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# Effect of the Board of Directors on Firm Performance

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**Abstract:** This paper aims to study the relationship between three characteristics of the Board of Directors (Board Size, Independent Members, and Number of Meetings) and performance (ROA, ROE) in Colombian firms during the 2008-2014 period. The analysis was performed using regression models in a balanced data panel that considered random effects. The results show that BD optimal size for the Colombian case is between 6 and 10 members; and there is no evidence to affirm that the relationship between the characteristics of the studied BD and economic performance is significant.

**Keywords:** Corporate governance, board of director, board size, board independence, board meeting frequency, performance

### **INTRODUCTION**

The fall of some corporate giants (Enron, Xerox, Parmalat, among others) has left profound scars in the entrepreneurial world, and some authors have suggested that the collapse of these organizations could have its origins in the lack of good corporate governance (Hassan Che Haat et al. 2008). These corporative scandals accelerated the understanding that the effects on the economy were generated due to weak corporate government practices, and that at the same time have negatively affected the confidence of people in the reliability of firm information.

The Board of Directors (BD) is a fundamental component of the corporate government system, its main function is to be the link between the proprietors and the management, to orient, supervise and counsel the relation of the latter with all other interested parties (Ward & Handy 1988). A common goal in the corporate government research has been to determine the possible relation between some BD features

and economic performance of the firm. Notwithstanding, it is acknowledged that no theory can explain in a broad manner the relations between BD and performance, this relation is varied and complex, therefore, it cannot be encompassed by a sole theory (Nicholson & Kiel 2007). This paper aims to study the relationship between three characteristics of the Board of Directors (Board Size, Independent Members, and Number of Meetings) and performance (ROA, ROE) in Colombian firms during the 2008-2014 period.

Therefore, two corporate government theories are useful to explain BD behaviour and effects over performance. On one hand, the stewardship theory with origins in psychology and sociology, was proposed to examine situations in which executives as much as administrators, are motivated to act in favour of the best interests of shareholders (Donaldson & Davis 1991). According this theory it is proposed that the directors are essentially trusted insiders and, therefore, good managers of the resources entrusted to them (Donaldson & Davis 1991; Donaldson 1990; Donaldson & Davis 1994).

On the other hand, the agency theory (Jensen & Meckling 1976; Eisenhardt 1989) has been the dominant approach in the study of corporate government (Hermalin & Weisbach 2003). Agency theory studies the way to align the interests of proprietors and managers (Jensen & Meckling 1976; Fama & Jensen 1983), based on the assumption that there is an inherent conflict between proprietors' interests and agent's (Fama & Jensen 1983).

Studies about governability of BD have received much interest (Hoy & Verser 1994; Zahra & Sharma 2004), which reflects on researchers' concern about survival and sustainability topics. In the same manner, researchers emphasize the role of BD for its potential contribution to firm results (Lester & Cannella 2006). In this paper we use the stewardship theory, and the Agency theory to analyse the possible relation between three aspects of BD (Board Size, Independent Members, and Number of Meetings) and performance.

This article is organized in the following manner. After this introduction, a literature revision is presented, and hypotheses are formulated in regard to the effect generated by good practices of BD corporate government over economic performance. Posteriorly, the methodology used to execute the analysis is presented. Next, the main results of the research are shown and discussed. This article ends with conclusions, limitations and recommendations for future researches.

## 1. Literature Revision and Hypotheses Development

Empiric evidence suggests that BD composition influences firm value (Menozzi et al. 2012), diverse features of BD have been explored from this approach, including number of Directors on BD (Yermack 1996; Dalton et al. 1998), percentage of independent members on BD (Agrawal & Knoeber 1996; Arosa et al. 2010), and numbers of annually celebrated meetings (Vafeas 1999). Thereupon, some studies that have been focused on the analysis of the relation between these aspects of BD and performance are presented.

# 1.1. BD Size

BD size has been of great interest, several studies have evidenced a positive relation between BD size and economic performance (Dalton *et al.* 1998; Pearce & Zahra 1992). These studies suggest that bigger size BDs allow the gathering of greater intellectual capacity (Van den Berghe & Levrau 2004) and, therefore, improve strategic decision making, which in turn impact firm results. In the same manner, there is evidence

that greater BDs can reduce management domain and control (Forbes & Milliken 1999; Goodstein *et al.* 1994), and improve the capacity of the firm to establish external links, procurement of resources and the presence of more qualified advisors (Dalton *et al.* 1998).

