



DELINEATING THE INFLUENCE OF BOARDROOM GENDER DIVERSITY ON CORPORATE SOCIAL RESPONSIBILITY, FINANCIAL PERFORMANCE, AND REPUTATION

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ABSTRACT. Background: The current study reveals the effectiveness of gender diversity in the boardroom and considers its impact on a firm's corporate social responsibility, financial performance and reputation, which leads towards business sustainability. The study is based on stakeholder theory assumptions which state that female directors play a vital role in board diversification.

Methodology: 100 index firms listed on the Pakistan Stock Exchange were chosen as a sample size. The firm's financial performance was measured by using three proxies in order to get robust results. Panel data of 6 years from 2010 to 2015 was applied for data analysis. The data was analyzed by applying the Fixed-Random OLS regression, which revealed that gender diversity in the boardroom has no significant relationship with corporate social responsibility (CSR), financial performance, and the reputation of a firm.

Results: Study results revealed that HODI mitigates corporate social responsibility activity. According to the Fixed-Random Regression results, PW has no significant impact on shareholder return. Sales and ROA have a significant positive relationship with SHR.

Conclusions: There is a negative relationship between boardroom gender diversity and a firm's financial performance. Females in boardrooms either cause negative effects or have no impact on the firm's financial performance. Similarly, there is no significant relationship between the presence of women in boardrooms and a firm's reputation.

Key words: Gender Diversity Corporate Social Responsibility, Firm Performance, Firm Reputation, Pakistan.

INTRODUCTION

Gender diversity in the workplace, and especially in boardrooms, has gained much attention around the globe in recent times. Not only is the number of female and male executives in top positions important, but also many other perspectives, namely that the decisions being made in boardrooms are a reflection of the current market situation and the community as well. The corporate world has to face different challenges daily, which necessitates a variety of different personalities with different views, ideas, and mindsets within the boardroom.

Diverse boardrooms are expected to increase the effectiveness of the boards. However, the question of the effectiveness of this decision is still being considered, not only by the corporate world but in academia as well. Sixteen countries have made it compulsory to enhance women's representation in boardrooms, while some others have asked corporate boards to increase the quota of women voluntarily. The concern for the influence of these decisions is considered by many, but efforts to find practical progress are slow [Rhode, Packel 2014]. A green supply chain is vital for business sustainability. There are different studies which have produced

different results in different demographic settings about the impact of diverse boardrooms. Previously, studies have tried to find out the impact of having more women in boardrooms on its financial performance. However, in recent years, more concern is being shown about how it affects corporate social responsibility performance as boards are increasingly held responsible for corporate social responsibility and sustainability decisions.

Along with these factors, researchers have also analyzed the influence of gender composition in boardrooms on a vital factor, i.e. corporate reputation based on the fact that increased female representation on boards sends a signal to stakeholders about an organization's concern for women's rights [Bear, Rahman, Post 2010]. Hope and work have a mediating relationship with creativity [Sarfraz, Qun, Abdullah, Tahir 2019]. Gender diversity in boardrooms is one of the controversial topics in behavioral finance [Rhode, Packel 2014]. Corporate boards affect the lives of millions, including their employees, community, and the global marketplace as well. Concern over the composition of boards has increased even more after scandals like Enron. Some researchers insisted on the fact that, besides the importance of the topic, research on practical progress does not match the required pace. Literature available on all the variables collectively chosen to be studied under this research paper in the context of Pakistani firms is insufficient and unreliable as well [Rhode, Packel 2014].

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Critical Mass Theory

Kanter analyzed the behaviors and experiences of women and minorities in the corporate sector [Sarah, Mona 2008]. Critical mass theory has analyzed the token status of women and stated that the number of people matters when it comes to adopting an innovative feature in a system. It requires a sufficient number for the rate of adoption to be sustained and grow on its own. She argued that, as the numerical proportion changes,

experience within a group also changes [Kanter 1977].

