits. Thus, according to previous reasoning, a positive relationship between political ties and tax burden is expected in family controlled firms.

Furthermore, according to stakeholder and legitimacy theories, the special features of family firms could make them more likely to legitimise their corporate behaviour through the fair payment of taxes. Thus, since risky strategies aimed at reducing corporate tax burden could be conceived as illegitimate and, consequently, a threat to the existence of political ties, politically connected family firms may be less likely to adopt risky tax strategies. Thus, we predict that the corporate tax burden will be higher in politically connected family firms.

Therefore, since the agency theory and both the stakeholder and legitimacy theory predict higher levels of tax burden for politically connected family firms, we test the following hypothesis:

*H2. In politically connected firms, family control increases corporate tax burden.*

### 3. METHODOLOGY

#### 3.1. Sample

From the OSIRIS database (Bureau van Dijk), the initial sample included the consolidated financial reports of Spanish-listed firms at the end of 2013. Considering the sectorial classification from the Madrid stock exchange (Bolsa de Madrid), we eliminated the sector Financial Services<sup>1</sup>. Moreover, in the context of Spanish-listed companies, Monterrey & Sánchez (2015) address their study including firm-year observations with negative pre-tax income. Considering our study is addressed in the same market, we apply the same procedure<sup>2</sup>. Finally, we apply the Hadi (1994) methodology to delete outliers (6.7% of the total sample). As a result, our final sample includes a non-balanced panel with 782 firm-year observations for the period 2003–2013. In Table 1, we show the distribution of the observations, classified by year and industry.

*PLEASE, INSERT TABLE 1 ABOUT HERE*

#### 3.2. Variables and sources of information

##### 3.2.1. Tax burden

Hanlon and Heitzman (2010) show a detailed discussion on the different variables used in the empirical tax avoidance literature, highlighting their benefits and limitations. In our study, we use the effective corporate tax rate (ETR) as the first proxy for corporate tax burden. Following Plesko (2003), the ETR is a robust measure of current year tax rates. In Spain, several authors have analysed tax avoidance using the ETR (e.g. Calvé, Labatut & Molina, 2005; Fernández, 2004; Fernández & Martínez, 2006; Fonseca, Fernández & Martínez, 2011; Martínez, 2015; Molina, 2005, 2012; Romero, Molina & Labatut, 2009). Thus, from the OSIRIS database, the ETR is measured as the tax income divided by the pre-tax income (e.g. Balakrishnan, Blouin, & Guay, 2012; Chen et al., 2010; Kubata, Lietz, & Watrin, 2013; McGuirre et al., 2014; Monterrey & Sánchez, 2015; Rego, 2003; Zimmerman, 1983):

$$ETR_{it} = \frac{Taxincome_{it}}{Pretaxincome_{it}}$$

According to Kubata et al. (2013), the use of the ETR has certain advantages. First, since it is a variable obtained from the financial statements, it is available to investors for a long period of time. Second,

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<sup>1</sup> More exactly, we eliminated the following subsectors: Banks, Insurance, Portfolio and Holding, Real Estate and Others, Investment Services, and SOCIMI.

<sup>2</sup> We also run the main regressions, eliminating the observations with negative pre-tax income, and no relevant changes were obtained (these results are available upon request).

the ETR is used by stakeholders to compare firms, both inside a country and across different jurisdictions.

However, Dyreng, Hanlon, and Maydew (2008) posit that the annual ETR is usually volatile and could not predict the long-run effective corporate tax rate. Consequently, the use of annual ETRs to examine tax avoidance in the long run could lead us to biased conclusions about corporate tax behaviour. To solve this problem, a number of authors propose a long-run measure that has been used in most recent studies (e.g. Ayers, Laplante, & McGuire, 2010; Balakrishnan et al., 2012; Kubata et al., 2013; Monterrey et al., 2010). In the current study, we also use a long-run measure of tax avoidance as an alternative dependent variable. In our study, we follow Balakrishnan et al. (2012) defining a 3-year cumulative ETR as follows:

$$3Y\_ETR_{it} = \frac{\sum_{t-2}^t Tax\ expense_{it}}{\sum_{t-2}^t Pretax\ income_{it}}$$

### 3.2.2. Political ties and family firms

The massive privatisations that occurred in Spain in recent decades have led companies to appoint ex-politicians onto the board of directors. Thus, almost half of Spanish listed firms have politically connected boards (e.g. Bona, Pérez & Santana, 2014; Guerra, Bona & Santana, 2015).