However, Yermack (1996) presents evidence of a negative effect between BD size and economic performance, suggesting that smaller BDs are more efficacious due to better communication that facilitates decision making. In regard to this, Lipton & Lorsch (1992) have suggested that BDs should have between eight and nine members, similar results were found by Ricart *et al.* (1998) in their study of practices of good government in Spain. Along the same line, Jensen (1993) evidenced that when a BD has more than seven or eight members, directors have less probabilities of operating efficaciously, due to coordination problems and problem solution, which overwhelms the advantages generated by the greater participation of members.

BD size has generated a huge debate in regard to the number of members which should compose it. Researchers argue that, even though BD size facilitates the development of the main functions in that government body, there is a point in which bigger BDs suffer from communication and coordination problems, and therefore, diminishes the effectiveness of BD, which in turn impacts firm profitability (Lipton & Lorsch 1992; Jensen 1993).

Big BDs allow more collective information that can help improve performance (Dalton & Dalton, 2005; Dalton *et al.*, 1998). Nevertheless, bigger BDs have communication and coordination problems, since it is difficult to organize their meetings, and reach a consensus, and all of it translates in slower and less efficient decision making for the firm (Jensen 1993). Jensen (1993) y Lipton & Lorsch (1992) have suggested that as the size of the BD increases beyond a certain point, these inefficiencies surpass the initial advantages of having more BD members, and it leads to a lesser level of corporate economic performance.

Empiric evidence presents arguments that support positive and negative association of BD size, and firm economic performance, arguments that may be sustained in the stewardship or in the agency theory, but without any of these theories holding a dominant position over the other. Consequently, if a bigger BD is related with lesser economic performance, then, bigger BDs would represent an inefficient government that could be improved by finding a BD size that translates into an efficient management and better economic results. Based on the formerly presented studies, the following hypothesis is proposed:

H<sub>1</sub>: There is a non-lineal relation between BD size and firm economic performance.

# 1.2. Participation of Independent Members in BD

The importance of the Independence of the BD is widely recognized, this practice of corporate government continues to be the most recommended in favour of improving BD efficacy (Kang et al. 2007). This is based on the assumption that the independent members may make a positive contribution to the supervision responsibilities of the BD ( (Moreno-Gomez, et al., 2016); Anderson & Reeb 2004), which could translate into a better corporate performance.

Empiric evidence suggests that the BD independent members contribute with their experience and objectivity, helping to minimise managerial entrenchment and rent subtraction (Dalton et al. 1998). Bacon (1985) suggests that independent members provide impartiality to the projects assessed by the firm, in the acquisition of other companies, or in the evaluation of commercial relations among firms. In regard to the

same, Winter (1977) suggests that only independent members can request privileged information and question the firm activities.

Independent members are one of the main defence lines that external or minority shareholders can use to protect their rights when facing the influence and power of majority stockholders (Anderson & Reeb 2004). To improve firm performance, independent members can stop majority stockholders from directly expropriating firm resources through an excessive compensation, special dividends or unjustified perks (Anderson & Reeb 2004).

Results of the researches that have examined the relation between BD proportion of independent members and firm economic performance are not conclusive, on one hand, diverse studies show a positive association (Pombo & Gutiérrez 2011; Jackling & Johl 2009), however, this relation depends on the used performance indicator. Jackling & Johl (2009) show in their study that a greater proportion of BD independent members is associated to a profitability increase, measured by the Q of Tobin, nevertheless, said association disappears when the performance indicator is ROA. For their part, Dalton *et al.* (1998) could not find any significant association between the participation of independent members and firm performance. Other studies show that said relation is negative (Agrawal & Knoeber 1996; Lefort & Urzúa 2008).

From the perspective of the Agency theory, firms may reduce agency costs by implementing adequate control systems and using corporate government structures like BD to effectively supervise managers (Bird *et al.* 2002; Fama & Jensen 1983). For example, Fama & Jensen (1983) claim that BD supervision activities to managers improve when the BD is dominated by independent members, since they may exercise more efficiently their control function as a results of being less exposed to conflicts of interests. Their main contribution is the capacity to remain independent while the supervision of operating activities and protection of firm assets is executed, looking to ensure the continuity and success of the firm (Gabrielsson & Huse 2005). Likewise, their objectivity, impartial approach, and professional competences, allow them to mediate in the disputes between majority and minority stockholders.

