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Corporate Governance Context on Women's Representation in Top Management Positions and Listed Companies Value

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Abstract

Decision making process within contemporary organisations involves different views expressed by individuals recognized through a multifarious education, wide-ranging and in-depth experience, alongside extensive perspectives. Through nominating women in top management positions is emphasized the solution towards difficult problems faced by corporations due to their specific skills. Thereby, gender diversity leads to a better decision making system. The aim of this research consists in the examination of the influence and causal relationship between the percentage of women on boards of directors and the value of companies listed on the Bucharest Stock Exchange over 2007-2011. Therewith, we took into account CEO gender diversity by employing CEO gender, as well CEO geographic diversity by considering CEO state of residence. The value of companies was proxied through industry-adjusted Tobin's Q ratio. By estimating multivariate regression models for panel data, unbalanced, we found a percentage of women representation on boards of at least 22.50 percent in order to positively influence firm value. Besides, the nonlinear relationship previously mentioned was not statistically significant when we estimated a fixed-effects model. Furthermore, our results provide support for a positive influence of CEO gender and CEO state of residence on firm value when we estimated fixed-effects models, although the relationship was not statistically significant when we estimated models without cross-sectional effects. The empirical research of causality showed the lack of Granger causality regarding several explored lags.

Keywords: women on boards; firm value; panel data regression models; Granger causality; vector autoregression; impulse-response functions.

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Introduction

The boards of directors show better performance if comprise members with various levels of education, broad views, and sundry experience. Therefore, we emphasize the requirement of competent individuals having multifarious skills, nominated based on criteria of talent and performance, since boards are the place where strategic decisions of corporations are set, corporate governance is applied, and the risks are controlled. Although women account for 60 percent of new university graduates in Europe, we distinguish frequently a lower representation of them in the top of the companies. Thus, there arises several questions towards the way in which the process of recruiting board members is unfolded. Consequently, there are multiple doubts as regards the level of skills, experience, as well previous performance when individuals are appointed in top management positions.

Social identity theory argues that female representation in top management provides manifold benefits to the organizations. According to Kent and Moss (1994), women are perceived as leaders by group members within the environments identified through a significant social interaction specific to contemporary corporations which compete in the global market. Moreover, on the strength of frequently inconveniences incurred within the ascension process of the companies, women acquire the required skills in order to overcome and settle the allocated tasks. Mainiero, Williamson, and Robinson (1994) reported the hurdles faced by women in order to become viable candidates for senior management positions: getting assigned to a high visibility project, proving critical skills for effective job performance, attracting top level support, showing entrepreneurial initiative, and accurately detecting what the company values. However, apart from the achieved technical competencies which are mandatory in order to adhere for positions in the top of the companies, women own the advantage of successfully surpassing male hierarchies. Tharenou (2001) pointed out that the combination uniqueness between the acquired technical skills and the power to surpass the occured hindrances gives women a psychological advantage, respectively the improvement of interaction with subordinates.

Likewise, women hold a special cognitive style which highlights the harmony within the company compared to male counterparts. Thanks to previously mentioned style, Hurst, Rush, and White (1989) mentioned the confidence of subordinates in women, as well the entrenchment of employees, alongside solving the challenges. In fact, women evidence a proactive atitude towards learning. According to Gersick, Bartunek, and Dutton (2000) women deploy extra-organisational relationships with other women with the aim of acknowledging their experiences. Ruderman, Ohlott, Panzer, and King (2002) showed the various roles out of female personal life, such as those of spouse, friend, parent, traveler, sister,

volunteer, or daughter, being underlined the psychological benefits which enhance the skills required to solve several tasks. Therefore, the interpersonal skills, and leadership practice are developed. The theories which highlights the supremacy of power in the decision making process within corporations (Pfeffer, 1981) show the disparities between women and men on the way the power is perceived. Thus, men perceive power in the form of influence (Johnson, 1976), whereas women perceive power as information and knowledge dissemination.

The aim of current research consists in investigating the influence and causal relationship between the percentage of women on boards of directors and the value of companies listed on the Bucharest Stock Exchange (BSE) over 2007-2011. However, the distinction between executive and non-executive directors was not considered. Besides, we take into account CEO gender diversity by employing CEO gender, as well CEO geographic diversity by considering CEO state of residence, facet unexplored enough within corporate governance specific literature. The novelty of this research is depicted by the first empirical results based on a sample of companies listed in Romania. However, the domain of corporate governance within the investigated country is unsatisfactorily researched, as well the concerns of related authorities towards implementing specific regulations being reduced. After 1989, we ascertain the establishment of the legal framework within this post-communist country from Eastern Europe with the purpose of privatisation the companies owned by the State during communist regime, although this process was not entirely finished. Moreover, there are controversial cases of privatisation due to many mistrusts of corruption. The companies admitted to trading on the regulated market of the BSE shall adopt and comply with the provisions of the Bucharest Stock Exchange Corporate Governance Code (2008), but on a voluntary basis. Hence, the importance of this research emerges from the requirement of setting quick regulations on women representation by legislative authorities. Moreover, the European listed corporations shall follow the provisions stated within the proposal for a Directive of the European Parliament and of the Council on improving the gender balance among non-executive directors of companies listed on stock exchanges (2012) which will be discussed forwards.

The remainder of this paper is organized as follows. Section two presents international evidence on women's representation on boards and CEOs state of residence, as well the European regulations set towards improving female board representation. Section three presents previous related literature based on which we develop research hypotheses. The research sample alongside all the employed variables and empirical research methods are described in Section four, whilst Section five provides the empirical results. Last section concludes the paper.

International Evidence on Women's Representation on Boards and CEOs State of Residence

We distinguish the concerns and efforts of the European Union institutions towards women representation on the boards of corporations, respectively the proposal for a Directive of the European Parliament and of the Council on improving the gender balance among non-executive directors of companies listed on stock exchanges and related measures (2012). The previously mentioned proposed Directive fixed a 40 percent target of the under-represented sex in non-executive board-member positions within publicly listed companies in Europe, with the exception of small and medium enterprises by 2020, or 2018 for listed public undertakings.

Figure 1 shows the percentage of women's representation, executive and non-executive members, on the boards of the largest listed companies within EU-27. Thus, in January 2012 we notice the overwhelming dominance of male gender on boards. Thereby 91.1 percent of executive board members and 85 percent of non-executive board members were men. Besides, we observe that the percentage of female executive board members (30.6 percent) within Romanian largest listed companies was over the mean value registered within EU-27 (8.9 percent), being also the highest level of representation. Contrariwise, the percentage of female non-executive board members (10.5 percent) was below the mean value registered within EU-27 (15 percent).