She titled the majority (by the number) of the group as "Dominants" and the numerically few or the minority of the group as "tokens." Tokens have to face many difficulties of survival within a social or corporate system as they either have to face hyper-visibility or sometimes invisibility. They also have to bear the stress of performing better and all the stereotypes attached to their gender instead of being considered an individual, which hinders their influence on decision making [Konrad, Kramer, Erkut, 2008].

Over time, this theory has received lots of recognition; it has been analyzed and applied to other fields as well, including the study of legislative behavior in women in order to study its impact on political settings [Sarah, Mona 2008]. Discussions about gender diversity in boardrooms can be viewed from two perspectives: ethical and economic. Underrepresentation of women in board rooms on the grounds of their gender is an unethical practice. Secondly, the economic view supports equal opportunities for women in boardrooms because denying capable and skilled women the right to be in boardrooms indirectly damages a firm's performance [Campbell, Mínguez-Vera 2008].

The economic perspective on the underrepresentation of women on boards has given rise to the resource dependence theory. This theory states that boardroom members are a source of assets (both tangible and intangible) to the firm which not only play an essential role in shaping its behaviour, but also its performance and environment as well [Pfeffer, Salancik 2003]. This theory agrees with the economic perspective, as it suggests that denying their right for presence in boardrooms leads to a failed attempt to gather the most skilled candidates. Failing to gather the best candidates and paying no heed to the women's talent pool leads to a failure to gain a competitive advantage which is critical to a firm's performance [Pfeffer, Salancik 2003].

People coming from diverse backgrounds are more likely to have different experiences of life which make their approach to specific

issues different from each other. New skills, an understanding based on knowledge and resources are sources of positive impacts on the performance of board members. Contrary to homogeneous groups, performance improves as their decision-making process gets better through the evaluation of more creative ideas for problem-solving [Ferreira 2010].

The composition of boards has been under the spotlight since scandals like Enron and Lehman Brothers. The presence of women and their slow advancement in boardrooms, besides having the purported equality, has been a great concern for researchers, the media, and the general public, who have lost their faith in industry giants. This concern has revived the debate about the role of gender diversity in boardrooms in the context of Corporate Governance and CSR [Terjesen, Sealy, Singh 2009].

GENDER DIVERSITY IN BOARDROOMS AND CSR

CSR itself is considered a term with many dimensions and perspectives which is quite complicated and challenging to define. It is considered to be a mix of social and environmental concepts which help in defining CSR. Corporate Social Responsibility or Responsiveness has been quite a provocative subject in the corporate world since the 1960s as it has been the topic of a great many types of research which have tried to elucidate its effects [Arlow, Gannon 1982]. In recent years, the importance of corporate social responsibility has increased immensely, not only in policymaking, but in academia as well. The researchers believe that it is not enough for an organization to be successful only in economic terms, but managing the interests of all stakeholders, including the general public, is also essential [Carroll 1979, Jamali, Safieddine, Rabbath 2008]. Hierarchical CEO succession boots a firm's innovation [Sarfraz, Qun, Shah, Fareed 2019]. Women are ahead of men in philanthropic activities, which indirectly indicates the fact that, the more women on a board, the more a firm will focus on corporate social responsibility. This means that, in order to increase their involvement in

corporate social responsibility, firms must also increase the representation of women on their board. Many researchers have tried to prove this relationship, and there is still much room for research on this topic in order to find out the consistency of the results in different geographical areas. Based on the literature above on gender diversity on boards and corporate social responsibility, which is reportedly pointing out the presence of a relationship between them, the following hypothesis can be stated:

H1: Gender diversity in the boardroom has an impact on a firm's CSR performance.

