DETERMINANTS OF BOARD COMPOSITION: EVIDENCE FROM TUNISIAN COMPANIES

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Abstract

This study focuses on the composition of boards of directors in the Tunisian context. We model the composition of the board of directors as a function of alternative governance mechanisms, some board characteristics and other control variables. On a sample of 97 Tunisian firms, we find evidence that the proportion of outsiders on the board of directors is positively associated with large block, institutional and overseas ownerships, and board size. We document that the CEO duality is associated with a decrease in the board independence. We fail to find an evidence that increased debt ratio to total assets is inversely associated with the outside board representation. While we predict a positive relationship between the board independence and the firm size, the organizational complexity and the quotation status; our results generally do not support this conjecture.

Keywords: board composition, corporate governance, agency conflicts, entrenchment.

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1. Introduction

The board of directors has long been recognized as a major structural mechanism to curtail managerial opportunism. In the modern corporation, the separation of ownership from control results in potential agency conflicts stemming from divergence between managerial and shareholder interests. In general, the small shareholders delegate their authority to the board of directors which is charged with the task of representing the shareholders' interests. The board delegates decision making to the managers and is responsible for determining long run targets of the company and for controlling managerial decisions. This situation leads to an agency problem, since the managers can use the firm's assets to serve their own interests in the detriment of those of the shareholders.

The central point of the effectiveness of any board of directors is its composition. From an agency perspective, the outside directors are objective and independent, especially in evaluating issues closely related to the fate of internal managers (Fama and Jensen, 1983). Outsiders have particular incentives to monitor the managers on behalf of the shareholders because of their reputation on the external labour market (Fama and Jensen, 1983).

As argued by (Prevost et al, 2002a), within an agency theoretical context, the determinants of the board composition can be classified in three major areas: the alternative corporate governance mechanisms, the other board characteristics and the potentially important control variables.

This study examines the determinants of the board composition in the context of the Tunisian market. Previous studies were conducted mostly in the US, UK and other comparatively large markets where the institutional environments differ greatly from that in Tunisia. Since institutional differences may have important implications for corporate governance in different countries (Shleifer and Vishny, 1997), the results of this study can thus enhance the understanding of how institutional differences impact on corporate governance.

Using a cross- sectional sample of 97 Tunisian firms, we find evidence that the proportion of outsiders on the board of directors is positively associated with large block, institutional and overseas ownerships, and board size. We document that CEO duality is associated with a decrease in board independence. We fail to find evidence that increased debt ratio to total assets is inversely associated with outside board representation. While we predict a positive relationship between board independence and firm size, organizational complexity and quotation status; our results generally do not support this conjecture.

The remainder of this paper is organised as follows. The next section briefly reviews the previous studies that have investigated the board composition. Section three gives a brief idea about of the formal legislative framework of the Tunisian corporate governance.

Section four describes our empirical design. Empirical results are reported and discussed in section five. Finally, section six serves as a conclusion.

2. Literature review

In this section we review two related strands of the literature that are relevant to this study. First we survey the area of board composition and whether or not boards are an effective means to control agency problems of the firm. Second, we review some of the studies that specifically model the determinants of board composition.

Fama and Jensen (1983) point out that the board of directors is the core of corporate governance and that its structure is so influential on its functions. They argue that outside directors are more efficient in monitoring the management and will not collude with the management. In this area, a large line of previous empirical studies has focused on the relationship between board independence and firm's performance (Baysinger and Butler, 1985; Rechner and Dalton, 1986; Hermalin and Weisbach, 1991; Beatty and Zajac, 1994; Bhagat and Black, 1999; Hermalin and Weisbach, 2002; etc.), following-on inconclusive results.

In addition to the studying of the relation between board independence and firm's performance, a number of studies has examined how boards accomplish some of the responsibilities commonly assigned to directors. Unlike the performance-related studies, theses studies of board actions have generally found significant results. In particular, these studies indicate that board independence is important. Board composition appears to affect the quality of decisions on CEO replacement (Weisbach, 1988; Dahya et al., 2002), responses to a hostile takeover (Byrd and Hickman, 1992; Shivdasani, 1993; Cotter et al. 1997), adoption of a poison pill (Brickley et al.1994), and the design of CEO compensation schemes (Core et al. 1999).

