Yönetim Kurullarındaki Cinsiyet Çeşitliliği ile Çeşitliliğin Finansal Performans Etkisi: Gelişmekte Olan Piyasa Örneği

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Öz

Cinsiyet eşitliği farkındalığı son yıllarda artmıştır. Ancak yönetim kurullarında kadınların temsili hâlen düşük seviyelerdedir. Öte yandan, yönetim kurullarında farklı cinslerin eşit oranda temsil edilmesinin daha iyi finansal sonuçlara neden olup olmadığı sorusu da henüz tam olarak cevaplanamamıştır. Bu çalışma BIST'te finans sektörü dışında faaliyet gösteren 151 şirketin 2008 – 2015 yılları arasındaki verilerini inceleyerek bu konu üzerinde yeni kanıt sunmayı amaçlamıştır. Yönetim kurullarında kadınların varlığı şirketin performansını arttırır hipotezi, performans ölçüsü olarak ROA ve ROE kullanıldığı durumlarda reddedilmiştir. Kadın yönetim kurulu üyesi ve Tobin Q oranı arasında, sistem GMM yöntemi kullanılarak içsellik (endogeneity) göz önünde bulundurulduğu durumda dahi ters ilişki bulunmuştur.

Anahtar kelimeler: Cinsiyet çeşitliliği, yönetim kurullarında kadın temsili, firma performansı, kadın yönetim kurulu üyeleri

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Gender Diversity in The Board Room and Its Financial Performance Effect: Evidence from an Emerging Market

Abstract

Awareness on gender equality has recently increased, however, representation of women on boards is still low and it is still an unanswered question that leveling gender diversity leads to better financial results. This study, based on a data of 151 non-financial firms of BIST between 2008 to 2015, aimed to provide evidence on this relationship. The hypothesis that presence of woman directors improves firm's performance was rejected, when firm performance was measured by ROE and ROA. A negative relation between presence of woman directors and Tobin's Q is revealed when endogeneity of gender diversity was addressed, using system GMM estimation.

Key Words: Gender diversity, board diversity, firm performance, woman directors

JEL Codes: G30, G34, J16

1. Introduction

Main function of board of directors is to scrutinize managers and prevent them from jeopardizing shareholders' wealth. Decisions related to company's policies, strategies, the appointment, dismissal and compensation of executives are among the decisions approved by the board. There is a permanent debate on the composition and skills of board of directors. A lot of research has focused on the roles and contributions of different types of board members. But it is still an unanswered question that presence of woman directors or leveling gender diversity in the board leads to better financial performance.

Gender diversity is expected to enhance relations with competitors and customers, and to expand industry knowledge, and facilitate financing. Men are generally more inclined towards competition, hierarchy, rational problem-solving, low emotionality, whereas women are opted for facilitating cooperation, supporting

and maintaining relationships, team-based accomplishment, intuitive problem-solving, sharing information, and emotionality (Luis-Carnicer et al., 2008). When certain qualities are not evenly distributed among men and women, the company without women on the board may be missing some of these qualities (Lückerath-Rovers, 2013). It is generally preferred that a board of a public company contains a well-balanced set of directors. A homogeneous group of directors is posited to be a symptom of weak corporate governance.

Women directors carry some observable benefits to the firm which may have some performance effect. For instance, female directors have fewer attendance problems, which are possible to contribute to board effectiveness (Francouer et al. 2008; Isidro and Sobral, 2015). Woman directors are generally better prepared for the meetings compared to men. The lack of advance preparations often weakens the directors' independence and leads into domination of the management over the board. Because, preparations before the meetings allow women directors become less dependent of reports and presentations made by the management (Huse and Solberg, 2005).