Politicians' and managers' incentives to be opaque could explain the low level of transparency commonly associated with the links between corporate and political elites (e.g. Bona et al., 2014; Leuz & Oberholzer-Gee, 2006). This fact, together with the absence of a generally accepted definition of politically connected firms, makes an analysis of the incidence of these connections on corporate behaviour difficult (Chaney et al., 2011). The data to capture the existence of political ties are obtained from Guerra et al. (2015). These authors consider the presence of politically connected boards as a proxy for the existence of political ties (e.g. Bona-Sánchez et al., 2014; Boubakri et al., 2012; Chaney et al., 2011; Chen, Li, Zu, & Sun, 2011; Duchin & Sosyura, 2012; Faccio, 2006; Goldman et al., 2009). Since Guerra Pérez et al. (2015) include data from 2003 to 2012, we extend the previous database by including data from 2013. Thus, we define POLITICS as a dummy variable that takes a value of 1 if at least one of the members of the board of directors has engaged in politics in the past, holding offices in European, Spanish or local government, and zero otherwise.



To identify family controlled firms, we use the data from Bona et al. (2014) and Guerra Pérez et al. (2015). These authors use the control chain methodology to identify the dominant shareholder in Spanish-listed firms during the period 2003–2012. We also extend this sample by including data from 2013. Thus, we define the variable FAMOWN as a dummy variable that takes the value of 1 if the dominant shareholder of the firm retains both directly or indirectly a percentage of voting rights no lower than 20% and this owner is a family or an individual, and zero otherwise.

### *3.2.3. Control variables*

We have included a set of variables that could affect the corporate tax rate. Thus, considering previous studies in the Spanish context (e.g. Bona, Perez & Santana, 2011; Bona-Sánchez et al., 2014; López & Santana, 2015, 2011; Ruiz & Santana, 2009; Sacristán & Gómez, 2007; Santana-Martin & Aguiar-Díaz, 2006), we include the dominant shareholder's voting rights (VOTE) using the control chain methodology (e.g. Claessens et al., 2000; Faccio & Lang, 2002; La Porta et al., 1999). Furthermore, Fama and Jensen (1983) argue that ownership concentration increases risk aversion. Since some strategies aimed at reducing effective tax rates might be risky, we expect a positive relationship between ownership concentration and corporate tax burden (Badertscher et al., 2013; Chen et al., 2010).

Moreover, Rego (2003) posits that the economies of scale derived from tax planning could explain the lower ETR levels in the case of multinational corporations. Moreover, they show that the ETRs get lower as the multinational corporation becomes larger. Therefore, we include two additional variables, INTERNAT, that measures the relation between international sales and total assets; and SIZE, calculated as the natural logarithm of total assets. However, regarding this latter variable, it is important to note that the incidence of size on the ETR is not clear in the previous literature (e.g. Badertscher et al., 2013; Chen et al., 2010; McGuire et al., 2014; Minnick & Noga, 2010; Rego, 2003; Zimmerman, 1983).

Moreover, we include the variable return-on-assets (ROA), measured as income before interest and taxes divided by total assets. There is no consensus on the incidence of this variable on the ETR. Thus, while some authors posit a positive relationship between the ROA and corporate tax burden (Calvé et al., 2005; Chen et al., 2010; Fernández Rodríguez, 2004; Plesko, 2003), others show a negative relationship (Derashid & Zhang, 2003; Frank, Lynch, & Rego, 2009; Lisowsky, 2010; Zhang et al., 2016).

To control for the incidence of leverage on corporate tax burden, we include the variable LEV, measured as the total debt divided by total assets. While some authors show a negative incidence of leverage on the corporate tax burden (e.g. Calvé Pérez et al., 2005; Fernández Rodríguez, 2004; Plesko, 2003; Richardson & Lannis, 2007), others posit a positive one (e.g. Chen et al., 2010; Feeny, Gillman, & Harris, 2006).

Some studies have shown that the size of the board of directors could affect tax avoidance strategies. Thus, we consider the variable BOARDSIZE, measured as the natural logarithm of the board size. Regarding this variable, Minnick and Noga (2010) show that as the number of board members increases, domestic ETR reduces; however, Monterrey Mayoral and Sánchez Segura (2015) do not find a significant incidence of board size on the corporate tax burden.

Finally, since previous studies have shown that capital intensity could affect corporate tax planning, we include the variable CI, measured as the total of non-current assets divided by the total assets. In this sense, previous empirical evidence shows inconclusive results regarding the incidence of CI on ETR (Chen et al., 2010; Fernández Rodríguez, 2004; Janssen & Buijnk, 2000; Monterrey et al., 2010; Plesko, 2003).

### 3.3. Estimation model

The regressions have been estimated using the generalised method of moments methodology (GMM) developed by Arellano and Bond (1991) and modified by Arellano and Bover (1995) and Blundell and Bond (1998). Thus, we control for endogeneity problems<sup>3</sup> in our models<sup>4</sup>.