With regard to studies on the determinants of board composition, one of the earliest studies led by Hermalin and Weisbach (1988) who found that changes in board composition are influenced by the CEO succession process and firm's performance. Rediker and Seth (1995) report, on a sample of 81 banks holding companies, a substitutional effect between board independence and large shareholder's ownership, managerial shareholdings and inside directors' ownership. Fernandez and Arrondo (2002) reproduced this same study in the context of the Spanish market. The tests led on a sample of 149 companies listed on the Madrid Stock Exchange and over the period 1990-1997 found the same results as those of Rediker and Seth (1995). While Bathala and Rao (1995) support the substitution hypothesis between debt, dividend policy and inside ownership and outside board representation. They conclude tha there is a positive relationship between institutional holdings and board independence. Prevost et al. (2002a) find that the proportion of outside board members on the board is inversely related to corporate insider ownership and positively related to ownership concentration and debt leverage. Using a simultaneous equations approach, Prevost et al. (2002b) find that the proportion of outsiders on the board is negatively related to future growth, appears to be nonlinearly related to inside ownership and positively related to board size.

As a summary, the knowledge of the factors affecting the board composition seems to be an important step in understanding boards and their role in corporate governance. The existing body of studies following the determinants of board composition suggests that there is a causal relationship between several governance mechanisms, board characteristics and the outside board representation.

3. Corporate governance in Tunisia

At this point, it seems necessary to provide a brief summary of the formal legislative framework of the Tunisian corporate governance. Indeed, the institutional environment in Tunisia, as it pertains to corporate governance, is fundamentally different from that of the US, UK, Australia, and other relatively much larger and developed markets. In fact, these countries are characterised by a relatively strong market for corporate control and relatively dispersed stock ownership (Laporta et al. 1999) while Tunisia has a weak market for corporate control and concentrated stock ownership. Furthermore, it should be mentionned that Tunisia remains one of the rare countries that have not yet established a code of corporate governance.

The corporate legal framework comes essentially from "the Code *des sociétés commerciales* "(CSC, 2000) and is a primarily French civil law at its origin. The CSC (2000) gave companies large latitude in determining the characteristics of their boards. In fact, the board of directors of a limited company is composed of three members at least and twelve members at most (Article 189, CSC). Within these legal limits, the number of directors is freely fixed by the statutes which can envisage either a fixed number or a variable number and there are no rules governing the composition between executive and non-executive directors. Finally, the statutes of the company can choose the duality or the dissociation between the roles of chief executive officer and chairman of the board (Article 215, CSC).

4. Empirical Design

4.1- Hypotheses development

Ownership concentration

In a corporation characterized by diffused stock ownership, no individual shareholder has an incentive to monitor the managerial behaviour because he would incur all the supervisory costs however the benefits would be shared by the other shareholders. Nevertheless, the large blockholders of tightly held firms present important incentives to control managerial actions as they bear a high proportion of the negative consequences of non value maximising

actions (Demsetz and Lehn, 1985). Consistent with this view, the previous studies found that outside board proportion and ownership concentration are substitutes (Li, 1994; Rediker and Seth 1995; Fernandez and Arrondo, 2002). However, in the Tunisian context we may not necessarily find this inversed relationship. In fact, the excessively high ownership concentration figures in Tunisia imply that outside takeovers are not a viable discipling mechanism. Thus, given the weak market for corporate control in Tunisia and the absence of hostile takeovers, more outside directors may be required. Accordingly, a positive relationship would be expected between board independence and ownership concentration. Consistent with this assumption, Prevost et al. (2002a) documents a positive relationship between the ownership concentration and the proportion of outside directors on the board.