GENDER DIVERSITY IN BOARDROOMS AND FINANCIAL PERFORMANCE OF THE FIRM

Research conducted in Spain tried to find the short- and long-term impacts of passing the Gender Equality Act in 2007, which made it necessary for organizations to have a 40% representation of women in boardrooms. Before that, it was a voluntary decision. Making it mandatory to have 40% of women in boardrooms led to an increase in stock prices. The stock exchange's positive reaction to women having additional representation in boardrooms has given rise to the belief that investors think women can add value to the firm. The same belief has been proved by finding the long-term impacts of an increased quota of women in boardrooms, which has resulted in a substantially increased value [Campbell, Vera 2010].

Although the same positive impact of a boardroom's gender diversity on a firm's financial performance has been confirmed by the Netherlands and Denmark as well, in some countries, this particular stance has not been supported. 102 Dutch and 84 Danish firms, 40 percent of which had at least one woman on the board, were analyzed in 2007. This particular study found that gender diversity in the boardroom has no impact on the financial performance of a firm, which is similar to many European types of research [Marinova, Plantenga, Remery 2016]. However, in response to a debate about the relationship

between gender diversity and FP, a comparison of firms with and without women on the board proved otherwise. According to this study, the firms where there was a presence of women on board worked better than those which did not have a representation of women [Lückerath-Rovers 2013]. Another study conducted in the same year found that there is even a weak negative correlation between having multiple women on boards and financial performance by analysis of the portfolios of the firms under study. The fact of having a positive correlation between gender diversity (GD) and FP in some industries has not been negated by this research [Chapple, Humphrey 2014].

Even after so much debate over this topic, the issue has not been settled. 255 Swedish OMX-listed firms analyzed through panel data over six years found no significant impact of a boardroom's gender diversity on the firm's financial performance [Alm, Winberg 2016]. One of the reasons for the positive impact of GD on a firm's financial performance is said to be the fact that having women on boards leads to less riskiness, which results in better performance [Perryman, Fernando, Tripathy, 2016]. Based on the above literature, it can be assumed that gender diversity in boardrooms has varying results which fluctuate in different situations. As mentioned earlier, based on the literature review, the following hypothesis can be made for further investigation of the relationship:

H2: Gender Diversity has an impact on a firm's financial performance.

GENDER DIVERSITY IN BOARDROOMS AND REPUTATION OF THE FIRM

Signaling theory has been put forward in support of the expected relationship between gender diversity in boardrooms and reputation. This theory has been explained in the following way: "Signaling theory assumes asymmetric information, and proposes that parties may convey, intentionally or not, relevant, but not readily observable information, through observable signals that are meaningful to the other party". It has been

proved that gender diversity on boards contributes to the reputation of the organization [Bear et al. 2010]. Not only was it found that the presence of women on a board increases the ratings for corporate social affairs, but it was also established that the percentage of women in boardrooms has a positive relationship with the reputation of the firm. According to Signaling theory and the literature,

H3: Gender Diversity in boardrooms has an impact on a firm's reputation.

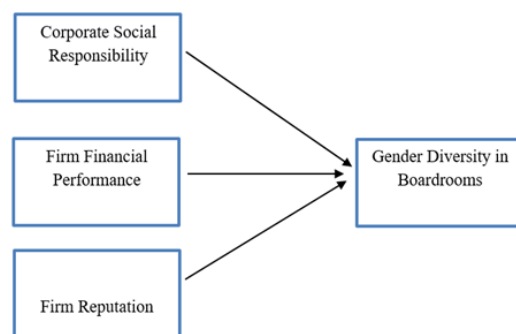


Fig. 1. Theoretical framework

MATERIALS AND METHODS

A sample of KSE-100 index companies was selected from the population of all the listed firms on the Pakistan Stock Exchange Limited, using a type of non-probability sampling technique called purposive sampling. Many small firms follow the lead of the top firms, and hence their impact on society is high when compared to other organizations. So, there is a need to research these firms to fulfil the scarcity of research in this area, particularly in Pakistan [Iqbal, Ahmad, Basheer, Nadeem 2012]. These 100 firms were analyzed for the required information using the six-year panel's data from 2010 to 2015. The primary source of gathering the required information for these 100 firms is financial reports which were uploaded on their official websites, as they are considered to be the most significant way of sharing information regarding companies [Belal 2000]. Financial reports are considered to be the most consistent tool for analyzing information about companies in many previous types of research as well.