Following the recommendations of the corporative government codes and under the perspective of the agency theory, it is expected that the participation of independent members in the BD produce better economic performance, due to the supervision and control function that these members execute in firms. Consequently, the following hypothesis is presented:

**H**<sub>2</sub>: The majority participation of independent members in the BD positively impacts firm economic performance.

# 1.3. Frequency of BD Meetings

One of the aspects of the Stewardship theory, linked to corporate government and economic performance is the intensity of BD activity, measured by the amount of BD meetings. Vafeas (1999) was one of the first authors that argued that BD meetings frequency is an important attribute of good practices of corporate government and may have important implications in the firm economic performance. For their part, Lipton & Lorsch (1992) suggest that a greater frequency of meetings will probably result in a superior performance, since BD meetings can be considered as a measure of supervision effectiveness or efficacy, and must therefore, influence firm results. Likewise, these meetings offer greater opportunities

to debate and exchange opinions about the manner of supervising and counselling the high management team (Conger et al. 1998).

Empiric evidence has found positive results that support BD activity and economic performance (Brick & Chidambaran 2010; García-Ramos & García-Olalla 2011; Vafeas 1999). I.e., Brick & Chidambaran (2010) suggest that the implementation of good corporate government codes increases the pressure on firms, which is reflected in BD greater activity. The study of Vafeas (1999) found that BDs that met frequently were less valued by the stock market, however, this association disappeared due to the improvement of economic performance after years of BD increased activities.

These improvement are more pronounced for the firms with previous low economic performance and firms not dedicated to execute corporate control of their operations. Along the same line, Jackling & Johl (2009) did not find any relation between the number of BD meetings and firm economic performance in Indian firms. The insignificance of this find may suggest that the relation between the number of meetings and performance can be more complex that a mere lineal relation or the possibility that the increase of BD activities comes as a reaction to poor firm performance, which in turn affects economic performance in the following years (Vafeas 1999).

According to the recommendations of corporate government codes and from the perspective of the stewardship theory, BDs are groups of competent people that help managers to improve their decision processes, through their experiences, competences and different approaches that contribute to the debate in BD meetings (Minichilli *et al.* 2009). Therefore, there are reasons to believe that BD meetings may be an important resource, and the frequency of BD meetings can influence economic performance. On the contrary, a high frequency of BD meetings could also be the result of BD poor performance, being detrimental to firm economic results.

Researches allow to find explanations in favour as against a positive relation between meetings frequency and firm economic performance (Minichilli *et al.* 2009; Vafeas 1999). I.e., Ricart *et al.* (1998) found evidence that there are active and passive BDs, the first ones have a high frequency of meetings and the second ones, a low frequency, which suggests that the influence exercised by a high activity of BD meetings and their relation with performance may have a non-lineal behaviour. Because of the latter reason, the following hypothesis is presented:

**H**<sub>3</sub>: There is a non-lineal relation between BD activity (in terms of number of meetings per year) and firm economic performance.

### 2. METHODOLOGY

## 2.1. Data and sample

This document studies the registered firms in the Colombian National Registry for Securities and Issuers (RNVE)<sup>1</sup>. Information for the analysis is obtained from annual reports and firm statutes. To include a firm in the sample, two conditions must be met: i) that the firm have available annual reports for all the years of the 2008-2014 period; and ii) that the firm have available information on corporate government (number of BD members, number of BD members with the quality of Independent, BD meetings frequency).

According to the above criteria, 90 firms were identified, of which 48 were not family operations, and 42 were family owned. From the total of the sample, 49 firms belonged to the real estate sector, 10 were of utilities, and 31 belonged to the financial sector. The analysis technique selected is a dependent model based on a linear regression for panel data. Panel data analysis is the most efficient tool to use when the sample is a mixture of time series and cross-sectional data.

#### 2.2. Research Model

The relation between BD features (size, independence, frequency of meetings) firm economic performance is studied through the regression model of the equation (1).

$$Performance = \beta_0 + \beta_1 Size\_BD + \beta_2 Size\_BD2 + \beta_3 Independent + \beta_4 Meeting_{BD}$$

$$\beta_5 Meeting_{BD2} + \beta_6 FamilyFirm + \beta_0 Size + \beta_8 Grow\_Sales$$

$$+ \beta_{9-11} (Sector) + \beta_{12-18} (Year) +$$
(1)

Next we introduce a definition of the variables:

## 2.3. Dependent Variables

The equation model (1) was analysed using the financial and operative indicators of the firm as dependent variables, dependents as approximations of economic performance, such as: Return on assets (ROA) and Return on equity (ROE). Below there is a detailed description of each indicator.