Our first hypothesis therefore is:

Hypothesis 1: *The proportion of the outside directors is positively related to the ownership concentration.*

Institutional holdings

Institutional investors can be seen as potential controllers of equity agency problems as their increased shareholding can give them a stronger incentive to monitor firm performance and managerial behaviour (Farinha, 2003). Historically, as noted by Bathala and Rao (1995), institutional investors dissatisfied with management or stock performance are known to pursue the "exit mechanism", i.e. selling the stock holdings. However, this mechanism is becoming costly because it may lead to a steep decline in the stock prices. Thus, institutional investors feel compelled to control managerial actions. The most direct and cost effective manner to do so is to increase board independence. Therefore, a positive relationship should exist between the proportion of outside board members and the proportion of institutional holdings. Bathala and Rao (1995) find a consistent evidence with this assumption.

Accordingly, our second hypothesis is:

Hypothesis 2: *The proportion of the outside directors is positively related to the institutional ownership.*

Foreign investors

Marchand and Paquerot (2004) argue that the presence of foreign investors appears to transform the rules of the French Corporate Governance. They base their presumption on Heidrick and Struggles study (1999) showing a certain correlation between the internationalization of the shareholder base and the "Anglo-Saxon" application of Corporate Governance. In addition, Simon (2003) points out that overseas investors seem to demand a higher standard of corporate governance from Hong Kong companies. Consistent with these assumptions, we predict that foreign investors tend to claim high standard of corporate governance from Tunisian firms, i.e. demand more board independence.

Thus, the following hypothesis is proposed:

Hypothesis 3: *The proportion of the outside directors is positively related to the foreign ownership.*

Debt financing

In the agency framework, debt financing is ascribed a significant role in mitigating agency problems. On one hand, the issue of debt instead of equity facilitates an increase in managerial ownership and therefore a greater alignment of interests between managers and shareholders (Jensen and Meckling, 1976). On the other hand, the contractual obligations associated with debt financing reduce the amount of free cash-flows which the managers could use in non value enhancing investments (Jensen, 1986). Additionally, debt forces managers to undertake fewer self-serving activities and become more efficient because of the threat of bankruptcy and the loss of reputation or dismissal (Grossman and Hart, 1982).

Debt financing negatively affects the capability of managers to incur in non optimal activities and in this way, could substitute the control by the board of directors. Consistent with this argument, Bathala and Rao (1995) find an inverse relationship between the proportion of outside board members and the debt leverage of the firm.

Consequently, we propose the following hypothesis:

Hypothesis 4: *The proportion of the outside directors is negatively related to the debt financing.*

Board size

As Dalton and Kesner (1987) report, there is evidence in the US and other countries that larger boards are associated with greater proportions of outside directors. Similarly, Denis and Sarin (1999) find that the board size is positively related to the fraction of independent outsiders.

Therefore we expect:

Hypothesis 5: *The proportion of the outside directors is positively related to the board size*

CEO duality

A further board characteristic that may have a significant impact on board composition is related to duality which occurs when the same person undertakes the combined roles of chief executive officer and chairman of the board. Prevost et al. (2002a) argue that CEOs who also assume the dual role of board chairmanship are likely to entrench their positions by stacking the board in their favour with insiders who are unlikely to be critical of their performance. Consistent with their assumption, the authors find that firms with CEOs who assume the chairmanship of the board tend to have fewer outside board members.

This leads us to propose:

Hypothesis 6: *The proportion of the outside directors is negatively related to the CEO duality*

4.2- Variable definition

OUTDIR is the dependent variable which refers to outside board representation. Similarly to Byrd and Hickman (1992) and Prevost et al. (2002a,b), we define outside directors as individuals who (1) are not employees of the firm; (2) do not have business ties (e.g. consultant, supplier, etc.) with the firm; and (3) do not have any apparent family relationship with the firm's CEO. We measure this variable by the proportion of outside directors to total directors on the board (Hermalin and Weisbach, 1988; Li, 1994; Bathala and Rao, 1995; Denis and Sarin, 1998; Prevost et al. 2002a,b; Fernandez and Arrondo, 2002; etc.).