Data for all the 100 firms was compiled for a percentage of women in boardrooms and CSR for all six years, which revealed that there were only 34 non-financial and 9 financial firms out of the entire 100 which had a gender diversity in their boardroom in at least one year out of all the six under consideration. After careful, necessary examination, 34 non-financial firms were analyzed using STATA in order to investigate the proposed relationships between gender diversity in boardrooms and all the dependent variables.

Measurement of variables

Gender diversity in boardrooms

Gender diversity in boardrooms or the composition of female directors has been made operational in two ways. First of all, it was measured by finding the percentage of women as compared to total directors in the boardrooms [Isidro, Sobral 2015]. Based on the above literature regarding the theory of critical mass, the second measure for gender diversity in boardrooms was an analysis of the data under critical mass theory. If the percentage of women in boardrooms was at least 30% or more, it was coded 1, and it was coded 0 if the percentage is below 30% [Isidro, Sobral 2015].

Corporate Social Responsibility

CSR performance or social performance of a firm can be estimated by the social disclosures made by that particular firm [Orlitzky, Schmidt, Rynes 2003]. Some methods can be employed under a content analysis technique in order to measure disclosures from a social welfare perspective. Support for the association of social performance to social reporting can also be found in literature, where social reporting consists of observing, assessing, and improving the impact of a firm's business activities on the community and the environment as a whole [Wood 1991].

Some methods were identified in the literature for content analysis while using different unit analysis, which includes word counts, number of sentences, number of pages,

and quantity of pages [Khan 2010]. For that matter, they generated an instrument for CSR disclosure using previous research in the same area [Cowen, Ferreri, Parker 1987, Mian, 2010]. If a particular item mentioned in the CSR disclosure index has been disclosed in the annual report or the CSR report of the firm for a particular year, it will be coded "1". If it has not been disclosed in any of them, it will be coded "0".

Firm's financial performance

Financial performance of the firm was calculated using the measures of ROA and ROS previously used by Isidro and Sobral [Isidro, Sobral 2015], along with ROE following Luckerath-Rovers [Lückerath-Rovers 2013]. Financial performance was measured using a natural log of ROA (Return on Assets), ROE (Return on Equity) and ROS (Return on sales) in order to control for outliers.

Firm's reputation

In order to operationalize the variable of reputation, the proxy of shareholder returns previously used by researchers was followed [Mukasa, Lim, Kim 2015]. The reason for using this proxy is that it represents the fundamental reputation drivers. Secondly, it reveals the substantial value and emotional appeal of shareholders, i.e. how successful a company has been in attracting its shareholders through its performance over time [Mukasa et al. 2015].

Control variables

Gender diversity and corporate social responsibility

Size based on total sales of the firm was used as a control variable to measure the relationship between gender diversity (GD) and corporate social responsibility (CSR) [Khan 2010].

Gender diversity and the firm's financial performance

The size of the firm and leverage were used as control variables to measure the relationship of gender diversity (GD) with ROA and ROS. The size of the firm was calculated as the natural logarithm of the total assets of the firm. The formula used for the calculation of leverage was the ratio of total debt to total assets [Isidro, Sobral 2015]. The controlling factor for ROE in order to find out the impact of gender diversity (GD) on ROE was the natural log of board size [Lückerath-Rovers 2013].

Gender diversity and firm reputation

The natural logarithm of sales has been used in the study to find the impact of gender diversity (GD) in boardrooms on the reputation of the firm along with the natural log of ROA. Both these variables are said to be correlated with the total shareholder's return used as a proxy for measuring reputation [Mukasa, Kim, Lim 2015].

STATA 13 was used to analyse the panel data under study in this research, which has both time series and cross-sectional properties. Regression analysis refers to regression models, which investigate the relationship between explanatory and outcome variables while keeping in control the impact of control variables, which goes with the objective of this study [Long, Freese 2006]. The ordinary least square regression model has been used in this study to find the impact of gender diversity in boardrooms on the variables under study in this research.