In this way, we estimate the following regressions:

*Hypothesis 1:*

$$ETR_{it} = \gamma_0 + \gamma_1 POLITICS_{it} + \gamma_2 VOTE_{it} + \gamma_3 INTERNAT_{it} + \gamma_4 ROA_{it} + \gamma_5 LEV_{it} + \gamma_6 SIZE_{it} + \gamma_7 BOARDSIZE_{it} + \gamma_8 CI_{it} + \mu_k + \theta_j + \epsilon_{it} \quad (1)$$

$$3Y\_ETR_{it} = \gamma_0 + \gamma_1 POLITICS_{it} + \gamma_2 VOTE_{it} + \gamma_3 INTERNAT_{it} + \gamma_4 ROA_{it} + \gamma_5 LEV_{it} + \gamma_6 SIZE_{it} + \gamma_7 BOARDSIZE_{it} + \gamma_8 CI_{it} + \mu_k + \theta_j + \epsilon_{it} \quad (2)$$

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<sup>3</sup> Following Greene (2000) and Wooldridge (2002), we broadly define endogeneity bias as any situation where the disturbance term of the structural equation is correlated with one or more independent variables.

<sup>4</sup> See Bona-Sánchez et al. (2014) for a detailed explanation of the methodology.

*Hypothesis 2:*

$$ETR_{it} = \gamma_0 + \gamma_1 FAMOWN_{it} + \gamma_2 VOTE_{it} + \gamma_3 INTERNAT_{it} + \gamma_4 ROA_{it} + \gamma_5 LEV_{it} + \gamma_6 SIZE_{it} + \gamma_7 BOARDSIZE_{it} + \gamma_8 CI_{it} + \mu_k + \theta_j + \epsilon_{it} \quad (3)$$

$$3y\_ETR_{it} = \gamma_0 + \gamma_1 FAMOWN_{it} + \gamma_2 VOTE_{it} + \gamma_3 INTERNAT_{it} + \gamma_4 ROA_{it} + \gamma_5 LEV_{it} + \gamma_6 SIZE_{it} + \gamma_7 BOARDSIZE_{it} + \gamma_8 CI_{it} + \mu_k + \theta_j + \epsilon_{it} \quad (4)$$

The dummy variable  $\mu_k$  controls for year effects (changes in tax rules) and  $\theta_j$  controls for industry effects, since tax planning could be affected by the industry in which the firms operate. Finally,  $\epsilon_{it}$  is the error term.

## 4. RESULTS

### 4.1. Descriptive analysis

We first analyse the tax burden along the period considered in our study. Thus, in Table 2 (panel A), we show the annual evolution of ETR and 3Y\_ETR. The highest average value of the ETR is 25% (year 2013), while the lowest average value is 18% (years 2007 and 2010). Similarly, the highest average value of 3Y\_ETR is 24% (year 2013), while the lowest average value is 19% (year 2008). Consistent with previous studies addressed in the Spanish market (e.g. Fernández Rodríguez, 2004; Monterrey Mayoral & Sánchez Segura, 2015), the annual average value for both variables is approximately 21%. Thus, in the Spanish case, listed firms show lower ETRs than non-listed companies (e.g. Calvé Pérez et al., 2005; Fernández Rodríguez & Martínez Arias, 2006; Monterrey & Sánchez, 2010; Romero et al., 2009).

Moreover, the minimum percentage of politically connected firms is 47% (year 2004) and the maximum is 59.1% (2011), being all the percentages over 55% since 2009. Thus, consistent with previous studies (Bona-Sánchez et al., 2014; Guerra et al., 2015), about half of the sample firms are politically connected.

Panel B shows the descriptive statistics for politically connected and unconnected firms. The means difference test reveals that the two groups do not differ in terms of ETR and 3Y\_ETR. However, the univariate test shows that politically connected firms have significantly higher international activity, ROA, size, board size and capital intensity than unconnected ones.

Regarding the correlation matrix, panel C shows significant correlation levels between ETR and 3Y\_ETR, but this is not relevant in our study because both variables are never included simultaneously in the same regression model. Moreover, we calculate the variance inflation factor (VIF) for each of the regression model variables. Since the highest VIF is below 5 (Studenmund, 1997), multicollinearity is not a problem in our models.

*PLEASE, INSERT TABLE 2 ABOUT HERE*

#### **4.2. Political ties and corporate tax burden**

To test our first hypothesis, we run the regression models of the equations Equation (1) y Equation (2) (Table 3, models 1 and 2). The results show a negative incidence of political ties on corporate tax avoidance (Model 1,  $\chi_1 = -0.22$ ; Model 2,  $\chi_1 = -0.16$ ). Thus, the results reveal a lower level of ETR for politically connected firms. These results are consistent with hypothesis H1a, which posits that in politically connected firms, the benefits resulting from risky tax planning aimed at reducing the corporate tax burden are higher than the costs.