The first four independent variables are the measures of the alternative mechanisms to control agency problems. Indeed, large shareholders (Bathala and Rao, 1995), institutional investors (Shleifer and Vishny, 1986 and Farinha, 2003) and foreign investors (Marchand and Paquerot, 2004) can be seen as potential controllers of equity agency problems as their increased shareholdings can give them a stronger incentive to monitor firm performance and managerial behaviour. Debt was also rationalised by Jensen and Meckling (1976) as a vehicle for reducing agency problems. PPLOWN refers to large block ownership, which is measured as the percentage of shares held by the large blockholder. INSTOWN refers to institutional ownership. Institutional investors are defined as banks, mutual funds and insurance companies. INSTOWN is measured as the percentage of shares held by institutional investors (e.g. Bathala and Rao, 1995). FOROWN refers to overseas ownership, which is measured as the percentage of shares held by foreign investors. TDTA is the debt ratio obtained by dividing the book value of total debts to total assets (e.g. Prevost et al. 2002 a,b).

Besides, we consider in our regression analysis some board characteristics as potential determinants of the board independence. Thus, BDSIZE refers to the board of directors' size and is measured as the number of directors on the board (Li, 1994; Prevost et al. 2002a,b). DUALITY is a dummy variable taking the value of one if the current CEO of the firm is also the chairman of the board, and zero otherwise (Li, 1994; Prevost et al. 2002a,b).

We use a number of control variables defined in the previous literature to account for any potential effects of external factors in our analysis. First, we control for firm size by using the logarithm of total assets. It proxies for a possible size effect that has been suggested in the literature (Kesner, 1988; Li, 1994; Prevost et al. 2002a,b). Second, we control for organizational complexity by using the number of business segments on which the firm operates (Prevost et al. 2002a). We expect large companies with high diversification activities to have more independent board of directors. Finally, we use a dummy variable that take 'one' if the firm is listed on the Tunisian Stock Exchange (TSE) to control for the quotation status of the firm as our sample include even listed and unlisted firms.

4.3- Data source

Data for this study are obtained from a sample of 20 non financial firms listed on the TSE as of December 31, 2002 and 77 non financial unlisted Tunisian firms. Data are taken from two sources: from listed companies' annual reports available on the TSE web site, and from questionnaire (provided in Appendix) addressed to unlisted firms.

4.4- Empirical methodology

Our basic methodology consists in estimating the following multivariate regression model using Ordinary Least Squares (OLS) method:

$$OUTDIR = \alpha_0 + \alpha_1\ PPLOWN + \alpha_2\ INSTOWN + \alpha_3\ FOROWN + \alpha_4\ TDTA + \alpha_5\ BDSIZE + \alpha_6\ DUALITY + \alpha_7\ FSIZE + \alpha_8\ BUSSEG + \alpha_9\ QUOTE + \varepsilon$$

The dependent variable, OUTDIR, is defined as the percentage of outsiders on the board. PPLOWN refers to large block ownership, which is measured as the percentage of shares held by the large blockholder.

Concerning idependent variables, INSTOWN refers to institutional ownership; measured as the percentage of shares held by institutional investors. FOROWN refers to overseas ownership, which is measured as the percentage of shares held by foreign investors. TDTA is the debt ratio obtained by dividing the book value of total debts by total assets. BDSIZE: board of directors' size and is measured as the number of directors on the board. DUALITY is a dummy variable taking the value of one if the current CEO of the firm is also the chairman of the board, and zero otherwise. FSIZE is a proxy of the firm size. It is measured by the logarithm of total assets book value. BUSSEG refers to organizational complexity of the firm and is considered as the number of business segments in which the firm operates. Finally,QUOTE refers to firm's quotation status which takes the value of one if the company is listed on TSE, and zero otherwise. Table 1 summarizes the hypothesis of our study and the measures of all variables considered in our analysis.

5. Empirical results

5.1- Descriptive statistics

Table 2 reports the descriptive statistics of the variables. It shows that the mean (median) proportion of outside directors (OUTDIR) is 44.85 (44.44) percent. Compared to the US (for example, Bathala and Rao indicate a mean of 70.73 percent outside directors on a sample of 261 American firms) and most European countries (for example, Li (1994) points out that a mean of 83 percent of French board directors are outsiders), Tunisian boards are characterized by less outsiders.