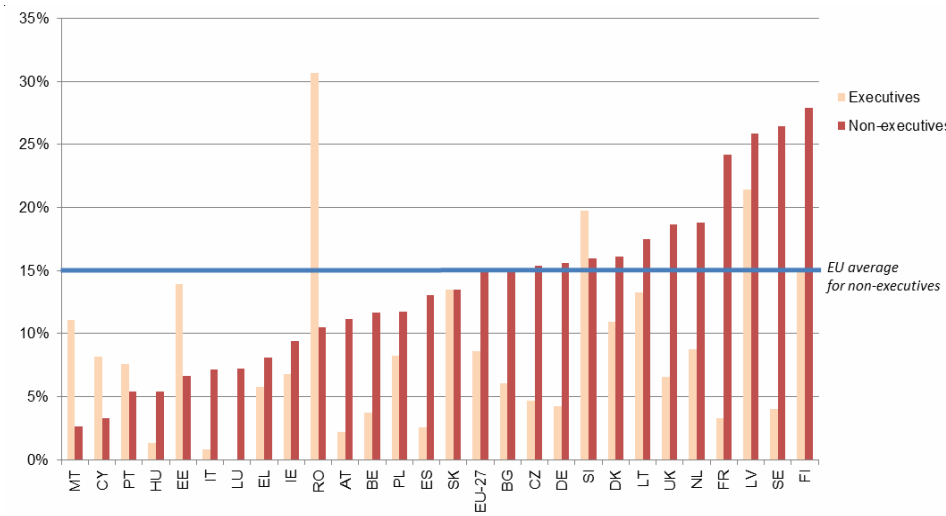

Figure 1. *The percentage of women's representation, executive and non-executive members, on the boards of the largest listed companies (EU-27) (January 2012).*

Source: *European Commission's database on women and men in decision-making.*

Table 1 provides the share of women on the boards of the largest publicly listed companies. Thereby, we remark significant differences between the member states of EU-27, respectively higher percentage of female board representation in Finland, Sweden, Latvia, France, and very lower percentage of women's representation on boards in Malta and Cyprus. Likewise, the reduced growth rate emphasizes about 40 years required in order to achieve the gender balance within boards of directors (at least 40 percent of each gender). By comparison, there are not considerable dissimilarities as regards the percentage of women's representation on US corporate boards. Accordingly, an investigation based on a sample of US companies employed by GMI Ratings (2012) shows that only 12.6 percent out of the board members of the S&P 1500 companies were women. As well, the companies comprised in Russsell 3000 revealed just 11.6 percent of female board representation. Withal, there was ascertained the fact that 36 percent of the companies out of Russell 3000 comprised only men on boards of directors. According to Catalyst (2012), the share of women on the boards of Fortune 500 companies was 16.6 percent, whereas during 2011 the women representation was 16.1 percent.

Table 1. *The percentage of women's representation (% total board members) on the boards of largest quoted companies (EU-27).*

Country	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	Average '03-'12
EU-27	**9**	**9**	**10**	**10**	**10**	**11**	**11**	**12**	**14**	**16**	**11.20**
Belgium	6	7	6	6	6	7	8	10	11	13	8.00
Bulgaria	11	18	19	17	15	12	17	11	15	12	14.70
Czech Republic	-	11	11	8	11	13	13	12	16	16	12.33
Denmark	11	11	11	12	15	17	18	18	16	21	15.00
Germany	10	12	12	11	11	13	13	13	15	18	12.80
Estonia	15	15	13	13	10	8	6	7	7	8	10.20
Ireland	7	6	6	5	6	7	8	8	9	9	7.10
Greece	7	7	7	8	11	6	5	6	6	8	7.10
Spain	3	4	4	4	6	8	10	10	11	12	7.20
France	5	6	7	8	9	9	10	12	22	25	11.30
Italy	2	2	3	4	3	4	4	5	6	11	4.40
Cyprus	6	7	7	6	2	3	3	4	5	8	5.10
Latvia	15	10	19	21	17	16	17	23	27	28	19.30
Lithuania	-	11	11	16	18	16	15	13	14	18	14.67
Luxembourg	4	4	3	1	3	3	3	4	6	10	4.10
Hungary	11	9	10	12	11	16	13	14	5	7	10.80
Malta	-	2	3	4	4	4	4	2	2	4	3.22
Netherlands	8	5	7	8	14	14	15	15	18	22	12.60
Austria	6	6	7	6	5	6	7	9	11	12	7.50
Poland	-	9	11	9	12	10	10	12	12	12	10.78
Portugal	4	4	6	7	3	3	4	5	6	7	4.90
Romania	**17**	**17**	**13**	**13**	**18**	**12**	**12**	**21**	**10**	**12**	**14.50**
Slovenia	20	19	19	19	14	18	10	10	14	19	16.20
Slovakia	7	9	11	10	24	18	18	22	15	14	14.80
Finland	12	16	21	20	18	20	24	26	26	29	21.20
Sweden	18	21	24	24	24	27	27	26	25	26	24.20
United Kingdom	15	13	12	12	12	12	12	13	16	19	13.60

Source: European Commission's database on women and men in decision-making.

Moreover, in March 2011 the companies listed on the European stock exchanges were requested to sign the 'Women on the Board Pledge for Europe' which expressed the voluntary increase of the number of women in their boardrooms. In fact, there is a provision according to which a target of 30 percent representing the share of women on the boards shall be reached by 2015 and 40 percent by 2020. Unfortunately, after a year only 24 companies across Europe had signed the Pledge. However, we notice disparate concerns inasmuch as eleven EU member states (Belgium, France, Italy, Netherlands, Spain, Portugal, Denmark, Finland, Greece, Austria, Slovenia) have set legal instruments to promote gender balance on company boards, whilst another eleven EU member states (Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Ireland, Latvia, Lithuania, Malta, Romania, Slovakia) have neither self-regulation measures nor legislation in place. By considering the settlement of a legal quota in January 2011 requiring that women shall hold 20 percent of board positions by 2014 and 40 percent by 2017, only France will succeed to fulfill the target of 40 percent by 2020. There is estimated that only seven EU member states (Filnand, Latvia, Netherlands, Slovakia, Spain, Denmark, Sweden) will accomplish the target of 40 percent before 2035.

Figure 2 reveals the share of non-national directors on the boardrooms in 2011 according to a report employed by Heidrick and Struggles.

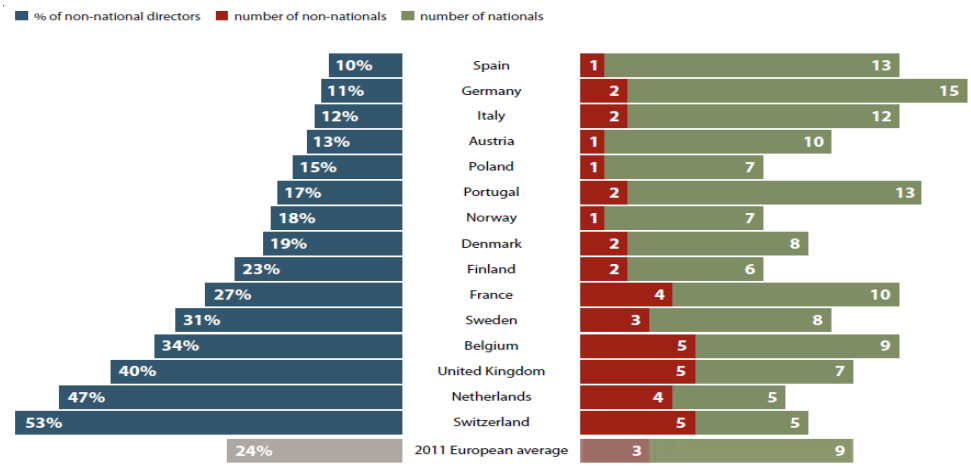

Figure 2. *Non-resident directors on the board.*

Source: *European Corporate Governance Report 2011, Challenging board performance, Heidrick and Struggles.*

Hence, by considering the context related to CEO geographic diversity within boards, unconcerned to directors' gender, we stress that Switzerland (53 percent), Netherlands (47 percent), United Kingdom (40 percent), Belgium (34 percent), Sweden (31 percent), and France (27 percent) registered a share of non-national directors over the European average (24 percent).