To test hypothesis 2, we run the regression models of Equations (3) and (4) (Table 3, models 3 and 4) using the subsample of politically connected firms. Our results show a positive effect of family control on corporate tax burden for politically connected firms (Model 3,  $\chi_1 = 0.07$ ; Model 4,  $\chi_1 = 0.001$ ). Thus, compared with politically connected non-family firms, politically connected family ones show a higher ETR. These results are consistent with hypothesis H2 and show that the special features of family-controlled firms affect the corporate tax burden in the presence of political ties. Our results particularly show that in politically connected family firms, the costs and risks derived from the adoption of strategies aimed at reducing the corporate tax burden are greater than their benefits. Alternatively, our results are consistent with family-controlled firms trying to legitimise their corporate behaviour through the fair payment of taxes.

Regarding the control variables, the results show a positive incidence of the dominant shareholder's voting rights on the corporate tax burden (coefficient on the variable VOTE is positive in all regressions). This result is consistent with Chen et al. (2010) and Badertscher et al. (2013) and reveals that ownership concentration reduces insiders' incentives to adopt risky tax strategies.

The coefficients on INTERNAT, ROA, LEV, SIZE and CI are negative and statistically significant, showing that as the external sales, return-on-assets, leverage, size and capital intensity increases, the corporate tax burden decreases. These results are consistent with the previous literature. Finally, our results also

reveal that as board size increases so, too, does the corporate tax burden. This could be explained by the difficulty with reaching a consensus in firms with a lot of directors on the board.

*PLEASE, INSERT TABLE 3 ABOUT HERE*

### **4.3. Sensitivity analysis**

To test the robustness of our results, we use alternative measures of our dependent and independent variables. Thus, in Table 4 (models 5, 6, 7 and 8), we measure the corporate tax burden using another variable built on the basis of the taxes paid by the firm, instead of the tax expense (e.g. Chen et al., 2010; McIntyre & Nguyen, 2000; Monterrey Mayoral & Sánchez Segura, 2015; Rego, 2003; Zimmerman, 1983). Consequently, we define CASH\_ETR, as taxes paid divided by pre-tax income, and 3Y\_CASH\_ETR, calculated as taxes paid from t to t-2 divided by pre-tax income from t to t-2<sup>5</sup>. Moreover, we consider a third measure of corporate tax burden, based on the total amount of deferred taxes (Table 4, models 9 to 10), which represent taxes that will be paid or refunded in the future (Monterrey Mayoral & Sánchez Segura, 2015). Thus, we define DEFTAX, measured as the total deferred taxes divided by total assets. As shown in Table 4, results using the alternative measures are similar to those obtained in Table 3.

*PLEASE, INSERT TABLE 4 ABOUT HERE*

To analyse whether our results are affected by the way in which we have defined political ties, we use two alternative measures of political ties. Thus, in models 11 and 12, we use the variable %POLITICS, measured as the percentage of ex-politicians on the board. Moreover, models 13 to 14 include the variable HIGHPOLITICS, a dummy variable that takes the value of 1 if at least one of the members of the board has held a high-level political position at the European or Spanish level in the past, and zero otherwise. Consequently, in this latter measure, we do not consider board members that have been engaged in local political positions in the past. The results are reported in Table 4 and also show (see Table 3) that political ties reduce the tax burden in Spanish listed firms.

Finally, we have used a more restrictive definition of a family firm, considering a percentage of voting rights of 50% or above (instead of 20%) to identify a shareholder as the dominant shareholder. Thus, we define FAMOWN50 as a dummy variable that takes a value of 1 if the main owner of the firm retains both directly or indirectly a percentage of voting rights no lower than 50% and this owner is a family

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<sup>5</sup> We obtain the information about taxes paid by the firms from the cash flow statement, available on the web of the Spanish Security Exchange Commission.

or an individual, and zero otherwise. The results (models 15 and 16 in Table 4) do not differ from those shown in Table 3.

## **5. DISCUSSION AND CONCLUSIONS**

The study extends the knowledge about the incidence of corporate governance mechanisms on listed firms' tax planning by analysing the relationship between political ties and corporate tax burden. In line with Monterrey et al. (2010), theoretical studies posit that corporate tax strategies depend on three key factors (i) the likelihood of tax aggressive planning being detected, (ii) the amount of sanctions derived from that behaviour, and (iii) insiders' risk aversion.