**ROA** (Return on assets): Based on Bhagat & Bolton (2008) and Cheng (2008) ROA is used as an economic performance indicator, for it allows to examine the effect of implementing good corporate government practices in BD over firm profitability. Chang & Choi (1988) point out that this indicator is an adequate measure of operative efficiency, since in most emerging economies, capital markets are imperfect, and the relation debt-capital is generally high.

**ROE** (Return on Equity): In the same manner, Martínez *et al.* (2007) use return on equity (ROE), for tests on strength of analysis, in spite of the limitation of this indicator, that depends greatly on the equity structure of the firm, and therefore, provides lesser information contents about a certain set of the firm investment opportunities (Adams & Mehran 2005).

### 2.4. Independent Variables

The relation between BD and performance is studied trough three characteristics: i) number of BD members (Size\_BD); ii) percentage of BD members with the quality of independent (Independence\_BD); and iii) number of times a year when BD meets (Meetings\_BD). BD size and number of meetings are also analysed through a non-lineal relation no lineal, taking their square values, Size\_BD2 and Meetings\_BD2, respectively.

#### 2.5. Control Variables

The family variable takes the value of one (1) when 50 percent of the properties are identified as belonging up to three families, and zero (0) otherwise (Gómez-Betancourt et al. 2012). The variable Growth\_Sales is calculated as the percentual growth on sales in regard to the former year. The dimension of the firm is

measured through the Size variable, calculated as the natural logarithm of the total assets. The dummy Sector variable classifies firms in three groups (Financial, Utilities, Real Estate).

#### 3. RESULTS AND DISCUSSION

## 3.1. Descriptive Statistics

Table 1 shows the main descriptive statistics for the variables of the research model. Average ROA is 4.19%, while average ROE is 9.08%. BD size oscillates between 5 and 10 members, average BD size is 6.16 members, where 51.53% of said members are independent. BDs meet between 2 and 24 times a year; medium activity is of 10.13 meetings per year.

Table 1
Descriptive Statistics

	Minimum	Medium	Maximum	Standard Deviation
ROA	-0.5343	0.0419	0.7617	0.0710
ROE	-1.5781	0.0908	0.8318	0.1300
Size_BD	5.00	6.16	10.00	1.50
Independence_BD	0.2000	0.5153	1.0000	0.2392
Meetings_BD	2.00	10.13	24.00	4.09
Size_Firm	9.43	14.12	18.61	1.97

Source: This Study

## 3.2. Regression Model

# Performance Measured by ROA Results

The results of this work come from a balanced data panel with random effects. According to De Andres & Vallelado (2008), the panel data analysis is an efficacious tool when the data are a mixture of series of time and transverse cut data, This technique is efficient since it considers constant heterogeneity and non-observable heterogeneity.

On Table 2 are shown the estimation results of the models, with ROA and ROE as dependent variables. Model 1 includes ROA in the regression as a dependent variable, BD size (Size\_BD), square BD size (Size\_BD2), participation of independent members on BD (Independence\_BD), BD activity (Meetings\_BD), square BD activity (Meetings\_BD2) as independent variables and the control variables (Family, Size, Sales Growth, Sector, Year). It is possible through this model to explain the 16.09% of ROA variability in the sample.

In regard to corporate government variables, it was found that BD size has a negative and significant effect over firm profitability (-0.0429, p < 0.05), while in the variable Size\_BD2 the relation is positive and meaningful (0.0037, p < 0.01), this suggests that the relation between BD size and firm profitability has a U shape, meaning, when the number of BD members increases, profitability decreases. There is, however, a point where profitability increases with BD size. The participation of BD independent members presented

a negative relation, albeit it is not meaningful (-0.0005, p > 0.1). Whereas BD activities (Meetings\_BD) exhibits a positive effect and non-meaningful (0.0026, p > 0.1) and the variable Meetings\_BD2 has a negative relation, which demonstrates a relation in the shape of an inverted U, without being significant in firm profitability (0.0001, p > 0.1).