Economic arguments favoring gender diversity generally stand on three main pillars. First, it is argued that greater diversity improves a firm's image and has positive impact on customers (Campbell and Minguez-Vera, 2008; Smith et al. 2006). Second, it is argued that diversity augments creativity and innovation. Third, diversity improves problem-solving as more perspectives emerges from a more diverse board (Campbell and Minguez-Vera, 2008; Brammer et al. 2007). Additionally, it is also exhibited that stock market reacts more positively to the appointment of women directors than men directors (Adams et al. 2010).

Accordingly, several countries enacted laws forcing gender quotas in the board room to increase the proportion of woman directors (Reguera-Alvarado et al. 2017). Countries such as Norway, France, Spain, Italy, the Netherlands legally required that 40% of the directors to be woman (Adams and Ferreira, 2009; Rose, 2007). But, it is still not for certain that gender diversity yields

better financial results. Appointment of women to company boards may improve firm's performance only if appointed women bring an additional perspective and expertise to the decision-making process. On the other hand, women on board may have negative effect on the performance of the firm if the decision to appoint a female only stems from a societal or legal pressure for greater sexual equality (Campbell and Minguez-Vera, 2008).

Consequently, the link between gender diversity and firm performance appears to be rather complex. This study aims to provide additional evidence on this unsettled relationship. Firm performance is computed both by accounting and market measures. Possible endogeneity between performance and gender diversity is also addresses in the study.

The rest of the paper is organized as follows. Section two reviews the prior studies on corporate gender diversity at board level and its performance effect, section three presents the methodology together with the data and the sample used in the study, section four presents the findings, and section five concludes.

2. Literature Review

One of the board's duties is to resolve agency problems between managers and shareholders by establishing the right compensation scheme and replacing managers who are not performing. From the perspective of agency costs theory, it is suggested that gender diversity increases the heterogeneity in the board and heterogeneous boards act more independently and reduces the costs of agency problems (Reguera-Alvarado et al. 2017). Another prominent theory, resource dependency theory (Pfeffer and Salancik, 1978; Hillman and Dalziel, 2003) proposes that the board's independence and diversity augments board's ability to establish external connections (Siciliano,1996). By selecting a director with required skills and connections, the firm can reduce its external dependency and gain valuable resources (Hillman et al. 2007). It is also argued that cognitive diversity stemming from gender diversity leads to more active boards, which effectively monitor firms' operation (Ararat et al.

2010). Contrarily, Luis-Carnicer et al. (2008) suggested that increasing gender diversity may enrich perspectives, but it may not necessarily result in better monitoring, which is the key function of the board. From the agency theory standpoint, it is not possible to explicitly tell, whether greater woman proportion on the board will improve or worsen corporate governance and corporate financial performance (Francoeur et al. 2008). The board's effective functioning mostly depends on the qualifications and skills of the directors, rather than the gender of the directors.

Since better decisions result in better financial performance, the question to be answered is whether leveling gender imbalances improves board's decision making process. In today's business setting, heterogeneous groups may be more advantageous to more uniform groups in knowledge, perspective, creativity, and judgment (Francouer et al. 2008). Gender-balance may be advancing board's monitoring by bringing a more diverse set of perspectives and competencies to the board, or on the contrary it may also be introducing unnecessary degree of complexity (Luis-Carnicer et al. 2008). Generally, heterogeneous groups are more likely to face communication and coordination difficulties, more conflicts and higher turnover (Martin-Ugedo and Minguez-Vera, 2014). Too much conflict means less effective and longer board meetings. In a market where fast reaction is especially important, this may hinder the firm's performance (Campbell and Minguez-Vera, 2008). It is possible that heterogeneity augments financial performance in complex firms but not in less complex firms. Thus, greater heterogeneity may not necessarily improve firm performance in all circumstances (Anderson et al. 2011).