Table1. Variables definition and hypothesis

Dependent variable		Measure
OUTDIR		The percentage of outsiders on the board of directors.
Independent variables	Measures	Hypothesis
↳ Alternative corporate governance mechanisms:		
PPLOWN	The percentage of shares held by the large blockholder.	H1: The proportion of the outside directors is positively related to the ownership concentration.
INSTOWN	The percentage of shares held by institutional investors.	H2: The proportion of the outside directors is positively related to the institutional ownership.
FOROWN	The percentage of shares held by foreign investors.	H3: The proportion of the outside directors is positively related to the foreign ownership.
TDTA	The book value of total debts divided by total assets.	H4: The proportion of the outside directors is negatively related to the debt financing.
↳ Board characteristics:		
BDSIZE	Current number of directors on the board.	H5: The proportion of the outside directors is positively related to the board size.
DUALITY	Equal to one if the CEO is also the chairman of the board and zero otherwise.	H6: The proportion of the outside directors is negatively related to the CEO duality.
↳ Control variables:		
Variable	Measures	predicted Sign
FSIZE	The logarithm of total assets book value.	+
BUSSEG	The number of business segments in which the firm operates.	+
COTE	Equal to one if the firm is listed on TSE and zero otherwise.	+

However, it is consistent with outsider directors' proportion in other small countries. For example, Prevost et al. (2002a) report a mean value about 42 percent of outside directors in New Zealand. The mean proportion of shares held by large owners (PPLOWN) is 46.52 percent with minimum of 7.5 percent and maximum of 99 percent. This provides an evidence of a highly concentrated ownership structure of Tunisian firms. The means proportions of stock held by institutional (INSTOWN) and foreign (FOROWN) investors are, respectively, about 9 and 15 percent. On the other hand, the mean proportions of debt to total assets (TDTA) is about 50 percent.

The typical board consists of 6 members, which is similar to that pointed out by Prevost et al. (2002a) in the New Zealand context. Nevertheless, it is considerably smaller than that in others countries. For example, Dalton and Kesner (1987) report a mean board size of 11.44 in the United Kingdom (UK) and 12.96 in the United States (US). Approximately, the three quarters of the sample exhibits CEO duality, which is nearly similar to that reported in the Dalton and Kesner study for US (82 percent), but higher than that found in UK (30 percent) and in New Zealand (as Prevost et al. (2002a) report a mean of 38 percent).

Table 2. Sample Descriptive statistics

Variables	Mean	Median	Standard deviation	Minimum	Maximum
OUTDIR	0.4485	0.4444	0.3557	0	1
PPLOWN	0.4652	0.3800	0.2708	0.0750	0.9900
INSTOWN	0.0910	0	0.1620	0	0.6900
FOROWN	0.1506	0	0.2995	0	0.9900
TDTA	0.4959	0.5080	0.2395	0.0532	0.9688
BDSIZE	5.9175	6.0000	2.5358	3	12
FSIZE	8.9949	8.8317	1.5822	5.38	12.28
BUSSEG	1.4536	1	0.6618	1	4
	Mode	Standard deviation		Frequency of '0'	Frequency of '1'
DUALITY	1	0.4555		28	69
QUOTE	0	0.4066		77	20

Notes: OUTDIR is the proportion of outside board members to total board size; PPLOWN is the proportion of shares owned by the large shareholder; INSTOWN is defined as the proportion of stock held by institutional investors; FOROWN is the proportion of stock held by foreign investors; TDTA is the debt ratio defined as total debts divided by total assets; BDSIZE is the size of the board of directors; DUALITY is a dummy variable that is equal to one if the CEO is also the chairman of the board and zero otherwise; FSIZE is defined as the logarithm of total assets book value; BUSSEG is the number of business segments in which the firm operates and QUOTE is a dummy variable that is equal to one if the company is listed on theTunisian Stock Exchange and zero otherwise.