Considering a sample of non-financial Spanish-listed firms along the period 2003–2013, our results reveal that political ties reduce corporate tax burden. Thus, in politically connected firms, the benefits from the adoption of strategies aimed at reducing the corporate tax burden are greater than their associated risks and costs. These findings are in line with those obtained by Adhikari et al. (2006), Wu et al. (2012), and Zhang et al. (2016) in East Asia, an institutional environment which clearly differs from the one in Spain. More exactly, in contrast with continental Europe, political ties in East Asia are mainly driven by public policy actions, like providing support to strategic industries or certain ethnic groups. Thus, our results show that in an institutional context where political ties mainly exist for business strategy reasons such as providing the firm with knowledge and experience, rather than for public policy ones, political ties also reduce the corporate tax burden.

Additionally, our results reveal that compared with politically connected non-family firms, politically connected family firms show higher levels of corporate tax burden. These results are consistent with the special features of family firms, increasing the costs and risks arising from the adoption of strategies aimed at reducing the corporate tax burden in the presence of political ties. Alternatively, these results are also consistent with a higher tendency of politically connected family firms to legitimise their corporate behaviour through the fair payment of taxes. Thus, the presence of political ties does not alter family firms' propensity to adopt less risky tax strategies, in line with Chen et al. (2010), Monterrey Mayoral et al. (2010), and Badertscher et al. (2013).

We contribute to the previous literature in different ways. First, we show new evidence on the relationship between political ties and the corporate tax burden in a context where political ties exist for business strategy reasons rather than for public policy ones. If we had opted to only study East Asian countries, it would not have been possible to come to this conclusion. Thus, we conclude that in

the Spanish context, the costs and benefits arising from the presence of political ties shape corporate tax planning. Second, our study contributes to the previous literature by showing novel evidence of the effect of family control on the corporate tax burden in the presence of political ties.

Our study presents important implications that could be extrapolated to other similar institutional settings. Thus, our findings are relevant to regulators, government, investors and auditors, by showing how the presence of political ties shapes corporate tax risk in a context where political ties exist for business strategy reasons rather than for public policy ones. Thus, political ties could provide a signal of the need to increase scrutiny over corporate tax strategies. The results on the incidence of family control on corporate tax burden in the case of politically connected firms are also interesting to those agents. Thus, in the Spanish case, family control increases the corporate tax burden in the presence of political ties, thereby decreasing corporate tax risk.

Our study is not without limitations. Thus, we capture the existence of political ties by considering the presence of politically connected boards. However, we did not consider other informal political ties. Furthermore, the study suggests several avenues for future research. As an example, it could be interesting to analyse the effect of political ties on tax burden in the case of firms controlled by institutional owners, differentiating between banks and mutual funds. We leave such an inquiry for future research.

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**Table 1. Sample distribution.**

<b>Panel A. Observations by year</b>	
2003	56
2004	60
2005	65
2006	72
2007	73
2008	74
2009	79
2010	80
2011	78
2012	76
2013	69
<b>Panel B. Observations by industry</b>	
Petrol and Power	77
Basic Materials, Industry and Construction	250
Consumer Goods	225
Consumer Services	104
Financial Services and Real Estate	76
Technology and Telecommunications	50

**Table 2. Descriptive Statistics and Correlation Matrix**

<b>Panel A. Effective tax rates and political connections</b>											
	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
<b>ETR (%)</b>	22	21	20	22	18	21	21	18	22	21	25
<b>3Y_ETR (%)</b>			20	21	20	19	21	21	21	22	24
<b>Politically connected firms (%)</b>	49.3	47.9	56.5	55.4	55.4	53.2	55.9	58.1	59.1	56.04	55.6
<b>Politically connected family firms (%)</b>	39.47	42.86	50.00	51.72	54.29	54.69	52.11	50.75	53.85	57.63	55.93
<b>Panel B. Descriptive Statistics</b>											
	<b>Politically connected firms (N=430)</b>			<b>Non-politically connected firms (N=352)</b>			<b>t-Student</b>				
	<b>Mean</b>	<b>Median</b>	<b>Standard deviation</b>	<b>Mean</b>	<b>Median</b>	<b>Standard deviation</b>					
<b>ETR</b>	0.22	0.25	0.18	0.21	0.24	0.20	1.57				
<b>3Y_ETR</b>	0.22	0.24	0.15	0.22	0.24	0.15	-0.18				
<b>VOTE</b>	1.00	1.00	0.00	0.00	0.00	0.00	0.41				
<b>INTERNAT</b>	29.33	22.34	19.16	27.92	24.26	18.69	4.20***				
<b>ROA</b>	0.46	0.47	0.35	0.40	0.43	0.26	2.12**				
<b>LEV</b>	0.05	0.04	0.04	0.04	0.04	0.03	0.34				
<b>SIZE</b>	0.65	0.68	0.18	0.63	0.64	0.18	13.18***				
<b>BOARDSIZE</b>	2.42	2.39	0.29	2.25	2.19	0.30	8.46***				
<b>CI</b>	0.59	0.75	0.22	0.53	0.54	0.21	3.46***				