Literature Review and Hypotheses Development

Fiedler's contingency theory (Fiedler, 1958) emphasizes the fact that performance related to a certain group is dependent on the leader's psychological style and three contextual variables as follows: the relationships between the leader and the group members, task structure, and position power. According to Doty and Glick (1994), *configurational theory differs towards* contingency theory due to a holistic approach which postulates that the parties of a social entity could not be understood within an isolated manner. Besides, multivariate configurations own an advantage which occurs from a complete exposure of organisational phenomenon in contrast with bivariate interactions related to simple contingent approaches. Therefore, Dwyer, Richard, and Chadwick (2003) based on contingency and configurational theories suggest that the effect of gender diversity at management level is conditioned by the strategic orientation of the company and its organisational culture or multiple interactions between these variables. However, gender diversity should improve the performance within the companies which seek growth.

The presence of women on senior management positions could lead to an increase in the the value of the companies since these organisational entities have new ideas and different visions. Nevertheless directors' dissimilitude could cause conflicts due to dissimilar points of view. We notice two s*chools of though which compare the performance of women-led companies and men-led companies, respectively liberal feminism having root within the liberal political philosophy and socialist feminism* (Black, 1989) with multifarious origins 'ranging from social learning theory to psychoanalysis' (Fischer, Reuber, and Dyke, 1993: 154). According to liberal feminism, Fischer *et al*. (1993) mentioned that women and men are considered equally skilled, hence any deviation from performance related to women being caused by their discrimination (such as the access to funding) or another systematic factors which deprive women of important resources (such as an adequate education). Contrariwise, socialist feminism supports that women and men are inherently dissimilar due to their nature. Consequently, the organisational activities are differently held by women and men, but this fact does not imply that *women-led companies record lower performance than men-led companies, circumstance confirmed by* Robb and Watson (2012). Social feminist theory argues that women follow reduced risks, a moderate growth of their

activity, as well a balance between work and family. Jianakoplos and Bernasek (1998) highlighted the risk aversion of women towards setting financial decisions as opposed men. Thus, by nominating women on top management positions the likelihood of a higher risk within strategic decisions will decline. Barber and Odean (2001) documented that men trade 45 percent more than women. However, there was found that trading lowers net returns by 2.65 percentage points a year for men and by 1.72 percentage points for women. Khan and Vieito (2013) established a lower risk if the CEO is women, respectively a better firm performance proxied by return on assets.

Based on these considerations, we draw the first hypothesis of current study:

H1: Women holding the CEO position positively influence the value of listed companies on the Bucharest Stock Exchange.

By considering the context of globalisation, geographic diversity of board members could be important if the companies follow to extend their horizons at an international sight. Oxelheim and Randř y (2003) found higher Tobin's Q ratio within the enterprises which have headquarters in Norway or Sweden and hold foreign (Anglo-American) board membership. In fact, this case could mark a signal in the market as regards the commitment towards the adoption of improved corporate governance specific practices. Therewith, the reputation in the financial market is enhanced. Contrariwise, we notice the major hindrance by the way of cultural differences. Thus, there could be observed several constraints such as language because there are often created certain subgroups on boardrooms based on language. Moreover we ascertain the requirement to set board and committee meetings at least one year in advance so that non-national board members can participate fully. Withal, there is required an equilibrium between international directors and national counterparts. However, actually a board which comprises only national directors is not the befitting decision, even simply appointing non-resident board members could be scanty. There are recommended members which shall understand the cultural differences, build a network, and penetrate the market.

The aforementioned views engender the second hypothesis of current investigation:

H2: Non-national persons which hold the CEO position positively influence the value of listed companies on the Bucharest Stock Exchange.

According to Eagly and Johnson (1990), as well Brett and Stroh (1999), women which hold positions of executive director register better performance towards settling the conflicts, adaptation at change, unfolding quality activities, and development of qualities related to other persons, motivating and inspiring others. These abilities are primordial in changing environments since it mitigate the stress related to subordinates and simultaneously improve their productivity. Huse and Solberg (2006) noticed the impediments faced by women on boards as regards

stating their opinions due to the ignorance and rejection of men towards their views if the boardrooms comprised only one woman. However, there are companies which are well-known for adopting the practice of tokenism. There is perceived the symbolic effort in employing certain measures or as against setting certain practices in order to diversify the group or to improve any circumstance of historical and systematic discrimination. Farrell and Hersch (2005) acknowledged the cases of tokenism over the period 1990-1999 within US companies comprised in Fortune 500, besides the cases of recruitment an additional women on board so far as the current is dismissed being uncommon. Konrad and Kramer (2006) specified the requirement of at least three women on board in order to avoid the cases of tokenism.

Carter, Simkins, and Simpson (2003) found a positive relationship between the percentage of women and minorities on boards and Tobin's Q ratio. Krishnan and Park (2005) showed that there is a positive association between the proportion of women on top management teams and organisational performance as proxied by return on assets. According to Adams and Ferreira (2009), gender-diverse boards allocate more effort to monitoring, likewise women being more likely to join monitoring committee. Withal, there was established that CEO turnover is sensitive to stock return performance, besides equity-based compensation of directors increasing within more gender-diverse boards. Nevertheless, the average effect of gender diversity on firm performance is negative.

Rose (2007) suggested that board diversity could signify a positive signal towards potential candidates for certain jobs, therefore attracting skilled individuals amongst near outside environments out of which are usually recruited board members. Lee and James (2007) documented negative cumulative abnormal returns (-2.47 percent) to women nomination as CEO, whereas on the announcement date Kang, Ding, and Charoenwong (2010) noticed a decrease of average abnormal returns by 1.3 percent. Besides, Kang *et al*. (2010) found that investors generally react positively to the appointment of women directors in Singaporean firms, respectively an increase of average abnormal returns by 1.5 percent. On the contrary, Farrell and Hersch (2005) noted insignificant abnormal returns on the announcement of a woman added to the board. Jurkus, Park, and Woodard (2011) concluded a negative relation between the percentage of female officers out of companies from less competitive markets and agency costs. However, the negative relation was not robust when the endogeneity of diversity was considered.

Furthermore, there are several opposite views as regards the positive influence of women directors on firm value. Shrader, Blackburn, and Iles (1997) noticed a negative influence between the share of women leaders and firm financial performance as proxied by return on sales, return on assets, return on investment, and return on equity. Rose (2007) concluded the lack of any statistically significant link between firm performance as measured by Tobin's Q ratio and female board

representation within Danish listed companies. Wang and Clift (2009) established that gender and racial diversity do not have statistically significant influence on firm performance as proxied by return on assets, return on equity, and shareholder return.

Based on previous evidence we state the third hypothesis of current research:

H3: The percentage of women's representation on boards positively influences the value of listed companies on the Bucharest Stock Exchange.

Data and Methodology

Research sample and variables description

Primary, our sample comprised all the companies listed on the Bucharest Stock Exchange on all three tiers between 2007-2011. Further, we dropped from our sample the companies out of financial intermediation sector (eleven companies) covering credit institutions (three banks), financial investment companies (five SIFs), and financial investment services companies (three SSIFs), taking into account that these companies are regulated by specific rules. Likewise, we removed from the initial sample the companies out of 'Unlisted' tier (twenty five companies) and the companies out of 'International' tier (two companies). Hence, our final sample shows the following distribution: 63 companies in 2007, 67 companies in 2008, and 68 companies between 2009-2011, summing up 334 statistical observations. The industry membership of selected sample is multifarious as following: wholesale/retail, construction, pharmaceuticals, manufacturing, plastics, machinery and equipment, metalurgy, food, chemicals, basic resources, transportation and storage, tourism, and utilities.