In regard to control variables on model 1, it was found that the structure of family property, although it presents a positive relation, it is not significant to explain firm profitability (0.0098, p > 0.1). Firms with bigger size and sales growth presented greater profitability (0.0028, p < 0.1; 0.0140, p < 0.01). In regard to the sectors, it was found that, the firms of the financial sector are less profitable than the real estate business sector (-0.0343, p < 1%), while utility firms are more profitable than the real estate ones (0.0507, p < 0.01). These results are consistent with previous studies that have explored a non-lineal relation between BD size and performance, for example, De Andres & Vallelado (2008) found that said relation has an inverted U shape, where a greater BD size produces greater performance, nevertheless, there is a point where a greater BD size does not represent profit improvement, on the contrary, it reduces it. Contrary to what was found by De Andres & Vallelado (2008), the results of this research show that the relation between BD size and economic performance has a U shape.

Table 2
Relation Between BD and Performance

Independent Variables	Dependent Variables					
-	R	0.4	ROE			
Model	(1)	(2)	(3)	(4)		
Size_BD	-0.0429**	-0.2833	-0.1074***	-0.4941		
	(-2.19)	(-1.26)	(-2.95)	(-1.18)		
Size_BD2	0.0037***	0.0382	0.0081***	0.0636		
	(2.63)	(1.19)	(3.09)	(1.06)		
Size_BD3		-0.0016		-0.0026		
		(-1.07)		(-0.93)		
Independence_BD	-0.0005	-0.0009	-0.0033	-0.0039		
	(-0.28)	(-0.47)	(-1.00)	(-1.16)		
Meetings_BD	0.0026	0.0023	0.0002	-0.0003		
	(1.36)	(1.19)	(0.04)	(-0.09)		
Meetings_BD2	-0.0001	-0.0001	0.0000	0.0000		
	(-0.70)	(-0.61)	(0.15)	(0.23)		
Family	0.0088	0.0084	0.0048	0.0041		
	(1.51)	(1.43)	(0.44)	(0.38)		
Size	0.0028*	0.0028*	0.0150***	0.0151***		
	(1.72)	(1.76)	(5.05)	(5.08)		
Growth_Sales	0.0140***	0.0141***	0.0217**	0.0218**		
	(2.71)	(2.73)	(2.27)	(2.28)		
Financial	-0.0343***	-0.0338***	0.0406***	0.0415***		
	(-5.09)	(-4.99)	(3.24)	(3.30)		

contd. table 2

Independent Variables	Dependent Variables					
•	R	0.4	ROE			
Model	(1)	(2)	(3)	(4)		
Utilities	0.0507***	0.0505***	0.0384**	0.0380**		
	(5.45)	(5.42)	(2.22)	(2.20)		
A_2008	-0.0012	-0.0012	0.0247	0.0248		
	(-0.12)	(-0.12)	(1.35)	(1.35)		
A_2009	0.0037	0.0037	0.0212	0.0212		
	(0.37)	(0.38)	(1.16)	(1.16)		
A_2010	0.0022	0.0023	0.0162	0.0162		
	(0.23)	(0.23)	(0.89)	(0.89)		
A_2011	-0.0011	-0.0011	0.0219	0.0220		
	(-0.11)	(-0.11)	(1.20)	(1.20)		
A_2012	-0.0060	-0.0059	0.0027	0.0027		
	(-0.61)	(-0.61)	(0.15)	(0.15)		
A_2013	-0.0012	-0.0012	-0.0221	-0.0220		
	(-0.12)	(-0.12)	(-1.21)	(-1.21)		
Intercept	0.1017	0.6430	0.1897	1.0606		
	(1.59)	(1.26)	(1.60)	(1.12)		
R <sup>2</sup> Adjusted (%)	16.09	16.25	14.16	14.28		

*Notes:* The total simple encompasses a balanced data panel with 90 firms for the 2008-2014 period. \*\*\*, \*\*, \*, indicate significance level of 1%, 5%, and 10%, respectively. The statistics t is shown between parentheses.

Source: This study

Due to the fact that the U shape between BD size and performance is not consistent with the findings in literature, on model 2 is examined the possibility that the relation between BD size and firm profitability may have another behaviour, for this, is introduced to the model the variable BD size cubed (Size\_BD3). In this model it was found that the Size\_BD3 variable presents a negative relation (-0.0016, p > 10%), the Size\_BD2 variable is related in a positive way (0.0382, p > 10%), whereas in the Size\_BD variable said relation is negative (-0.2833, p > 10%). This suggests that the relation between BD size and profitability has a cubic shape, meaning, as BDs grow in size, performance may be affected by communication problems (Yermack 1996; Jensen 1993). However, there is a point where this fact can change, product of the greater intellectual capital coming from the greater number of BD members (Van den Berghe & Levrau 2004), this helps relate a greater BD size to greater performance.