RESULTS

Table 1 represents the descriptive statistics of the study variables. The data were collected over six years, from 2010 to 2015. Panel data of 34 non-financial firms included in this study is actively balanced according to STATA 13. After getting this indication, the table for descriptive statistics was obtained, which is quite useful in providing some necessary information on data analysis.

Table 1. Descriptive Statistics

| Variables | Mean | Min. | Max. | Std. Dev. |
|-----------|--------|--------|--------|-----------|
| CSR | 0.318 | 0 | 0.7 | 0.168 |
| ROA | 2.025 | -4.616 | 3.972 | 1.190 |
| ROE | 2.687 | -2.721 | 5.086 | 1.272 |
| ROS | 2.058 | -0.776 | 4.387 | 1.099 |
| SHR | 2.520 | -2.086 | 6.411 | 1.979 |
| LEV | 0.170 | 0 | 1.676 | 0.199 |
| Size | 15.994 | 0 | 19.171 | 3.433 |
| Sales | 15.743 | 0 | 19.340 | 3.797 |
| BS | 2.029 | 0 | 2.708 | 0.525 |

Note. N = 34, T = 6, obs. = 204

Table 2. Pair-wise Correlation Matrix

| | PW | CM | ROA | LEV | Size | Sales | BS |
|-------|-------|--------|--------|-------|-------|-------|----|
| PW | 1 | | | | | | |
| CM | 0.616 | 1 | | | | | |
| ROA | 0.180 | 0.113 | 1 | | | | |
| LEV | 0.000 | -0.036 | -0.198 | 1 | | | |
| Size | 0.107 | -0.036 | 0.230 | 0.175 | 1 | | |
| Sales | 0.123 | -0.002 | 0.319 | 0.090 | 0.870 | 1 | |
| BS | 0.119 | -0.014 | 0.279 | 0.074 | 0.769 | 0.786 | 1 |

Table 2 represents the values of correlation among variables. It is visible that all the values of table 2 are less than 0.9. Although the value of the correlation between Size (Natural logarithm of total assets) and Sales (Natural logarithm of total sales) is 0.870, which is

quite high, the data is declared to be lacking the issue of multicollinearity.

Table 3. Variance Inflation Factor

| Variables | Percentage of Women | | Critical Mass | |
|-----------|---------------------|-------|---------------|-------|
| | VIF | 1/VIF | VIF | 1/VIF |
| PW | 1.01 | 0.98 | | |
| CM | | | 1.00 | 0.88 |
| ROA | 1.14 | 0.87 | 1.13 | 0.87 |
| LEV | 1.03 | 0.96 | 1.03 | 0.96 |
| Size | 1.04 | 0.95 | 1.03 | 0.96 |
| Sales | 1.12 | 0.89 | 1.00 | 0.99 |
| BS | 1.01 | 0.98 | 1.00 | 0.99 |

Table 4. Breusch-Pagan Test for Heteroscedasticity

| | PW | | CM | | PW | | | CM | | |
|-----|------------------|-------|------------------|-------|------------------|------|-------|------------------|------|-------|
| | Chi ² | Prob. | Chi ² | Prob. | Chi ² | Lags | Prob. | Chi ² | Lags | Prob. |
| CSR | 0.00 | 0.96 | 0.02 | 0.90 | 110.60 | 1 | 0.00 | 112.85 | 1 | 0.00 |
| ROA | 0.04 | 0.84 | 2.50 | 0.11 | 57.65 | 1 | 0.00 | 60.09 | 1 | 0.00 |
| ROS | 0.12 | 0.72 | 2.16 | 0.14 | 99.78 | 1 | 0.00 | 106.58 | 1 | 0.00 |
| ROE | 0.20 | 0.65 | 0.07 | 0.79 | 42.59 | 1 | 0.00 | 43.52 | 1 | 0.00 |
| SHR | 3.48 | 0.06 | 2.44 | 0.11 | 11.52 | 1 | 0.00 | 11.41 | 1 | 0.00 |