Table 2 describes all the variables employed in the empirical research. All data was hand collected, besides the source of it being represented by the annual reports disclosed by the companies.

The value of selected companies is proxied by Tobin's Q ratio, but industry-adjusted, similar Eisenberg, Sundgren, and Wells (1998) in order to account for the varied industry membership. However, we followed the definition afforded by Kaplan and Zingales (1997), Gompers, Ishii, and Metrick (2003), withal Bebchuk, Cohen, and Ferrell (2009). In fact, we have not considered the market value of debt at the numerator, respectively the replacement cost of assets at denominator. Subsequently, after we have computed Tobin's Q ratio for each company, we have adjusted it according to industry membership as follows. Therefore, the difference between Tobin's Q ratio of a certain company and industry' median Tobin's Q ratio is ΔQ, while industry-adjusted measure of Tobin's Q ratio (QAdj) is defined as follows: $QAdj = sign(\Delta Q)*sqrt(|\Delta Q|)$, where $sign(\Delta Q)$ is the sign of difference

between Tobin's Q ratio of a certain company and industry' median corresponding to Tobin's Q ratio, whereas sqrt(|ΔQ|) is the square root of absolute value of ΔQ. We decided to employ median instead of mean because our data did not follow a normal distribution.

Table 2. *Description of variables*

Variable	Definition
Variable regarding firm value	
QAdj	Industry-adjusted Tobin's Q ratio. Tobin's Q ratio was computed as the market value of assets divided by the book value of assets, where the market value of assets equals the book value of assets plus the market value of common equity less the sum of the book value of common equity.
Variables regarding board of directors diversity	
%Women	The ratio between the number of women directors on corporate board of directors and the total number of directors on board (%).
%Women^2	The percentage of women directors on corporate board of directors squared (%).
CEOGender	Dummy variable: If the CEO is male = 0; If the CEO is female = 1.
CEOState	Dummy variable: If the CEO is resident in Romania = 0; If the CEO is non-resident in Romania = 1.
Control variables	
FS	Firm Size, as the annual total assets (logarithmic values).
Lev	Leverage, computed as debt/book value of assets.
SGrowth	Sales Growth, as the relative increase of sales from the previous year (%).
Listing	The number of years since listing on the BSE (logarithmic values).

Source: *Author's processing.*

Furthermore, we employed several control variables taking into consideration the influence on firm value related to other factors. Thereby, we will use the annual total assets (logarithmic values) as proxy for firm size. According to Himmelberg, Hubbard, and Palia (1999), monitoring and agency costs are higher within large companies, fact which causes an increase of managerial holdings. Besides, large companies own skilled managers, being noticed a higher level of their shareholdings. Anyway, large companies benefit from economies of scale towards top management monitoring and lead to a lower optimal level of managerial holdings. However, we ascertain several studies (Grossman and Hart, 1982; Jensen, 1986; Stulz, 1990; Hart and Moore, 1995) which emphasizes the role of indebtedness towards mitigating agency conflicts between managers and shareholders. Growth opportunities will be controlled through the relative increase of sales from the previous year. Gaver and Gaver (1995) mentioned that information asymmetry between managers and shareholders within growing companies occurs due to the fact that managers own private information as regards the future value of investments. Anderson, Francis, and Stokes (1993) found that growing companies beared higher monitoring costs by considering the total compensation of directors and audit fees, opposite to non-growing companies. In addition, we will employ the logarithmic values related to the number of years since listing on the BSE in order to control for firm age. Black, Jang, and Kim (2006) and

Balasubramanian, Black, and Khanna (2010) noticed that younger firms are likely to be faster-growing and perhaps more intangible asset intensive which can lead to higher Tobin's Q ratio.

Empirical research methods

In order to unfold the empirical research as regards the influence of women's representation in top management positions on the value of the BSE listed companies, considering furthermore CEO gender diversity, as well CEO geographic diversity, we will estimate multivariate regression models for panel data, unbalanced, both models without cross-sectional effects and fixed-effects models. By taking into account that there could occur potential nonlinear relationships we will estimate several polynomial regression models. Similar Baltagi (2005), we consider the following general form of panel data regression model without cross-sectional effects:

$$y_{it} = \alpha + X'_{it}\beta + u_{it,} \quad i = 1, ...N, \; t=1,... \; T \tag{1}$$

where y is the dependent variable (industry-adjusted Tobin's Q ratio), X is the vector of explanatory variables (variables regarding board of directors diversity, as well control variables), the i subscript denotes the cross-section dimension, respectively the companies listed on the BSE, whereas t subscript denotes time, respectively the period 2007-2011.

According to Baltagi (2005), most of the panel data applications employ a one-way error component model for the disturbances as following: $u_{it} = \mu_i + \nu_{it}$, where μ_i shows the unobservable individual-specific effect, whilst ν_{it} shows the remainder disturbance. As well, we will consider the following general form of the fixed-effects model, where are assumed to be fixed parameters to be estimated, whereas the remainder disturbances stochastic independent and identically distributed IID(0, σ_v^2):

$$y_{it} = (\alpha + \mu_i) + X'_{it}\beta + \nu_{it,} \; i = 1, ...N, \; t=1,... \; T \tag{2}$$

Further, in order to detect the direction of causal relationships, we will employ Granger (1969) approach. Thereupon, there is stated that a variable X Granger-cause a variable Y if, given the past values of Y, past values of X are useful for predicting Y. Afterwards, we will test the stationarity related to the selected time series by employing the tests developed by Dickey and Fuller (1979), as well Phillips and Perron (1988) and we will perform the vector autoregressive technique (VAR) by considering the following equations:

$$X_t = \alpha_1 + \sum_{j=1}^{k} \beta X_{t-j} + \sum_{j=1}^{k} \chi_j \, Y_{t-j} + \varepsilon_{1t} \tag{3}$$

$$Y_t = \alpha_2 + \sum_{j=1}^{k} \delta_j Y_{t-j} + \sum_{j=1}^{k} \Phi_j X_{t-j} + \varepsilon_{2t} \tag{4}$$

X_t being the industry-adjusted Tobin's Q ratio, X_{t-j} the lagged values related to industry-adjusted Tobin's Q ratio, whilst Y_t are the variables regarding board of directors diversity, distinctly considered, Y_{t-j} the lagged values related to diversity variables. In fact, the employed time series are stationary if a shock on it is temporary. In addition, in order to test for a long-term equilibrium between the selected variables we will research potential cointegration relationships.

Results

Descriptive statistics

Table 3 shows summary statistics as regards all the variables employed within the empirical investigation. Therefore, without taking into account the distinction between executive and non-executive directors, the share of women representation on boards (14.36 percent) is over the mean value (11.20 percent) registered for EU-27 largest quoted companies *(Table 1)*.