Similar to the theoretical framework, empirical evidence is also not consistent. Some of the prior studies found negative relation between gender diversity and the firm performance (Adams and Ferreira, 2009; Andres et al., 2005; Carter et al. 2010; Pelled et al. 1999; Shrader et al. 1997; Darmadi, 2011), whereas some other researchers exhibited a positive relation (Reguera-Alvarado et al. 2017; Campbell and Minguez-Vera 2008; Carter et al. 2003; Erhardt et al. 2003; Bonn et al. 2004; Gordini and

Rancati, 2017; Kılıç and Kuzey, 2016). Few researchers found no relation at all (Rose, 2007; Zahra and Stanton 1988; Chapple and Humphrey, 2014).

Nevertheless, the representation of woman in the board has been significantly increased in Europe in the last decade. Still, it only reached to 17%. Low proportion of woman at board level may be attributed to "the glass ceiling effect" which basically refers to indirect barriers to career opportunities and professional development of women. These barriers which are deeply rooted in culture and society, constrain the progression of women to senior management positions (Lazzeretti et al. 2013). Existing female directors generally help breaking the glass ceiling since they imply career possibilities to prospective recruits and extend their career goals (Lükerath-rovers, 2013; Hillman et al. 2007).

Norway has the highest woman representation on the board (39%), where, it is mandatory by law to have 40% female representation in the board (Ararat, 2015). In France, women had to hold 20 % of board seats by 2014, and 40 % by 2017. In Finland, companies had been compelled to have at least one woman director since July 2010 (Chapple and Humphrey, 2014). In Italian listed companies, women should comprise at least one third of board seats since 2015 (Gordini and Rancati, 2017). In Germany gender diversity is attempted to be achieved via voluntary arrangements based on "comply or explain" principle. But the female representation in the boardroom is still rather low, at around 10%.

Achieving higher fraction of women appointed to company boards requires that they have the similar opportunities until the appointment stage. Unless discriminations are eliminated at lower levels of corporate ladder, women may not achieve necessary skills and qualifications to match their male colleagues. Hence, to achieve gender diversity at the board level, preferential treatment of women should start at lower career roles long before board level. On the other hand, as number women directors are more limited in number, women may be intentionally preferring better performing firms. Consequently, the relation between gender

diversity and firm performance may be endogenous (Campbell and Minguez-Vera, 2008; Farrell and Hersch, 2005). Martin-Ugedo and Minguez-Vera (2014) showed that the probability of women's presence on the board of Spanish SMEs increased with firm performance confirming a likely endogenous relation.

Regarding the studies with Turkish companies, most of them exhibited positive relation between women directors and financial performance of the firm (Ararat et al.,2010; Ararat et al. 2015; Kılıç and Kuzey, 2016; Solakoğlu and Demir, 2016).

There are conjectures against gender diversity as well as in favor of it. As expected the empirical evidence is also inconclusive. Inconsistent results of different studies may be attributed to the methodology, timing and length of the data collected. The inconsistency of findings on gender diversity and firm performance undoubtedly suggests that further studies on the subject are needed. Accordingly, this study aims to extend the literature with the longest timewise data in Turkey and taking into account the possibility of endogeneity between performance and diversity in estimations.

3. Methodology

3.1. Women Representation on Board in Turkey

In Turkey, the awareness on gender equality has remarkably increased in recent years. Yet, women representation at board level is quite low. Table 1 gives details of female representation on the boards of major non-financial listed companies of Turkey from 2008 to 2015.

Table 1: Women Representation at Board Level

	AVERAGE BOARD SIZE	NO. OF WOMAN DIRECTORS	%
2008	6.92	0.62	9%
2009	6.83	0.68	10%
2010	6.82	0.71	10%
2011	6.78	0.79	12%
2012	7.62	0.76	10%
2013	7.74	0.77	10%
2014	7.78	0.81	10%
2015	7.81	0.86	11%

Percentage of board seats held by women only increased from 9% in 2008 to 11% in 2015. The numbers are still very far from fair representation of both genders though a significant improvement is observed in the assignment of woman directors. Table 2, gives the evolution of number of companies with at least one woman director. In 2008, only 43% of the sample had at least one woman director whereas in 2015 over 60% of the companies had at least one woman director at their board.