Table 3 illustrates the correlation coefficients for all variables used in this paper. It shows that the proportion of outside directors is positively associated with the proportion of shares held by the principal

shareholder (0.259*), by institutionals (0.237*) and by foreign investors (0.423**). However, board independence is negatively correlated with the incidence of CEO duality (-0.339**). In sum, the correlation matrix shows that in general most interrelationships are as expected. On the other hand, Since Table 3 identifies a number of significant correlations amongst the explanatory variables, it is necessary to examine whether the regression results in Table 4 may be compromised by multicollinearity. The highest Pearson correlation amongst the explanatory variables in Table 3 is 0.623 (board size and quotation status) with the next highest value being 0.523 (firm size and quotation status). However, since Judge et al. (1988) suggest that correlations below 0.8 should not normally result in serious multicollinearity, these are unlikely to significantly impair the validity of the regression results.

Table 3. Correlation Matrix for all variables

	OUTDIR	PPLOWN	INSTOWN	FOROWN	TDTA	BDSIZE	DUALITY	FSIZE	BUSSEG
PPLOWN	0.259*								
INSTOWN	0.237*	-0.168							
FOROWN	0.423**	0.457**	-0.001						
TDTA	0.039	0.075	0.261**	0.111					
BDSIZE	0.191	-0.322**	0.366**	-0.151	0.064				
DUALITY	-0.339**	-0.056	-0.096	-0.325**	0.011	0.042			
FSIZE	0.166	-0.104	0.262**	0.190	-0.054	0.360**	-0.209*		
BUSSEG	0.203*	-0.114	0.146	0.114	0.131	0.246*	0.024	0.313**	
QUOTE	0.201*	-0.192	0.273**	-0.038	-0.067	0.623**	0.100	0.523**	0.423**

Notes: OUTDIR is the proportion of outside board members to total board size; PPLOWN is the proportion of shares owned by the large shareholder; INSTOWN is defined as the proportion of stock held by institutional investors; FOROWN is the proportion of stock held by foreign investors; TDTA is the debt ratio defined as total debts divided by total assets; BDSIZE is the size of the board of directors; DUALITY is a dummy variable that is equal to one if the CEO is also the chairman of the board and zero otherwise; FSIZE is defined as the logarithm of total assets book value; BUSSEG is the number of business segments in which the firm operates and QUOTE is a dummy variable that is equal to one if the company is listed on Tunisian Stock Exchange and zero otherwise. ** Denotes significance at the 1% level. * Denotes significance at the 5% level.

5.2. The determinants of board composition

Table 4 presents the coefficients for the regression model and related statistics estimated using the OLS method. The regression model is significant at the 1% level (*F*-value = 5.965, *p*-value = 0.000) with adjusted R-square of approximately 32 percent (better than the one reported in Prevost et al. study, i.e. 11.3 percent).

Table 4. Regression Estimates

Independent Variable	Regression coefficient (*t*-statistic)
Intercept	0.443
	(1.702)*
PPLOWN	0.241
	(2.381)**
INSTOWN	0.186
	(1.932)*
FOROWN	0.284
	(2.700)***
DEBT	-0.088
	(-0.955)
BDSIZE	0.206
	(1.769)*
DUALITY	-0.271
	(-2.896)***
FSIZE	-0.155
	(-1.439)
BUSSEG	0.135
	(1.394)
QUOTE	0.125
	(0.975)
F-value	5.965
(*p*-value)	(0.000)
R-square	0.382
Adj. R-square	0.318
N	97

Notes: OUTDIR is the proportion of outside board members to total board size; PPLOWN is the proportion of shares owned by the large shareholder; INSTOWN is defined as the proportion of stock held by institutional investors; FOROWN is the proportion of stock held by foreign investors; TDTA is the debt ratio defined as total debts divided by total assets; BDSIZE is the size of the board of directors; DUALITY is a dummy variable that is equal to one if the CEO is also the chairman of the board and zero otherwise; FSIZE is defined as the logarithm of total assets book value; BUSSEG is the number of business segments in which the firm operates and QUOTE is a dummy variable that is equal to one if the company is listed on the Tunisian Stock Exchange and zero otherwise. Coefficients and the associated t-statistic for the significance of the coefficient in parenthesis are shown. The asterisks next to the t-statistic denote the significance level for a two-tiled test of the null hypothesis that the coefficient is equal to zero. * Denotes significance at the 10% level. ** Denotes significance at the 5 % level. *** Denotes significance at the 1% level. The F-value is the model F-value with the associated p-value shown in parenthesis. R-square refers to the unadjusted and adjusted R-square of the model, respectively. N is the sample size used in the regression.