Table 3. *Descriptive statistics.*

Variable	N	Mean	Median	Min	Max	Std. Dev.
QAdj	334	0.08928	0.00000	-0.81178	1.87060	0.570688
%Women	334	0.14362	0.00000	0.00000	0.66667	0.183162
CEOGender	334	0.11976	0.00000	0.00000	1.00000	0.325168
CEOState	334	0.12874	0.00000	0.00000	1.00000	0.335417
FS	334	8.24129	8.193217	6.977173	10.52934	0.610849
Lev	334	0.38754	0.353737	0.006916	1.940834	0.285651
SGrowth	334	0.07058	0.045353	-0.913607	2.503076	0.356558
Listing	334	0.96833	1.041393	0.000000	1.204120	0.253036

Source: *Author's calculations. Description of the variables is provided in* Table 2.

Table 4 provides the frequencies towards women's representation on the boards of the BSE listed companies, and *Table 5* shows the frequencies of CEO gender diversity and CEO geographic diversity. We notice that the first, the second, and the fourth intervals record the highest representation of female on boardrooms. In fact, we remark a reduced number of listed companies on the BSE within the share of women's representation exceeds the threshold of 50 percent which emphasizes the gender balance. Likewise, we ascertain the fact that most of the companies listed on the BSE own male CEOs, furthermore being resident in Romania.

Table 4. Frequency table of women's representation on boards

Variable	2007		2008		2009		2010		2011	
	N	%	N	%	N	%	N	%	N	%
0%<=%Women<=10%	37	58.73016	37	55.22388	35	51.47059	35	51.47059	33	48.52941
10%<%Women<=20%	11	17.46032	14	20.89552	16	23.52941	14	20.58824	14	20.58824
20%<%Women<=30%	3	4.76190	2	2.98507	3	4.41176	3	4.41176	3	4.41176
30%<%Women<=40%	10	15.87302	11	16.41791	10	14.70588	12	17.64706	13	19.11765
40%<%Women<=50%	0	0.00000	0	0.00000	0	0.00000	0	0.00000	1	1.47059
50%<%Women<=60%	0	0.00000	1	1.49254	1	1.47059	1	1.47059	1	1.47059
60%<%Women<=70%	2	3.17460	2	2.98507	3	4.41176	3	4.41176	3	4.41176
70%<%Women<=80%	0	0.00000	0	0.00000	0	0.00000	0	0.00000	0	0.00000
80%<%Women<=90%	0	0.00000	0	0.00000	0	0.00000	0	0.00000	0	0.00000
90%<%Women<=100	0	0.00000	0	0.00000	0	0.00000	0	0.00000	0	0.00000

Source: *Author's calculations. Description of the variables is provided in* Table 2.

Table 5. *Frequency table of CEO gender diversity and CEO geographic diversity.*

Variable		2007		2008		2009		2010		2011	
		N	%	N	%	N	%	N	%	N	%
CEOGender	Male	57	90.47619	60	89.55224	58	85.29412	59	86.76471	60	88.23529
	Female	6	9.523810	7	10.44776	10	14.70588	9	13.23529	8	11.76471
CEOState	Resident	54	85.71429	59	88.05970	60	88.23529	59	86.76471	59	86.76471
	Non-resident	9	14.28571	8	11.94030	8	11.76471	9	13.23529	9	13.23529

Source: *Author's calculations. Description of the variables is provided in* Table 2.

Table 6 shows the correlations between all the employed variables.

Table 6. *Pearson correlation coefficient matrix*

Variable	QAdj	%Women	CEOGender	CEOState	FS	Lev	SGrowth	Listing
QAdj	1	-.029 (.594)	-.051 (.356)	.101 (.064)	.054 (.326)	**.321**** (.000)	.072 (.187)	-.021 (.701)
%Women	-.029 (.594)	1	**.203**** (.000)	**-.116*** (.034)	**-.251**** (.000)	**-.166**** (.002)	-.051 (.349)	**-.172**** (.002)
CEOGender	-.051 (.356)	**.203**** (.000)	1	**-.142**** (.009)	-.011 (.845)	**-.285**** (.000)	**-.111*** (.043)	-.040 (.467)
CEOState	.101 (.064)	**-.116*** (.034)	**-.142**** (.009)	1	.040 (.463)	**.252**** (.000)	.008 (.885)	-.007 (.904)
FS	.054 (.326)	**-.251**** (.000)	-.011 (.845)	.040 (.463)	1	.076 (.167)	.055 (.320)	**-.110*** (.045)
Lev	**.321**** (.000)	**-.166**** (.002)	**-.285**** (.000)	**.252**** (.000)	.076 (.167)	1	.082 (.134)	.047 (.387)
SGrowth	.072 (.187)	-.051 (.349)	**-.111*** (.043)	.008 (.885)	.055 (.320)	.082 (.134)	1	.009 (.865)
Listing	-.021 (.701)	**-.172**** (.002)	-.040 (.467)	-.007 (.904)	**-.110*** (.045)	.047 (.387)	.009 (.865)	1

Source: Author's calculations. Description of the variables is provided in Table 2.

Notes: ***Significant at 1% level; *significant at 5% level.*

Therefore, Pearson correlation coefficients does not highlight strong correlations between the employed independent variables within empirical research. Also, the results of empirical investigation are not affected by the multicollinearity phenomenon which involves higher variances and covariances of the regression coefficients' estimators, higher confidence intervals of the estimators due to higher standard deviations, the distorsion of results related to Student's t-test due to higher standard deviations, a higher coefficient of determination, the instability of estimators and its standard deviations at small changes of data.

Regression results: The influence of female board representation, CEO gender, and CEO state of residence on firm value

Table 7 shows the coefficients of multivariate regression models for panel data without cross-sectional effects.

Table 7. *Regressions' results of female board representation, CEO gender, and CEO state of residence on firm value (models without cross-sectional effects)*

Variable	1	2	3	4	5
C	-0.357775 (-0.770858)	-0.391063 (-0.849916)	-0.352285 (-0.758539)	-0.361398 (-0.777580)	-0.356142 (-0.765842)
%Women	0.091669 (0.528414)	**-0.919192*** (-2.192157)	0.067675 (0.384251)	0.097773 (0.561089)	0.073583 (0.416337)
%Women^2		**2.042364**** (2.643152)			
CEOGender			0.078281 (0.803643)		0.081404 (0.832962)
CEOState				0.040235 (0.436655)	0.045257 (0.489872)
FS	0.029312 (0.573850)	0.034503 (0.681102)	0.026915 (0.525741)	0.029345 (0.573781)	0.026856 (0.523980)
Lev	**0.641903***** (6.053396)	**0.667322***** (6.323849)	**0.664594***** (6.053307)	**0.630505***** (5.766836)	**0.652679***** (5.797629)
SGrowth	0.073680 (0.878358)	0.068696 (0.826171)	0.079702 (0.945870)	0.074277 (0.884261)	0.080613 (0.955341)
Listing	-0.063658 (-0.526028)	-0.047393 (-0.394670)	-0.064568 (-0.533239)	-0.061931 (-0.510855)	-0.062662 (-0.516630)
F-Statistic	**7.939837*****	**7.901663*****	**6.717027*****	**6.631982*****	**5.778352*****
R-sq	0.107966	0.126626	0.109725	0.108486	0.110380
Adj R-sq	0.094368	0.110601	0.093389	0.092128	0.091277
N	334	334	334	334	334

Source: *Author's calculations. Description of the variables is provided in* Table 2.

Notes: *†p < .10; *p < .05; **p < .01; ***p < .001.*

The t-statistic for each coefficient is reported in parentheses.