Table 2

Panel C. Correlation matrix											
	ETR	3Y ETR	POLITICS	VOTE	INTERNAT	FAMOWN	ROA	LEV	SIZE	BOARDSIZE	VIF
3Y_ETR	0.63***										
POLITICS	0.001	0.002									1.20
VOTE	-0.03	0.01	0.03								1.08
INTERNAT	-0.0097	-0.006	0.09*	-0.12***							1.04
FAMOWN	-0.02	-0.09	0.04	0.88***	-0.10						1.04
ROA	-0.02	-0.02	0.07**	0.05*	-0.01**	-0.08**					1.63
LEV	0.03	0.01	0.01	0.16***	0.01	0.15***	-0.39***				1.56
SIZE	0.04	0.08*	0.43***	0.07**	0.009	-0.12***	0.23***	0.21***			1.31
BOARDSIZE	0.12***	0.01	0.25***	-0.07**	-0.01	-0.20***	0.10***	0.20***	0.57***		1.53
CI	-0.01	0.05	0.11***	-0.12***	0.10***	-0.10***	0.002	-0.10***	0.27***	0.314***	1.22

Variables: *ETR*, is the effective tax rate, measured as tax income divided by pretax income; *3Y ETR*, is the three-year cumulative ETRs. *POLITICS*, is a dummy variable that takes the value of 1 if at least one of the members of the board of directors has ever engaged in politics, holding offices in European, Spanish or local government, and zero otherwise. *VOTE*, percentage of dominant shareholder's voting rights. *FAMOWN*, is a dummy variable that takes the value of 1 if the main owner of the firm retains both directly or indirectly a percentage of voting rights not lower than 20% and this owner is a family or an individual, and zero otherwise. *INTERNAT*, is the relation between international sales and total assets. *ROA*, is the return-on-assets, measured as income before interest and taxes divided by total assets. *LEV*, is the total debt divided by total assets. *SIZE*, is the natural logarithm of the total assets. *BOARDSIZE*, is the natural logarithm of the board size. *CI*, is the capital intensity, measured as non-current assets divided by total assets. \*\*\* p<0,01, \*\* p<0,05, \* p<0,1

**Table 3. Political connections and tax avoidance**

	Model 1 (ETR)	Model 2 (3Y_ETR)	Model 3 (ETR)	Model 4 (3Y_ETR)
<i>POLITICS<sub>it</sub></i>	-0.22*** (-3.27)	-0.16*** (-7.96)		
<i>FAMOWN<sub>it</sub></i>			0.07*** (11.74)	0.001*** (2.99)
<i>VOTE<sub>it</sub></i>	0.01*** (9.75)	0.002*** (4.74)		
<i>INTERNAT<sub>it</sub></i>	-0.21*** (-5.26)	-0.08*** (-4.99)	-0.65** (-2.42)	-0.02*** (-3.42)
<i>ROA<sub>it</sub></i>	-2.34*** (-11.40)	-0.7*** (-5.02)	-0.65* (-1.69)	-0.06*** (-3.01)
<i>LEV<sub>it</sub></i>	-0.82*** (-5.31)	-0.34*** (-5.23)	-1.92*** (-5.77)	-0.35** (-2.27)
<i>SIZE<sub>it</sub></i>	-0.04*** (-2.79)	-0.04*** (-6.25)	-0.27** (-2.34)	-0.007*** (-3.22)
<i>BOARDSIZE<sub>it</sub></i>	0.16* (1.65)	0.09*** (2.88)	1.23* (1.70)	0.02*** (2.73)
<i>CI<sub>it</sub></i>	-1.32*** (-7.81)	-1.89*** (-3.16)	-1.94*** (-7.13)	-0.11* (-1.89)
Constant	1.49*** (4.35)	-0.3** (-2.23)	-0.3** (-3.14)	0.34* (-1.80)
Year effects	<i>Sí</i>	<i>Sí</i>	<i>Sí</i>	<i>Sí</i>
Industry effects	<i>Sí</i>	<i>Sí</i>	<i>Sí</i>	<i>Sí</i>
Observations	782	601	430	338
Hansen test	61.85 (0.79)	57.62 (0.73)	57.62 (0.71)	31.75 (0.63)
m <sup>2</sup> test	-1.31 (0.19)	0.62 (0.53)	-1.01 (0.31)	1.78 (0.43)
z <sup>1</sup> test	49.36***	40.26***	54.25***	9.75***
z <sup>2</sup> test	38.93***	6.71***	10.05***	1.98***
z <sup>3</sup> test	20.76***	45.28***	8.72***	7.84***