Nevertheless, the results of our study showed that this performance improvement has a limit in relation to BD size. When analysing a cubic relation, it showed that BDs with size between 5.87 and 10.05 members present greater performance in regard to ROA. This implies that having less than 6 members represents for the firms little intellectual knowledge in the BD, whereas having more than 10 members would imply communication problems that affect their decisions. These results are consistent with article 44 of Law 964, 2005 where it is suggested that BD of issuers must be integrated by a minimum of five (5) an a maximum of ten (10) members.

In regard to the remaining variables of model 2, it was found that the size and growth of sales determine firm performance (0.0028, p < 0.1; 0.0141, p < 0.01). Likewise, it was observed that the sign of the dummy sector variables keeps), which suggests that the utility firms (0.0505, p < 0.01) are more profitable in comparison to real estate firms, whereas the financial sector firms (-0.0338, p < 0.01) are less profitable.

## 3.3. Results for performance measured by ROE

On models 3 and 4 of Table 2 it is reproduced the formerly presented analysis, this time having ROE as a performance variable. Results are similar to those found with ROA. Through this analysis was found evidence of a cubic relation between BD size and performance (ROE). The variables that measure BD size change signs as BD grows. The variable Size\_BD presented a negative relation (-0.4941, p > 0.1), the variable Size\_BD2 relates in a positive manner (0.0636, p > 0.1), whereas the variable Size\_BD3 showed a negative relation (-0.0026, p > 0.1). Through this analysis it could be proved that an optimum size BD should have a minimum of six (6) and a maximum of ten (10) members, which are similar results to those obtained in ROA.

In regard to the remaining variables of model 6, it was found that size and sales growth are determinant of firm performance (0.0151, p < 0.01; 0.0218, p < 0.05). In terms of the economic sector, it was observed that the firms of the financial sector (0.0415, p < 0.01) and of utilities (0.0380, p < 0.05) are more profitable in comparison to real estate firms. In reference to the optimum size, it was found that having between 6.28 y 10.19 members, implies greater performance for firms.

#### **CONCLUSIONS**

The current research empirically examines the implementation of good practices of BD corporate government and its impact over firm economic performance. For this, we were based on a sample of 90 Colombian firms that bid on the stock market for the 2008-2014 period. The findings are supported on lineal regression models that control non-observable heterogeneity effects, simultaneity and dynamic endogeneity and, therefore, allow to submit more solid conclusions in comparison to former studies. In consonance with Adams & Mehran (2005), results allow to defy the general belief that smaller BDs are more efficient. In the first place, it was found that the relation between BD size and firm profitability present a non-lineal relation, concretely, U shaped. Thus, the inclusion of more BD members should translate into improvement of the supervision and counselling functions, governability and increase of economic results. However, there is a limit beyond which the coordination, control and decision making problems surpass benefits. In this study it has been found that optimum BD size is between 6 and 10 members, this result is consistent for ROA as well as ROE.

In the second place, and closely linked to BD size, the convenience of having independent members in the BD is examined. There was no found evidence that suggests any effects over performance due to participation of BD independent members. An arguments sustaining these results is that some directors classified as independent are not truly independent from the administration, since they are committed with the firm or its current CEO in a very subtle way to be captured in the habitual definition of "independence", which would entail losing all the advantages offered by having independent BD members.

In the third place, evidence shows that there is not a lineal and significant relation between BD activity and economic performance. This result is contrary to the hypothesis that sustains that BD meetings perform a more proactive than reactive role. Therefore, an increase in BD meeting frequency would be an answer to the search of strategic decisions to improve value, instead of an answer to poor results (Vafeas 1999).

Finally, it has been identified that the implementation of corporate government practices is not a sole factor to determine firm economic performance, there are other factors that contribute to firm profitability, like firm size, sales growth, and productive sector, among others.

The current research has limitations to be considered when assessing the obtained conclusions. On one hand, it is possible to pose the problem of sample representation (and implicitly, of the obtained results). To this regard, the future research could extend the analysis (and the sample) to other capital markets in Latin America, as well as to firms not included in the stock market. On the other hand, the impact of corporate government practices on firm economic performance cannot be understood only in terms of size, participation of independent members or number of BD meetings. Associated aspects to the dynamics produced inside the BD should also be considered. In this sense, future researches could adopt a behavioural approach in the study of BDs, focused on decision making processes and on coordination and communication problems.