Hence, by estimating a polynomial regression model (model 2), we found a nonlinear relationship between the share of women's representation on boards of the BSE listed companies and industry-adjusted Tobin's Q ratio. Thus we notice a percentage of women representation on boards of at least 22.50 percent[4] in order to positively influence firm value. Moreover, by taking into account the influence on firm value of variables related to CEO gender diversity (models 3 and 5) and CEO geographic diversity (models 4 and 5), we emphasize the lack of any statistically significant relationship based on the level of statistical significance associated to Student's t-test. Therefore, after we have estimated multivariate regression models for panel data without cross-sectional effects, we infer that the first hypothesis H1 is partly validated, whereas the second H2 and the third H3 hypotheses are rejected. However, we ascertain the positive influence of indebtedness on firm value in all the estimated models. *Table 8* exhibits the empirical results of fixed-effects estimated models.

Table 8. *Regressions' results of female board representation, CEO gender, and CEO state of residence on firm value (fixed-effects models).*

Variable	1	2	3	4	5
C	0.489153 (0.267318)	0.521852 (0.285248)	0.504468 (0.275999)	0.555622 (0.304735)	0.593691 (0.326863)
%Women	0.334124 (0.610328)	-1.244946 (-0.801905)	0.335264 (0.613115)	0.355247 (0.651227)	0.362094 (0.666355)
%Women^2		4.086100 (1.086893)			
CEOGender			0.250563 (1.265672)		**0.353034**† (1.742473)
CEOState				**0.554881**† (1.731167)	**0.692543*** (2.105597)
FS	0.031647 (0.139701)	0.026869 (0.118624)	0.026899 (0.118858)	0.020019 (0.088666)	0.010443 (0.046419)
Lev	**1.067235***** (5.953983)	**1.094845***** (6.049647)	**1.072208***** (5.987180)	**1.035625***** (5.769608)	**1.034790***** (5.787466)
SGrowth	0.086968 (1.118148)	0.077831 (0.995219)	0.099530 (1.270802)	0.071003 (0.909947)	0.084742 (1.084691)
Listing	**-1.165307***** (-4.367242)	**-1.162763***** (-4.359054)	**-1.174770***** (-4.406047)	**-1.198070***** (-4.495792)	**-1.219531***** (-4.589273)
F-Statistic	**3.885785*****	**3.851401*****	**3.863338*****	**3.902933*****	**3.921373*****
R-sq	0.517361	0.519544	0.520316	0.522861	0.528389
Adj R-sq	0.384219	0.384646	0.385636	0.388894	0.393643
N	334	334	334	334	334

Source: *Author's calculations. Description of the variables is provided in* Table 2.

Notes: *†p < .10; *p < .05; **p < .01; ***p < .001.*

The t-statistic for each coefficient is reported in parentheses.

[4] We consider the following notations: Y = firm value, X = the ratio between the number of women directors on corporate board of directors and the total number of directors on board, X^2 = the percentage of women directors on corporate board of directors, but squared. By considering the coefficients associated to X and X^2, then:
y = -0.919192*X + 2.042364*X^2 → dy/dX = -0.919192 + 2*2.042364*X = -0.919192 + 4.084728*X - 0.919192 + 4.084728*X = 0 → 4.084728*X = 0.919192 → X = 22.50%.

Therefore, although the coefficients of model 2 confirm the nonlinear relationship between the percentage of women on boards and firm value acknowledged in model 2 out of *Table 7*, the nonlinear relationship was not statistically validated in *Table 8* after we have estimated a fixed-effects regression model. In addition, we remark the positive influence of CEO gender (model 5) on firm value, as well the positive influence of CEO state of residence (models 4 and 5) on industry-adjusted Tobin's Q ratio. Thereby, by estimating fixed-effects multivariate regression models, the first hypothesis H1 is rejected, whilst the second H2 and the third H3 hypotheses are validated. However, by taking into consideration the impact of control variables on firm value, we confirm the positive influence of leverage, withal the negative influence of firm age since listing on industry-adjusted Tobin's Q ratio in all the estimated models.

Causality research results: The causal relationships between women's representation on boards, CEO gender diversity, CEO geographic diversity, and firm value

Table 9 shows the results of Granger causality test. Thus, the percentage of women's representation on boards Granger cause industry-adjusted Tobin's Q ratio for the third lag, but firm value does not Granger cause the share of women on boards. As regards CEO gender diversity, the gender related to CEO Granger cause firm value for the first lag, whereas firm value Granger cause CEO gender for the second and for the third lag. As for CEO geographic diversity we notice the lack of Granger causality.

Table 9. *Granger causality test*

Null hypothesis	Lag 1			Lag 2			Lag 3		
	N	F-Statistic	Prob	N	F-statistic	Prob	N	F-statistic	Prob
QAdj does not Granger cause %Women	266	0.00085	0.9768	198	0.37617	0.6870	130	0.06338	0.9791
%Women does not Granger cause QAdj		0.70044	0.4034		2.18757	0.1150		**5.61089**	**0.0012**
QAdj does not Granger cause CEOGender	266	2.08421	0.1500	198	**2.34764**	**0.0983**	130	**3.99521**	**0.0094**
CEOGender does not Granger cause QAdj		**2.77954**	**0.0967**		2.01101	0.1366		1.69887	0.1708
QAdj does not Granger cause CEOState	266	0.00351	0.9528	198	0.96580	0.3825	130	0.63535	0.5936
CEOState does not Granger cause QAdj		1.76576	0.1851		1.35540	0.2603		0.58158	0.6282

Source: *Author's calculations. Description of the variables is provided in* Table 2.

Table 10 provides the results of statistical tests regarding time-series stationarity. Therefore, by considering the results of Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP), industry-adjusted Tobin's Q ratio is stationary both for level data and for the first difference data.

Table 10. *Unit root tests*

Method	QAdj		%Women	
	I(0)		I(0)	
	Statistic	Prob.**	Statistic	Prob.**
ADF - Fisher Chi-square	**406.323**	**0.0000**	49.1585	0.9724
PP - Fisher Chi-square	**402.288**	**0.0000**	20.1125	0.3265
Method	I(1)		I(1)	
	Statistic	Prob.**	Statistic	Prob.**
ADF - Fisher Chi-square	**654.235**	**0.0000**	22.2524	0.1352
PP - Fisher Chi-square	**667.814**	**0.0000**	20.8661	0.1051

Source: *Author's calculations. Description of the variables is provided in* Table 2.

Notes: ***Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution.*

Contrariwise, the percentage of women on boards of directors is non-stationary, thus having a unit root. The methodology related to vector autoregressive technique suggests the fact that all the employed variables within empirical research should be stationary. Nevertheless, we will follow Harvey (1990) according to which the traditional approach of VAR enthusiasts is to work on level, even if some of the series are non-stationary.

Table 11 reports the selection criteria as regards the VAR lag order. Thus, based on the five selection criteria (LR, FPE, AIC, SC, and HQ), for three theoretical lags is recommended only one lag for the VAR model 'QAdj-%Women'.

Table 11. *VAR lag order selection criteria.*

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-49.27861	NA	0.007545	0.788902	0.833018	0.806827
1	170.1478	**428.7255***	**0.000274***	**-2.525351***	**-2.393004***	**-2.471574***
2	172.7903	5.081568	0.000280	-2.504466	-2.283886	-2.414837
3	173.7263	1.771301	0.000294	-2.457328	-2.148517	-2.331848

Source: *Author's calculations. Description of the variables is provided in* Table 2.