Variance inflation factor, i.e. VIF, and tolerance values, i.e. 1/VIF, were used to detect the issue of multicollinearity in the study models. Table 3 represents the values of VIF for all the models used to study the impact of PW and CM on variables. All values of VIF in Table 3 are less than 5, whereas all values of 1/VIF are more significant than 0.1. These results are indicative of the fact that there is no multicollinearity among these variables in all models.

Table 4 provides that there is no issue of heteroscedasticity in the data. Chi² values are less than the probability in all cases, but for some variables, the value of Chi² is more than

the probability. Although the null hypothesis can be rejected at all levels, robust standard errors in OLS regressions were used in order to get unbiased results for all models.

BREUSCH-GODFREY TEST FOR SERIAL CORRELATION

Significant probability values are represented in Table 5. High values of Chi² reveal the presence of strong autocorrelation in the data with a degree of freedom of 1. Robust standard errors will be applied in the OLS regression for the correction of this issue.

Table 5a. Breusch-Pagan Test for Heteroscedasticity

| Variable | Model 1 | | | Model 2 | | | Model 3 | | |
|----------|----------------------------|---------|-----------|-----------------------|---------|-----------|------------------------|---------|-----------|
| | Random Effect | | | Fixed Effect | | | Fixed Effect | | |
| | CSR | | | ROA | | | ROS | | |
| | Coeff. | z-stats | Std. Err. | Coeff. | t-stats | Std. Err. | Coeff. | t-stats | Std. Err. |
| Constant | 0.102 | 1.69* | 0.060 | -1.270 | -1.39 | 0.912 | -1.204 | -1.50 | 0.804 |
| PW | -0.047 | -0.66 | 0.071 | 0.477 | 0.43 | 1.119 | -0.347 | -0.38 | 0.922 |
| LEV | | | | -0.347 | -1.57 | 0.221 | -0.254 | -1.28 | 0.198 |
| Size | | | | 0.202 | 3.58*** | 0.056 | 0.206 | 4.18*** | 0.049 |
| BS | | | | | | | | | |
| Sales | 0.014 | 3.56*** | 0.003 | | | | | | |
| ROA | | | | | | | | | |
| | R ² = 0.227 | | | R ² =0.108 | | | R ² = 0.104 | | |
| | Chi ² =12.72*** | | | | | | | | |

Table 5b. Breusch-Pagan Test for Heteroscedasticity

| Variable | Model 4 | | | Model 5 | | |
|----------|-----------------------------|---------|-----------|-----------------------------|---------|-----------|
| | Random Effect | | | Random Effect | | |
| | ROE | | | SHR | | |
| | Coeff. | z-stats | Std. Err. | Coeff. | z-stats | Std. Err. |
| Constant | 0.717 | 1.21 | 0.594 | 0.120 | 0.43 | 0.277 |
| PW | 0.986 | 1.03 | 0.959 | -0.049 | -0.37 | 0.132 |
| LEV | | | | | | |
| Size | | | | | | |
| BS | 0.913 | 3.33*** | 0.274 | | | |
| Sales | | | | 0.092 | 4.69*** | 0.019 |
| ROA | | | | 0.463 | 3.93*** | 0.117 |
| | R ² = 0.150 | | | R ² = 0.133 | | |
| | Chi ² = 12.17*** | | | Chi ² = 78.61*** | | |

Fixed-Random Regression with Robust Standard Errors for the impact of PW on CSR, FFP and FR