The ownership concentration variable PPLOWN is significantly positive at the 5 percent level which suggests that higher blockholder's ownership in Tunisian firms may result in a higher outsider representation in the board of directors. This supports the evidence suggested by Prevost et al. (2002a). These authors explain their findings by the fact that more outside directors may be required to compensate the lack of an affective takeover disciplining mechanism in New Zealand. Indeed, similar to the New Zealand context where ownership is concentrated, the Tunisian one does not face the disciplinary effect of the external takeover market. Our first hypothesis (H1) is consequently supported suggesting a complementary association between the proportion of board outsiders and the ownership concentration.

In addition, the institutional ownership variable (INSTOWN) is significantly positive at the 10 percent level which also suggests a complementary effect with outside board representation. This supports our second hypothesis supposing that a high propensity of shares owned by institutional investors leads to an increase in the proportion of outsiders in the board of directors. Our results are consistent with the findings of Bathala and Rao (1995) and imply, as it is pointed out by Shabou (2003) in the Tunisian context, that institutional investors seem to play a weaker governance role which is compensated by an increased number of outside board members. Indeed, as it reported in Bathala and Rao study (1995), institutional investors put pressure on firms to increase outside board members in order to protect their interests as shareholders.

Moreover, the overseas ownership variable indicates a positive coefficient which is statistically significant at 1 percent level. Subsequently, our third hypothesis is supported indicating that foreign investors need more outsiders on the board of directors. Our findings imply that international investors impose higher standard of corporate governance in Tunisian firms by enforcing the independence of the boards of directors. Based on Heidrick and Struggles (1999) study, Marchand and Paquerot (2004) conclude that overseas investors tend to transfer the international rules of corporate governance to the domestic firms in which they hold a fraction of capital.

Contrary to our hypothesised relationship (H4), the leverage (TDTA) variable has a negative but insignificant coefficient. Indeed, our study fails to find an association between the debt and the board independence. It is not consistent with the evidence documented in Bathala and Rao (1995) study supporting a substitution effect of leverage on board composition. Besides, it is not consistent with the findings of Li (1994), Denis and Sarin (1998) and Prevost et al. (2002a) who conclude that there is a complementary relationship. On the other hand, our results are consistent with the recent findings of Dumontier et al. (2005) study, in the Tunisian context, relating audit quality requirement to debt. Thus, we conclude that, contrary to the implications of agency theory, debt must not be considered as a vehicle for reducing agency problems (Jensen and Meckling, 1976) in the Tunisian context. As it is pointed out by Dumontier et al. (2005), debt is generally obtained due to the business relationship between firms' managers and bankers.

On the other hand, board size (BDSIZE) has a positive coefficient that is significant at the 10 percent level. This is consistent with our predictions (H5) suggesting that larger boards of directors are associated with greater proportion of outsiders on the board. This is consistent with Prevost et al. (2002b) findings but is contrary to the evidence documented in Li (1994) and Prevost et al. (2002a) studies who fail to report any association between board size and board independence.

DUALITY is significantly negative at 1 percent level. While, this supports our last hypothesis (H6) and is consistent with the findings of Prevost et al. (2002 a,b) indicating that firms in which CEO performs the chairman function on the board tend to have fewer outside board members; it is contrary to the Li's (1994) evidence.

For the control variables included in our regression model, we first fail to report relationship between firm size and board independence. Our empirical results support the findings of Bathala and Rao (1995) on a sample of 261 American firms, but not those reported by Prevost et al. (2002 a,b) who conclude that there is an inverse relationship between firm size and outside board representation. This is may be contingent with the industry factors as it is pointed out by Finkelstein and D'Aveni (1994).