Notes: * *indicates lag order selected by the criterion; LR: sequential modified LR test statistic (each test at 5% level); FPE: Final prediction error; AIC: Akaike information criterion; SC: Schwarz information criterion; HQ: Hannan-Quinn information criterion.*

Therefore, *Table 12* shows the estimation for the VAR model 'QAdj-%Women', as well the roots of characteristic polynomial based on which we will verify the stability condition of the estimated model. In fact, the VAR model 'QAdj-%Women' is stable since all roots are subunitary. As much, the estimated VAR model could be employed in order to describe the autoregressive relationships between women's representation in top management positions and the BSE listed companies value.

Table 12. *The estimation of VAR model 'QAdj-%Women' and roots of characteristic polynomial.*

Variable	QAdj	%Women	Root	Modulus
QAdj(-1)	0.332895 (0.04800) [6.93547]	0.000146 (0.00503) [0.02909]	0.972576 0.332925	0.972576 0.332925
%Women(-1)	-0.129692 (0.15496) [-0.83692]	0.972606 (0.01624) [59.8713]		
C	-0.041299 (0.03560) [-1.16021]	0.009820 (0.00373) [2.63174]		

Source: *Author's calculations. Description of the variables is provided in* Table 2.

Notes: *Standard errors in ( ) and t-statistics in [ ].*

Table 13 reports the results of unrestricted cointegration rank tests (trace and maximum eigenvalue).

Table 13. Johansen cointegration test

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	**0.105731**	**23.51379**	**15.49471**	**0.0025**
At most 1	0.006983	1.387508	3.841466	0.2388
Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	**0.105731**	**22.12628**	**14.26460**	**0.0024**
At most 1	0.006983	1.387508	3.841466	0.2388

Source: *Author's calculations. Description of the variables is provided in* Table 2.

Notes: **denotes rejection of the hypothesis at the 0.05 level;*

***MacKinnon-Haug-Michelis (1999) p-values.*

The procedure of cointegration developed by Johansen (1991) shows a long-term relationship between women's representation on boards and the value of the companies listed on the BSE. Both trace test and max-eigenvalue test indicates one cointegration equations at the 0.05 level.

Figure 3 provides a graphical representation of impulse response functions related to the VAR model 'QAdj-%Women'.

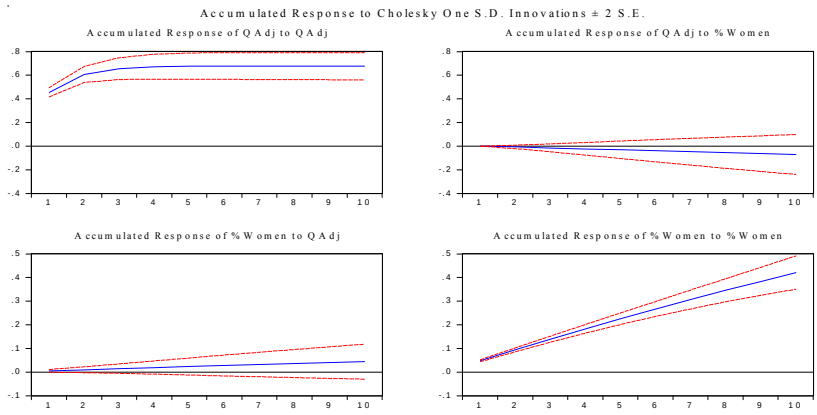

Figure 3. Impulse-response functions related to VAR model 'QAdj-%Women'.
Source: *Author's calculations. Description of the variables is provided in* Table 2.

Thereby, a shock of one percent in the percentage of women directors (the top right graph) involves a decrease of industry-adjusted Tobin's Q ratio. Contrariwise, a shock of one percent in firm value causes an increase of the percentage of women directors (the bottom left graph).

Discussion and Conclusions

Current research provides the first empirical evidence based on a sample of companies listed on the Bucharest Stock Exchange as regards the influence and causal relationship between the percentage of women on boards of directors and the value of quoted companies. Therewith, we took into consideration CEO gender diversity by employing CEO gender, as well CEO geographic diversity by considering CEO state of residence. Thereby, by estimating multivariate regression models for panel data, unbalanced, we found a percentage of women share on boards of at least 22.50 percent in order to positively influence industry-adjusted Tobin's Q ratio employed as proxy for firm value. Thus, we confirm the findings achieved by Konrad and Kramer (2006), Huse and Solberg (2006), and Farrell and Hersch (2005), being required an adequate number of women on boardrooms inasmuch as their initiatives shall not be ignored, also being removed the mistrusts towards tokenism. Contrariwise, the nonlinear relationship between the percentage of women on boards and firm value was not statistically significant when we estimated a fixed-effects model. Although the theories of liberal feminism and socialist feminism does not involve differences between *female-led companies and male-led companies, our results provide support for a positive influence of CEO gender on firm value. Moreover, there resulted that* CEO geographic diver-

sity positively influences industry-adjusted Tobin's Q ratio thanks to the new horizons emerged with non-national directors appointment. Besides, the empirical relationships between CEO gender, CEO state of residence, and firm value were not statistically significant when we estimated models without cross-sectional effects. The causal research of women's representation on boards, CEO gender diversity, CEO geographic diversity, and firm value revealed the lack of Granger causality as for several examined lags.

Notwithstanding the share of women on boards of the BSE listed companies exceeds the mean value registered for EU-27 largest listed companies, further the percentage of female executive board members being the highest within EU-27, we recommend an increase of the percentage of women's representation in non-executive board-member positions. There should be settled provisions by the Romanian State in order to reach the target of 40 percent set by the European Parliament and by the Council by 2020. However, the limits of current investigation are depicted by the reduced number of statistical observations due to unfolding an empirical research for the case of a country with low capital market development, and implicitly a *lower number of listed companies. Likewise, we should take into account the fact that the time-series of women representation on boards is non-stationary, according to* Harvey (1990) being important to acknowledge the effects of unit roots on distribution of the estimators. Furthermore, as future research we consider the distinct examination of female representation on boards by employing the number of executive and non-executive female directors. Our purpose consists in exploring the effects on firm value related to the increase of the number of non-executive women directors according to the proposed Directive of the European Parliament and of the Council.

References

Adams, R. B. & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, 94(2), 291-309.

Anderson, D., Francis, J. R. & Stokes, D. J. (1993). Auditing directorship and the demand for monitoring. *Journal of Accounting and Public Policy*, 12(4), 353-375.

Balasubramanian, N., Black, B. S. & Khanna, V. (2010). The relation between firm-level corporate governance and market value: A case study of India. *Emerging Markets Review*, 11(4): 319-340.

Baltagi, B. H. (2005). *Econometric analysis of panel data*, 3rd edition. West Sussex: John Wiley & Sons Ltd.

Barber, B. M. & Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. *Quarterly Journal of Economics*, 116(1), 261-292.

Bebchuk, L., Cohen, A. & Ferrell, A. (2009). What matters in corporate governance?. *Review of Financial Studies*, 22(2), 783-827.

Black, B. S., Jang, H. & Kim, W. (2006). Does corporate governance affect firm value? Evidence from Korea. *Journal of Law, Economics & Organization*, 22(2): 366-413.

Black, N. (1989). *Social Feminism*. New York: Cornell University Press.

Brett, J. M. & Stroh L. K. (1999). Women in management: how far have we come and what needs to be done as we approach 2000?. *Journal of Management Inquiry*, 8(4):392-398.