Table 2: Percentage of Companies with at least One Woman Director on Board

	Number of Companies with at least One Woman Director	Percentage
2008	50	43%
2009	68	47%
2010	71	49%
2011	80	55%
2012	83	57%
2013	84	58%
2014	84	58%
2015	88	61%

3.2. Data and the Sample

The sample of the study consisted of 151 non-financial Turkish companies listed on Borsa Istanbul (Istanbul Stock Exchange) during

the 2008-2015 period. Board composition data was collected from companies' individual annual reports. Financial firms are deliberately excluded because they have fundamentally different operating activities; using similar performance measures in financial and non-financial firms might have distorted the findings. Secondly, there are studies specifically addressing financial firms (i.e. Kılıç, 2015).

3.3. Method

As the data has both cross-section and time dimensions panel data approach is adopted in the study. The gender diversity of the board is measured in three different ways. First, it is measured by a dummy variable which takes the value of 1in case of presence of at least one woman on the board, and 0 otherwise. Second, it is measured by the proportion of women on the board, that is, the number of women directors divided by total number of directors. Then, the Blau Index is used to measure the diversity on the board similar to some of the prior studies (Ararat et al. 2010, Kılıç and Kuzey, 2016; Martin-Ugedo and Minguez-Vera, 2014). Blau (1977) suggested how a group's diversity might be estimated by the variety of individual attributes. Blau index for gender diversity is estimated with below equation (1):

$$blau\,index = 1 - \Sigma_{i=1}^{n} p_i^2 \qquad (1)$$

where,

Pi = the proportion of the board members in the i'th category of a given attribute

n = number of categories in a given attribute which is 2

The maximum and the minimum values of Blau index are 0.5 (when there is equal number of women and men on the board) and 0 (when there are only men or only women on the board), respectively.

To measure the firm performance, three different measures, Return on Assets (ROA), Return on Equity (ROE) and Tobin's Q are used. Leverage, firm size and ownership structure are used

as control variables. Thus, the hypothesis that gender diversity on board level has positive effect on the performance of the firm is tested with below equation (2).

$$Performance = \beta_0 + \beta_1\, GenderDiversity + \beta_3 Size + \beta_4\, Leverage + \beta_5 Ownership + \varepsilon \quad (2)$$

All variables employed in the study are given in Table 3. As the chosen gender diversity measures are highly correlated, to avoid a possible multicollinearity problem, only one measure is included in each regression estimation.

Table 3: Variables

	DESCRIPTION
Dependent Variables	
ROA	Return on Assets = $\dfrac{Earnings\ before\ Interest\ and\ Tax}{Total\ Assets}$
ROE	Return on Equity = $\dfrac{Net\ Profit}{Total\ Shareholders'\ Equity}$
Tobins_Q	= $\dfrac{Total\ Assets + Market\ Value\ of\ Equity\text{-}Book\ Value\ of\ Equity}{Total\ Assets}$
Independent Variables	
DWOMANDIR	Dummy Variable,1 if there is at least one woman director,0 otherwise
PWOMANDIR	= $\dfrac{(Number\ of\ Woman\ Directors)}{(Total\ Number\ of\ Directors)}$
BLAU_GENDER	Blau index= $1 - \sum_{i=1}^{n} p_i^2$, p_i is the proportion of each gender
Log(assets)	Proxy for firm size=Natural logarithm of Total Assets
Leverage	Proxy for Financial Risk = $\dfrac{Total\ liabilities}{Total\ Assets}$
Ownership	Proxy for shareholder structure = $\dfrac{Number\ of\ public\ shares}{Total\ number\ of\ shares}$