Variables: *ETR*, is the effective tax rate, measured as tax income divided by pretax income; *3Y\_ETR*, is the three-year cumulative ETRs. *POLITICS*, is a dummy variable that takes the value of 1 if at least one of the members of the board of directors has ever engaged in politics, holding offices in European, Spanish or local government, and zero otherwise. *VOTE*, percentage of dominant shareholder's voting rights. *FAMOWN*, is a dummy variable that takes the value of 1 if the main owner of the firm retains both directly or indirectly a percentage of voting rights not lower than 20% and this owner is a family or an individual, and zero otherwise. *INTERNAT*, is the relation between international sales and total assets. *ROA*, is the return-on-assets, measured as income before interest and taxes divided by total assets. *LEV*, is the total debt divided by total assets. *SIZE*, is the natural logarithm of the total assets. *BOARDSIZE*, is the natural logarithm of the board size. *CI*, is the capital intensity, measured as non-current assets divided by total assets. Hansen, test of over-identifying restrictions, under the null hypothesis that all instruments are uncorrelated with the disturbance process. m2, statistic test for lack of second-order serial correlation in the first-difference residual. z1, Wald test of the joint significance of the reported coefficients. z2, Wald test of the joint significance of the time dummies. z3, Wald test of the joint significance of the industries dummies. \*\*\* p<0,01, \*\* p<0,05, \* p<0,1



Table 4. Political connections and tax avoidance. Sensitivity analysis

	Model 5 (ETR2)	Model 6 (3Y_ETR2)	Model 7 (CASH_ ETR)	Model 8 (3Y_CASH _ETR)	Model 9 (DEFTAX)	Model 10 (DEFTAX)	Model 11 (ETR)	Model 12 (3Y_ETR)	Model 13 (ETR)	Model 14 (3Y_ETR)	Model 15 (ETR)	Model 16 (3Y_ETR)
<i>POLITICS<sub>it</sub></i>	-0.89*** (-12.27)	-0.16*** (-5.48)			-0.003*** (-3.62)							
<i>FAMOWN<sub>it</sub></i>			0.02*** (5.45)	0.04*** (2.68)		0.08** (2.64)						
<i>FAMONW50<sub>it</sub></i>											1.65* (1.74)	0.16* (1.76)
<i>%POLITICS<sub>it</sub></i>							-0.80*** (-5.26)	-0.52*** (-6.22)				
<i>HIGHPOLITICS<sub>it</sub></i>									-0.37*** (-3.36)	-0.16*** (-7.02)		
<i>VOTE<sub>it</sub></i>	0.01*** (13.29)	0.093*** (3.92)			0.004 (1.04)		0.01*** (15.03)	0.002 (0.99)	0.01*** (10.14)	0.002*** (4.94)		
<i>INTERNAT<sub>it</sub></i>	-0.46*** (-4.75)	-1.99*** (-5.66)	-0.19** (-2.32)	-0.18* (-1.70)	-0.009*** (-8.82)	-0.007*** (-2.95)	-0.06* (-1.68)	-0.006*** (2.97)	-0.29*** (-4.71)	-0.09*** (-6.43)	-0.83 (-1.51)	-0.08* (-1.93)
<i>ROA<sub>it</sub></i>	-7.02*** (-11.98)	-0.03*** (-6.07)	-1.55*** (-2.91)	-2.03*** (-5.80)	-0.013*** (-3.37)	-0.05*** (-8.88)	-2.75*** (-9.94)	-0.007** (-2.15)	-2.17*** (-5.97)	-0.52*** (-3.33)	-2.51** (-2.08)	-0.84 (-1.41)
<i>LEV<sub>it</sub></i>	-1.15*** (-4.73)	-0.75*** (-10.29)	-0.59** (-2.55)	-0.12*** (-3.07)	-0.014*** (-5.74)	-0.07 (0.86)	-0.55*** (-3.55)	-0.15*** (-2.81)	-0.84*** (-4.62)	-0.31*** (-4.31)	-2.96* (-1.86)	-0.34 (-1.14)
<i>SIZE<sub>it</sub></i>	-0.03*** (-2.37)	-0.047*** (-13.30)	-0.01* (-1.72)	-0.02* (-1.82)	-0.004*** (-13.32)	-0.006*** (-7.50)	-0.02 (-1.32)	-0.01*** (-4.24)	-0.01*** (-2.88)	-0.04*** (-7.51)	-0.34 (-1.36)	-0.03 (-1.50)
<i>BOARDSIZE<sub>it</sub></i>	0.49***	0.89***	0.42***	0.21***	0.005***	0.002	0.18***	0.18***	0.28**	0.11***	0.64	0.20***