#### NOTE

1. The purpose of RNVE is to register securities classes and types, as well as the issuers of the same and their issuances, and certify all things related to the registration of said issuers, securities classes and types. The inscription in this Registry is a requisite for those entities that desire to make a public offer of their securities or that negotiate them in a negotiation system.

## **REFERENCES**

- Adams, R.B. & Mehran, H., (2005), Corporate performance, board structure and its determinants in the banking industry, Available at: https://www.newyorkfed.org/medialibrary/media/research/staff\_reports/sr330.pdf.
- Agrawal, A. & Knoeber, C.R., (1996), Firm performance and mechanisms to control agency problems between managers and shareholders. *Journal of financial and quantitative analysis*, 31(3), pp.377–397.
- Anderson, R.C. & Reeb, D.M., (2004), Board composition: Balancing family influence in S&P 500 firms. *Administrative science quarterly*, 49(2), pp. 209–237.
- de Andres, P. & Vallelado, E., (2008), Corporate governance in banking: The role of the board of directors. *Journal of banking & finance*, 32(12), pp. 2570–2580.
- Arosa, B., Iturralde, T. & Maseda, A., (2010), Outsiders on the board of directors and firm performance: Evidence from Spanish non-listed family firms. *Journal of Family Business Strategy*, 1(4), pp. 236–245.
- Bacon, J., (1985), The role of outside directors in major acquisitions or sales. In Conference Board.
- Van den Berghe, L.A.A. & Levrau, A., (2004), Evaluating Boards of Directors: what constitutes a good corporate board? *Corporate Governance: an international review*, 12(4), pp.461–478.
- Bhagat, S. & Bolton, B., (2008), Corporate governance and firm performance. *Journal of corporate finance*, 14(3), pp.257–273.
- Bird, B. et al., (2002), Family business research: The evolution of an academic field. Family Business Review, 15(4), pp. 337–350.

- Brick, I.E. & Chidambaran, N.K., (2010), Board meetings, committee structure, and firm value. *Journal of corporate finance*, 16(4), pp.533–553.
- Chang, S.J. & Choi, U., (1988), Strategy, structure and performance of Korean business groups: A transactions cost approach. *The journal of industrial economics*, pp.141–158.
- Cheng, S., (2008), Board size and the variability of corporate performance. *Journal of Financial Economics*, 87(1), pp.157–176.
- Conger, J.A., Finegold, D. & Lawler, E.E., (1998), Appraising boardroom performance. *Harvard business review*, 76, pp.136–164.
- Congreso de Colombia, (2005), Ley 964 de 2005, "Por la cual se dictan normas generales y se señalan en ellas los objetivos y criterios a los cuales debe sujetarse el Gobierno Nacional para regular las actividades de manejo, aprovechamiento e inversión de recursos captados del público".
- Dalton, C.M. & Dalton, D.R., (2005), Boards of Directors: Utilizing Empirical Evidence in Developing Practical Prescriptions. *British Journal of Management*, 16, pp.91–97. Available at: http://10.1111/j.1467-8551.2005.00450.x.
- Dalton, D.R. et al., (1998), Board composition, leadership structure, and financial performance: Meta-analytic reviews and research agenda. Strategic Management Journal, 19(3), pp. 269–290.
- Donaldson, L., (1990), The ethereal hand: Organizational economics and management theory. *Academy of management Review*, 15(3), pp. 369–381.
- Donaldson, L. & Davis, J.H., (1994), Boards and company performance research challenges the conventional wisdom. *Corporate governance: An international review*, 2(3), pp. 151–160.
- Donaldson, L. & Davis, J.H., (1991), Stewardship theory or agency theory: CEO governance and shareholder returns. *Australian Journal of management*, 16(1), pp. 49–64.
- Eisenhardt, K., (1989), Building theories from case study research. The Academy of Management Review, 14(4), pp. 532-550.
- Fama, E.F. & Jensen, M.C., (1983), Separation of ownership and control. The Journal of Law & Economics, 26(2), pp. 301–325.
- Forbes, D.P. & Milliken, F.J., (1999), Cognition and corporate governance: Understanding boards of directors as strategic decision-making groups. *Academy of management review*, 24(3), pp. 489–505.
- Gabrielsson, J. & Huse, M., (2005), Outside directors in SME boards: A call for theoretical reflections. *Corporate Board: role, duties and composition*, 1(1), pp. 28–37.
- García-Ramos, R. & García-Olalla, M., (2011), Board characteristics and firm performance in public founder-and nonfounder-led family businesses. *Journal of Family Business Strategy*, 2(4), pp. 220–231.
- Gómez-Betancourt, G. et al., (2012), Estudio sobre el desempeño de las empresas familiares colombianas que cotizan en la bolsa de valores, frente a las empresas no familiares. Entramado, 8(1), pp. 28–42.
- Goodstein, J., Gautam, K. & Boeker, W., (1994), The effects of board size and diversity on strategic change. *Strategic management journal*, 15(3), pp.241–250.
- Hassan Che Haat, M., Abdul Rahman, R. & Mahenthiran, S., (2008), Corporate governance, transparency and performance of Malaysian companies. *Managerial Auditing Journal*, 23(8), pp. 744–778.
- Hermalin, B.E. & Weisbach, M.S., (2003), Boards of directors as an endogenously determined institution: A survey of the economic literature. FRBNY Economic Policy Review, 9(1), pp. 7–26.
- Hoy, F. & Verser, T.G., (1994), Emerging business, emerging field: Entrepreneurship and the family firm. *Entrepreneurship: Theory and Practice*, 19(1), pp. 9–24.
- Jackling, B. & Johl, S., (2009), Board structure and firm performance: Evidence from India's top companies. *Corporate Governance: An International Review*, 17(4), pp. 492–509.
- Jensen, M.C., (1993), The modern industrial revolution, exit, and the failure of internal control systems. *the Journal of Finance*, 48(3), pp. 831–880.