4. Results

Table 4 presents the results of panel regressions in which ROA is the dependent variable. The OLS (ordinary least squares) estimation assumes that there is no correlation between explanatory variables and the error term. The Breusch-Pagan Lagrange multiplier test (Breusch and Pagan, 1980) discloses the presence of heteroscedasticity. In other words, variance of error terms seems to be dependent on the values of the independent variables. Thus, firm-specific effects are important and the OLS results are not efficient. The random effects estimation provides efficient estimates under the assumption that the firm-specific effects are uncorrelated with the regressors. When firm-specific effects are correlated with the regressors, the results of the OLS and random effects are biased and inconsistent (Baltagi, 2005). Then, fixed effects estimator is the

Table 4: Dependent Variable - ROA

Variable	OLS		Random Firm Effects		OLS		Random Firm Effects		OLS		Random Firm Effects	
C	-0.144169	***	-0.212361	***	-0.157873	***	-0.204852	***	-0.160265	***	-0.204601	***
DWOMANDIR	-0.004262		-0.005525									
PWOMANDIR					-0.015178		0.002490					
BLAU-GENDER									-0.008331		0.001735	
LOG(ASSETS)	0.014147	***	0.017641	***	0.014810	***	0.016918	***	0.014915	***	0.016904	***
LEVERAGE	-0.044834	***	-0.049564	***	-0.049285	***	-0.041960	**	-0.049363	***	-0.041936	**
OWNERSHIP	-0.000258	*	-0.000211		-0.0002016		-0.000242		-0.000204		-0.000242	
Adj R²	0.046924		0.023075		0.056539		0.023515		0.056384		0.023508	
F-statistic	15.75793		8.080036		18.45378		8.013619		18.40313		8.011504	
Prob(F-statistic)	(0.0000)		(0.0000)		(0.0000)		(0.0000)		(0.0000)		(0.0000)	
Breusch-Pagan LM Test	700.0631				800.6429				809.4646			
Prob.	(0.0000)				(0.0000)				(0.0000)			
Hausman X²			3.930696				1.629377				1.511519	
Prob.			0.4155				0.8035				0.8246	

Significance: ***p<0.01, **p<0.05, *p<0.1

consistent estimator. However, the Hausman chi-square test (Hausman, 1978), comparing fixed effects and random effects estimators does not reject the assumption that random effects are not correlated with the regressors (p>0). Therefore, random effects GLS (generalized least squares) estimation emerges as the efficient estimator for the equation in which ROA is the dependent variable.

In all panel regressions where ROA is the dependent variable, gender diversity measures are insignificant suggesting that gender diversity at the board level does not have any impact on operational performance measured by ROA. Table 5, presents the results of panel regressions in which ROE (return on equity) is the dependent variable and Table 6 provides the results in which Tobin's Q is the dependent variable.

Table 5: Dependent Variable - ROE

Variable	OLS		Random Firm Effects		OLS		Random Firm Effects		OLS		Random Firm Effects	
C	-0.721694	**	-0.746622	*	-0.732794	**	-0.820673	*	-0.713660	**	-0.799797	**
DWOMANDIR	0.015497		0.033870									
PWOMANDIR					0.174032		0.255385					
BLAU-GENDER									0.115175		0.188638	
LOG(ASSETS)	0.044153	**	0.044743	**	0.043328	**	0.047254	**	0.042327	**	0.045944	**
LEVERAGE	-0.299585	***	-0.285060	**	-0.270018	**	-0.266286	**	-0.267722	**	-0.261966	**
OWNERSHIP	-0.000817		0.000715		0.001012		-0.000943		-0.001008		0.000953	
Adj R²	0.006731		0.003495		0.005311		0.003372		0.005170		0.003319	
F-statistic	3.031402		2.051338		2.555067		1.985433		2.513597		1.969972	
Prob(F-statistic)	(0.01681)		(0.08506)		(0.037435)		(0.094496)		(0.040097)		(0.096842)	
Breusch-Pagan LM Test	32.15157				22.04138				22.10399			
Prob.	(0.0000)				(0.0000)				(0.0000)			
Hausman X²			1.613337				1.707766				2.276001	
Prob.			0.8064				0.7893				0.6851	