Bucharest Stock Exchange (2008). *Bucharest Stock Exchange Corporate Governance Code*.

Carter, D. A., Simkins, B. J. & Simpson, W. G. (2003). Corporate governance, board diversity and firm performance. *The Financial Review*, 38(1), 33-53.

Catalyst (2012). *2012 Catalyst Census: Fortune 500 Women Board Directors*, 1-3.

Dickey, D. A. & Fuller, W. A. (1979). Distribution of the estimators for autoregressive time series with a unit root. *Journal of the American Statistical Association*, 74(366), 427-431.

Doty, D. H. & Glick, W. H. (1994). Typologies as a unique form of theory building: Toward improved understanding and modeling. *The Academy of Management Review*, 19(2), 230-251.

Dwyer, S., Richard, O. C. & Chadwick, K. (2003). Gender diversity in management and firm performance: The influence of growth orientation and organizational culture. *Journal of Business Research*, 56(12), 1009-1019.

Eagly, A. H. & Johnson, B. T. (1990). Gender and leadership style: A meta analysis. *Psychological Bulletin*, 108(2), 233-256.

Eisenberg, T., Sundgren, S. & Wells, M. T. (1998). Larger board size and decreasing firm value in small firms. *Journal of Financial Economics*, 48(1), 35-54.

European Commission (2012). *Proposal for a Directive of the European Parliament and of the Council on improving the gender balance among non-executive directors of companies listed on stock exchanges and related measures*. Brussels, 14.11.2012 COM(2012) 614 final, 2012/0299 (COD), 1-28.

Farrell, K. A. & Hersch, P. L. (2005). Additions to corporate boards: The effect of gender. *Journal of Corporate Finance*, 11(1-2), 85-106.

Fiedler, F. E. (1958). *Leader attitudes and group effectiveness*. Illinois: University of Illinois Press.

Fischer, E. M., Reuber, R. A. & Dyke, L. S. (1993). A theoretical overview and extension of research on sex, gender, and entrepreneurship. *Journal of Business Venturing*, 8(2), 151-168.

Gaver, J. T. & Gaver, K. M. (1995). Compensation policy and the investment opportunity set. *Financial Management*, 24(1), 19-32.

Gersick, C. J. G., Bartunek, J. M. & Dutton, J. E. (2000). Learning from academia: The importance of relationships in professional life. *Academy of Management Journal*, 43(6), 1026-1044.

Gompers, P., Ishii, J. & Metrick, A. (2003). Corporate governance and equity prices. *QuarterlyJournal of Economics*, 118(1), 107-156.

Granger, C. W. J. (1969). Investigating causal relationshions by econometrics models and cross spectral methods. *Econometrica*, 37(3), 424-438.

Grossman, S. J. & Hart, O. (1982). *Corporate financial structure and managerial incentives*. In The economics of information and uncertainty, edited by John McCall, Chicago: University of Chicago Press.

Hart, O. & Moore, J. (1995). Debt and seniority: An analysis of the role of hard claims in constraining management. *The American Economic Review*, 85(3), 567-585.

Harvey, A. (1990). *The econometric analysis of time series*, 2nd edition. Cambridge: MIT Press.

Heidrick & Struggles (2011). *European Corporate Governance Report 2011, Challenging board performance*.

Himmelberg, C., Hubbard, G. & Palia, D. (1999). Understanding the determinants of managerial ownership and the link between ownership and performance. *Journal of Financial Economics*, 53(3), 353-384.

Hurst, D. K., Rush, J. C. & White, R. E. (1989). Top management teams and organizational renewal. *Strategic Management Journal*, 10(1), 87-105.

Huse, M. & Solberg, A. G. (2006). Gender-related boardroom dynamics: How Scandinavian women make and can make contributions on corporate boards. *Women in Management Review*, 21(2), 113-130.

Jensen, M. C. (1986). Agency costs of free cash flow corporate finance and takeovers. *The American Economic Review*, 76(2), 323-329.

Jianakoplos, N. A. & Bernasek, A. (1998). Are women more risk averse?. *Economic Inquiry*, 36(4), 620-630.

Johansen, S. (1991). Estimation and hypothesis testing of cointegration vectors in Gaussian vector autoregressive models. *Econometrica*, 59(6), 1551-1580.

Johnson, P. (1976). Women and power: Towards a theory of effectiveness. *Journal of Social Issues*, 32(3), 99-110.

Jurkus, A. F., Park, J. C. & Woodard, L. S. (2011). Women in top management and agency costs. *Journal of Business Research*, 64(2), 180-186.

Kang, E., Ding, D. K. & Charoenwong, C. (2010). Investor reaction to women directors. *Journal of Business Research*, 63(8), 888-894.

Kaplan, S. & Zingales, L. (1997). Do investment-cash flow sensitivities provide useful measures of financing constraints?. *Quarterly Journal of Economics*, 112(1), 169-216.

Kent, R. L. & Moss, S. E. (1994). Effects of sex and gender role on leader emergence. *The Academy of Management Journal*, 37(5), 1335-1346.

Khan, W. A. & Vieito, J. P. (2013). CEO gender and firm performance. *Journal of Economics and Business*, 67, 55-66.

Konrad, A. M. & Kramer, V. W. (2006). How many women do boards need?. *Harvard Business Review*, 84(12), 22.

Krishnan, H. A. & Park, D. (2005). A few good women - on top management teams. *Journal of Business Research*, 58(12), 1712-1720.

Lamb, M. & Gladman, K. (2012). *Variation in female board representation within the United States*. GMI Ratings, 1-8.

Lee, P. M. & James, E. H. (2007). She'-e-os: gender effects and investor reactions to the announcements of top executive appointments. *Strategic Management Journal*, 28(2), 227-241.

Mainiero, L. A., Williamson, A. P. & Robinson, G. S. (1994). Getting anointed for advancement: The case of executive women. *The Academy of Management Executive*, 8(2), 53-67.

Oxelheim, L. & Randř y, T. (2003). The impact of foreign board membership on firm value. *Journal of Banking and Finance*, 27(12), 2369-2392.

Phillips, P. C. B. & Perron, P. (1988). Testing for unit roots in time series regression, *Biometrika*, 75(2), 335-346.

Pfeffer, J. (1981). *Power in organizations*. Marshfield: Pitman Publishing.

Robb, A. M. & Watson, J. (2012). Gender differences in firm performance: Evidence from new ventures in the United States. *Journal of Business Venturing*, 27(5), 544-558.

Rose, C. (2007). Does female board representation influence firm performance? The Danish evidence. *Corporate Governance: An International Review*, 15(2), 404-413.

Ruderman, M. N., Ohlott, P. J., Panzer, K. & King, S. N. (2002). Benefits of multiple roles for managerial women. *The Academy of Management Journal*, 45(2), 369-386.

Shrader, C. B., Blackburn, V. B. & Iles, P. (1997). Women in management and firm financial performance: An exploratory study. *Journal of Managerial Issues*, 9(3), 355-372.

Stulz, R. (1990). Managerial discretion and optimal financing policies. *Journal of Financial Economics*, 26(1), 3-27.

Tharenou, P. (2001). Going up? Do traits and informal social processes predict advancing in management?. *The Academy of Management Journal*, 44(5), 1005-1017.

Wang, Y. & Clift, B. (2009). Is there a "business case" for board diversity?. *Pacific Accounting Review*, 21(2), 88-103.