As documented in Bathala and Rao (1995) and Prevost et al. (2002 a,b) studies, the organizational complexity variable (BUSSEG) seems to be statistically insignificant. This indicates that firm's activities diversification has no bearing on the board composition.

Finally, our study documents that the firm's quotation status doesn't appear to influence the board composition.

6. Conclusions

In this paper we model the board composition as a function of alternative corporate governance mechanisms (i.e. large blockholder ownership, institutional ownership, overseas ownership and debt); some board characteristics (i.e. board size and duality) and other control variables (i.e. firm size, organizational complexity and quotation status). Using OLS regression estimates, the study documents a positive relationship between the proportion of outside board members and some governance mechanisms including large blockholder, institutional and foreign ownerships. These results are not consistent with the predictions of agency theory and suggest that firms optimally choose the board composition depending on the ownership structure, particularly on the extent funds provided by overseas investors to Tunisian firms. This is an important contribution of the study. A prior research on board composition has not considered this relationship. The results are also inconsistent with the predictions of agency theory regarding the monitoring role of debt, as we fail to document any relationship between debt leverage and board independence.

Additionally, our study reports a significant positive relationship between board independence and board size. This suggests that firms with larger boards of directors tend to appoint more outside members. Furthermore, our results support an inverse association between CEO duality and outside board representation. This is consistent with an entrenchment effect of CEO in dual leadership positions, that is CEO who assumes the chairmanship of board of directors has a preference for inside members rather than outsiders to improve his dominating position in the firm.

Finally, we fail to find relationship between each one of our control variables (firm size, organizational complexity, and quotation status) and board independence because of the insignificance of their coefficients in a multivariate regression.

Future researches seem to be considerably relevant, particularly in Tunisian context, to take into account inside manager ownership and firm performance in order to serve as a guide for institutional regulators. On a larger sample of Tunisian firms, a future study appears to be pertinent to control the effect of industry factors in dreading the potential effect of firm's size on the board composition.

Notes

[1] www.bvmt.com.tn

[2] We also calculate the Spearman correlation among the independent variables to check whether multicollinearity exists among the variables. We find that the pair-wise correlations, generally, do not appear to indicate any concern over multicollinearity problems in estimating the regression equation.

[3] Furthermore, similar to Bathala and Rao (1995), we also utilize variance inflation factors (VIFs) to determine whether any of the explanatory variables may be involved in multicollinearities. QUOTE has the highest VIF, i.e. 2.096. However, since only VIFs in excess of 10 are deemed to be an evidence of a significant multicollinearity, standard interpretations of the regression results can be made.

[4] The firm size variable remains statistically insignificant in a multivariate analysis, even when it is measured by the logarithm of sales of the firm (as it is measured in Bathala and Rao study); everything being the same elsewhere.

[5] Finkelstein and D'Aveni (1994) document an inverse relationship between board composition and firm size for the chemical and computer industries in the US, but report an insignificant positive coefficient for the printing and publishing industries.

[6] We report a positive and significant association between BUSSEG and OUTDIR only when the quotation status variable is excluded from our OLS model estimating, everything being the same elsewhere.

[7] Note that the quotation variable become statistically significant suggesting that listed Tunisian firms seem to have more independent boards of directors, only when we remove the board size variable from our multivariate equation.

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Appendix. Questionnaire addressed to unlisted Tunisian firms

Please answer the following questions about your business by specifying the information requested or by checking the appropriate response.

↳ General information:

How many business segments does your firm operate in? _____

↳ Ownership structure:

Large blockholder's ownership % _____

Institutional investors ownership % _____

Foreign investors ownership % _____

↳ Board characteristics:

Board size _____

Number of outside directors _____

Is the current CEO also the chairman of the board of directors? Yes ☐ No ☐

↳ Financial information:

Book value of total assets in December 31, 2002 _____

Book value of total debt in December 31, 2002 _____