Significance: ***p<0.01, **p<0.05, *p<0.1

Similar to the regressions in which dependent variable is ROA, gender diversity also does not seem to have any effect on return on equity (ROE) (Table 5). The coefficients of all three measures of gender diversity are insignificant. Again, random firm effects model emerges as the efficient estimator in the regressions

(Hausman test p>0.05). The regressions in which Tobin's Q is the dependent variable, OLS estimations delivers significant but negative coefficients for gender diversity measures. However, Breusch- pagan LM test suggest that variance of error terms seems to be correlated with values of the independent variables (p<0.05). Thus because of presence of heteroscedasticity, OLS is not efficient. Additionally, Hausman χ^2 test reveals that random effects are correlated with the regressors (p<0.05), therefore random effects are biased and inconsistent. Therefore, fixed effects estimator is the consistent estimator. Presence of at least one woman director seems to have positive impact on Tobin's Q, whereas ratio of woman directors and Blau index appears to be insignificant. The positive impact of woman presence on board may be attributed to positive perception of the investors rather than direct impact of woman director on operational performance. Tobin's Q specifically measures market performance rather than operational performance or profitability. Change in the sign of the coefficient of DWOMANDIR, when estimation model changes from OLS to fixed effects GLS, probably stems from the very weak influence on the dependent variable. Firm specific effects appear to be much more influential in the model compared to the chosen explanatory variables.

As previously discussed, number of female directors is limited; women may deliberately prefer better performing firms. Accordingly, the relation between gender diversity and firm performance may be endogenous as suggested by some of the prior researchers (Campbell and Minguez-Vera, 2008; Farrell and Hersch, 2005; Martin-Ugedo and Minguez-Vera, 2014).

System GMM (generalized method of moments) estimation solves possible endogeneity problem when gender diversity and firm performance are determined simultaneously. The fixed or random effects estimators take into account firm specific heterogeneity but not the endogeneity.

Table 6: Dependent Variable - Tobin's Q

Variable	OLS		Fixed Firm Effects		OLS		Fixed Firm Effects		OLS		Fixed Firm Effects	
C	3.993139	***	0.050109		4.453040	***	0.453542	*	4.406430	***	0.481302	*
DWOMANDIR	-0.257127	***	0.092317	***								
PWOMANDIR					-1.155669	***	0.056929					
BLAU-GENDER									-0.955261	***	0.024335	
LOG(ASSETS)	-0.089916	***	0.068019	***	-0.113605	***	0.048173	***	-0.108937	***	0.046995	***
LEVERAGE	-0.444670	***	-0.024207		-0.410536	***	0.099342		-0.439403	***	0.095721	
OWNERSHIP	-0.011619	***	0.000365		-0.011712	***	-0.000200		-0.011814	***	-0.000208	
Adj R²	0.063798		0.656215		0.066243		0.710070		0.068788		0.708039	
F-statistic	21.42679		15.95844		21.66182		19.64848		22.51450		19.46575	
Prob(F-statistic)	(0.0000)		(0.0000)		(0.0000)		(0.0000)		(0.0000)		(0.0000)	
Breusch-Pagan LM Test	1697.581				1659.768				1651.274			
Prob.	(0.0000)				(0.0000)				(0.0000)			
Hausman χ²			16.690722				11.792580				12.844319	
Prob.			0.0022				0.0190				0.0121	

Significance: ***p<0.01, **p<0.05, *p<0.1

Two stage least squares (2SLS) estimate considers the endogeneity but it is not efficient in samples of short panels with large cross-sections (Arenello and Bond, 1991; Martin Ugedo, 2014). As only regressions in which Tobin's Q is the dependent variable suggested a possible relationship between gender diversity and performance, system GMM estimations are only run with Tobin's Q. Thus, the system equations solved simultaneously are as follows:

$$Tobins\_q = \beta_0 + \beta_1 \, Dwomandir + \beta_2 \, log(assets) + \beta_3 \, leverage + \beta_4 \, ownership \qquad (3)$$

$$Dwomandir = \beta_5 + \beta_6 \, Tobins\_q + \beta_7 \, Pwomandir + \beta_8 \, Bsize \qquad (4)$$

In equation (3) BSIZE (board size), BLAU_GENDER, and lag values of LEVERAGE, OWNERSHIP and LOG(ASSETS) are used as instruments. In equation (4) ROE and lag values of TOBINS_Q, LOG(ASSETS), BSIZE and PWOMANDIR are used as the instruments. The results of system GMM regressions are given in Table 7.