	(3.00)	(5.16)	(4.13)	(3.23)	(2.83)	(0.5)	(3.03)	(6.68)	(2.19)	(3.77)	(0.26)	(2.73)
$Cl_{it}$	-1.14***	-0.52	-0.39***	-1.19***	-0.037***	-0.033***	-0.60***	-0.38***	-0.83***	-0.46***	-1.11	-0.40**
	(-9.33)	(-1.58)	(-2.60)	(-3.24)	(-8.36)	(-3.31)	(-4.59)	(-4.05)	(-4.97)	(-4.31)	(-0.43)	(-2.50)
Constant	0.15	-0.12*	0.45	-2.00*	-0.06***	-0.06***	0.25	-0.29**	1.27***	-0.31**	2.15	0.27
	(0.96)	(-1.98)	(0.95)	(-1.89)	(-8.60)	(-8.60)	(0.93)	(-3.43)	(4.42)	(-2.36)	(0.44)	(0.99)
Year effects	Sí	Sí	Sí	Sí	Sí	Sí	Sí	Sí	Sí	Sí	Sí	Sí
Industry effects	Sí	Sí	Sí	Sí	Sí	Sí	Sí	Sí	Sí	Sí	Sí	Sí
Observations	529	303	529	303	782	430	782	601	782	601	430	338
Hansen test	54.51	42.40	18.75	21.66	65.80	32.75	72.08	60.28	36.76	56.54	13.39	14.24
	(0.65)	(0.77)	(0.76)	(0.77)	(0.89)	(0.91)	(0.74)	(0.67)	(0.62)	(0.94)	(0.79)	(0.87)
m <sup>2</sup> test	-1.24	0.32	-0.08	-0.47	-0.66	1.40	-1.33	1.58	-1.33	0.96	-0.98	0.20
	(0.21)	(0.75)	(0.93)	(0.63)	(0.50)	(0.16)	(0.18)	(0.12)	(0.18)	(0.33)	(0.32)	(0.8)
z <sup>1</sup> test	63.41***	88.16***	30.05**	9.30***	42.30***	22.67***	93.48***	43.74***	40.59***	37.63***	2.71***	3.22***
z <sup>2</sup> test	51.11***	85.60***	1.80***	1.39***	2.05*	5.54***	18.17***	18.84***	46.06***	3.16***	2.60***	17.6***
z <sup>3</sup> test	55.04***	18.50***	8.20***	3.66***	64.42***	2.90***	32.62***	53.10***	28.74***	20.49***	2.45***	14.91***

Variables: ETR, is the effective tax rate, measured as tax income divided by pretax income; 3Y\_ETR, is the three-year cumulative ETRs. CASH\_ETR, is the effective tax rate, measured as taxes paid divided by pretax income. 3Y\_CASH\_ETR, is the three year cumulative CASH\_ETR. DEFTAX, is deferred tax, measured as total deferred taxes divided by total assets. POLITICS, is a dummy variable that takes the value of 1 if at least one of the members of the board of directors has ever engaged in politics, holding offices in European, Spanish or local government, and zero otherwise. HIGHPOLITICS, is a dummy variable that takes the value of one if at least one of the members of the board held a high-level political position at the European or Spanish level in the past, and zero otherwise. VOTE, percentage of dominant shareholder's voting rights. FAMOWN, is a dummy variable that takes the value of 1 if the main owner of the firm retains both directly or indirectly a percentage of voting rights not lower than 20% and this owner is a family or an individual, and zero otherwise. INTERNAT, is the relation between international sales and total assets. ROA, is the return-on-assets, measured as income before interest and taxes divided by total assets. FAMOWN50, is a dummy variable that takes the value of 1 if the main owner of the firm retains both directly or indirectly a percentage of voting rights not lower than 50% and this owner is a family or an individual, and zero otherwise. LEV, is the total debt divided by total assets. SIZE, is the natural logarithm of the total assets. BOARDSize, is the natural logarithm of the board size. CI, is the capital intensity, measured as non-current assets divided by total assets. Hansen, test of over-identifying restrictions, under the null hypothesis that all instruments are uncorrelated with the disturbance process. m2, statistic test for lack of second-order serial correlation in the first-difference residual. z1, Wald test of the joint significance of the reported coefficients. z2, Wald test of the joint significance of the time dummies. z3, Wald test of the joint significance of the industries dummies. \*\*\* p<0,01, \*\* p<0,05, \* p<0,1.