- Jensen, M.C. & Meckling, W.H., (1976), Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, 3(4), pp. 305–360.
- Kang, H., Cheng, M. & Gray, S.J., (2007), Corporate governance and board composition: Diversity and independence of Australian boards. *Corporate Governance: An International Review*, 15(2), pp. 194–207.
- Lefort, F. & Urzúa, F., (2008), Board independence, firm performance and ownership concentration: Evidence from Chile. *Journal of Business Research*, 61(6), pp.615–622.
- Lester, R.H. & Cannella, A.A., (2006), Interorganizational Familiness: How Family Firms Use Interlocking Directorates to Build Community Level Social Capital1. *Entrepreneurship Theory and Practice*, 30(6), pp.755–775.
- Lipton, M. & Lorsch, J.W., (1992), A modest proposal for improved corporate governance. *The business lawyer*, 48(1), pp.59–77.
- Martínez, J.I., Stöhr, B.S. & Quiroga, B.F., (2007), Family ownership and firm performance: Evidence from public companies in Chile. *Family Business Review*, 20(2), pp.83–94.
- Menozzi, A., Urtiaga, M.G. & Vannoni, D., (2012), Board composition, political connections, and performance in state-owned enterprises. *Industrial and Corporate Change*, 21(3), pp. 671–698.
- Minichilli, A., Zattoni, A. & Zona, F., (2009), Making boards effective: An empirical examination of board task performance. *British Journal of Management*, 20(1), pp. 55–74.
- Moreno-Gomez, J., Gomez-Betancourt, G. & Betancourt Ramirez, J., (2016), Board of director in the family business and its impact on socioemotional wealth. Revista Espacios, 37(8), pp. 6-14.
- Nicholson, G.J. & Kiel, G.C., (2007), Can Directors Impact Performance? A case based test of three theories of corporate governance. *Corporate Governance: An International Review*, 15(4), pp. 585–608.
- Pearce, J.A. & Zahra, S.A., (1992), Board composition from a strategic contingency perspective. *Journal of management studies*, 29(4), pp. 411–438.
- Pombo, C. & Gutiérrez, L.H., (2011), Outside directors, board interlocks and firm performance: Empirical evidence from Colombian business groups. *Journal of Economics and Business*, 63(4), pp. 251–277.
- Ricart, J.E., Alvarez, J.L. & Gallo, M.A., (1998), Prácticas de gobierno en España, IESE Business School.
- Vafeas, N., (1999), Board meeting frequency and firm performance. Journal of financial economics, 53(1), pp.113–142.
- Ward, J.L. & Handy, J.L., (1988), A survey of board practices. Family Business Review, 1(3), pp.289–308.
- Winter, R.K., (1977), State law, shareholder protection, and the theory of the corporation. *The Journal of Legal Studies*, 6(2), pp.251–292.
- Yermack, D., (1996), Higher market valuation of companies with a small board of directors. *Journal of financial economics*, 40(2), pp. 185–211.
- Zahra, S.A. & Sharma, P., (2004), Family business research: A strategic reflection. Family Business Review, 17(4), pp.331–346.