Table 7: Results of system GMM regressions

	Coefficient	
β_0	4.603980	***
DWOMANDIR	-0.374841	***
LOG(ASSETS)	-0.111008	***
LEVERAGE	-0.367313	**
OWNERSHIP	-0.014238	***
β_5	-0.081311	**
TOBINS_Q	-0.008636	
PWOMAN	3.280809	***
BSIZE	0.037956	***
Equation 1, Adj. R^2	0.075814	
Equation 2. Adj. R^2	0.677496	
J-statistic	0.014183	

Significance: ***$p<0.01$, **$p<0.05$, *$p<0.1$

System equation estimations revealed that the relationship between Tobin's Q and presence of woman director is not endogenous. System GMM (generalized method of moments) confirms one way negative relationship between presence of woman directors on the board and Tobin's Q. Coefficient of DWOMANDIR is highly significant while the coefficient of TOBINS_Q is insignificant. Estimated J-statistic is between 5% and 10% of critical value of χ^2 distribution. Thus, we can conclude that the instruments are exogenous.

5. Conclusion

Performance effect of gender diversity at the board level is a long-time debated issue. Empirical evidence offered by numerous academic researches is not consistent. Based on a panel data of 151 non-financial firms listed on BIST between 2008 to 2015, this study could not verify a robust relation between woman directors and firm performance. The hypothesis that presence of woman directors on the board improves firm's performance was strongly

rejected, when firm performance was measured by ROE and ROA. A significant negative relation between presence of woman directors and Tobin's Q is revealed even when endogeneity of gender diversity was addressed using system GMM estimation. However, when gender diversity was measured by proportion of woman directors and Blau index, it did not exhibit significant relation with firm performance. Lower performance of boards with woman directors are generally explained by over-monitoring of these boards (Adams and Ferreira, 2009). These boards posited to be over-cautious in evaluating investment projects which limits future growth prospects of the firm and results in lower Tobin's Q. It is also suggested that gender diversity results in a diverse set of viewpoints and competencies, but simultaneously introduce a degree of complexity which complicates the board's decision process (Luis- Carnicer et al. 2008).

Given the exclusive findings of this study, these would be strong arguments. Solely with the negative relation disclosed between presence of woman director and Tobin's Q, it is not possible to deduce that board gender diversity affects firm performance adversely; Women directors accounted nearly 10% of total directors in the sample of this study. Almost half of the firms in the sample did not have any woman director on their board. The low percentage of woman among board directors weakens the validity of the findings. The study simply suggests that the relationship between board gender diversity and company performance is either insubstantial or non-exists.

The idea of favoring woman in board appointments to male dominant boards stem from anticipated "cognitive diversity". However, both male and female directors are generally screened by the same selection process of the firm, resulting in similar values, experience and knowledge presented at the board. Thus, appointed female board members might not engender the anticipated cognitive variety. Besides, female board members at low numbers are likely to be marginalized and not taken seriously (Rosener, 1995). Even if the women appointed to corporate boards are different from the men on these boards, they may not have sufficient

influence on board's decisions. When individuals are in minority, they often restrain themselves from expressing opposing ideas against the beliefs and judgments of the majority.

Concisely, the findings of this study do not present any strong argument for or against appointing female directors to corporate boards. Gender diversity and performance relation is probably more complicated than currently considered. Quota based gender policies at board level cannot be justified merely from the performance perspective.

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