Note. N = 34, T = 6, obs. = 204

*p < .1, **p < .05, and ***p < .01

Table 6a. Breusch-Pagan Test for Heteroscedasticity

| Variable | Model 1 | | | Model 2 | | | Model 3 | | |
|----------|----------------------------|---------|-----------|-----------------------|---------|-----------|------------------------|---------|-----------|
| | Random Effect | | | Fixed Effect | | | Fixed Effect | | |
| | CSR | | | ROA | | | ROS | | |
| | Coeff. | z-stats | Std. Err. | Coeff. | t-stats | Std. Err. | Coeff. | t-stats | Std. Err. |
| Constant | 0.102 | 1.70* | 0.060 | -1.203 | -1.42 | 0.847 | -1.098 | -1.54 | 0.711 |
| CM | -0.007 | -0.28 | 0.028 | 0.314 | 0.69 | 0.455 | 0.276 | 0.64 | 0.433 |
| LEV | | | | -0.325 | -1.58 | 0.206 | -0.225 | -1.28 | 0.175 |
| Size | | | | 0.200 | 3.81*** | 0.052 | 0.196 | 4.46*** | 0.044 |
| BS | | | | | | | | | |
| Sales | 0.013 | 3.51*** | 0.003 | | | | | | |
| ROA | | | | | | | | | |
| | R ² = 0.218 | | | R ² =0.106 | | | R ² = 0.112 | | |
| | Chi ² =12.31*** | | | | | | | | |

Table 6b. Breusch-Pagan Test for Heteroscedasticity

| Variable | Model 4 | | | Model 5 | | | | |
|----------|-----------------------------|-----------|--------|-----------------------------|-----------|--------|---------|-----------|
| | Random Effect | | | Random Effect | | | | |
| | ROE | | | SHR | | | | |
| | Coeff. | Std. Err. | Coeff. | z-stats | Std. Err. | Coeff. | z-stats | Std. Err. |
| Constant | -1.098 | 0.711 | 0.695 | 1.17 | 0.593 | 0.144 | 0.56 | 0.259 |
| CM | 0.276 | 0.433 | 0.595 | 1.53 | 0.389 | 0.136 | 0.22 | 0.622 |
| LEV | -0.225 | 0.175 | | | | | | |
| Size | 0.196 | 0.044 | | | | | | |
| BS | | | 0.964 | 3.43*** | 0.280 | | | |
| Sales | | | | | | 0.091 | 4.90*** | 0.018 |
| ROA | | | | | | 0.455 | 3.89*** | 0.116 |
| | R ² = 0.157 | | | R ² = 0.133 | | | | |
| | Chi ² = 13.54*** | | | Chi ² = 81.37*** | | | | |

Table 5 (a, b) and 6 (a, b) provide the results of Fixed-Random Regressions after applying the Hausmann test and Robust Standard Errors. Robust results for the same models have been presented along with the standard errors in a separate column. Given below is the representation of both tables through the model equations after applying robust standard errors:

Model 1

$$CSR_{it} = 0.102 - 0.047PW_{it} + 0.014Sales_{it} + \epsilon_{it}$$

$$CSR_{it} = 0.102 - 0.007CM_{it} + 0.013Sales_{it} + \epsilon_{it}$$

The results of Fixed-Random Regression with Robust Standard Errors for the impact of PW and sales on CSR point towards the insignificant relationship between GD and

corporate social responsibility (CSR). The controlling variable sales had a significant positive impact on corporate social responsibility (CSR) at 1%. The results are more or less similar for CM, and corporate social responsibility (CSR), as its relationship is insignificant, where Sales are significant at all levels. The model's predictability, i.e. R², is 22.7% and 21.8% respectively, significant at 1% represented by the value of Chi².

Model 2

$$ROA_{it} = -1.270 + 0.477PW_{it} - 0.347LEV_{it} + 0.202Size_{it} + \epsilon_{it}$$

$$ROA_{it} = -1.203 + 0.314CM_{it} - 0.325LEV_{it} + 0.200Size_{it} + \epsilon_{it}$$

The second model under consideration was intended to find out the impact of GD on ROA while keeping leverage and size-controlled. The Fixed-Random Regression with Robust Standard Errors results revealed that the relationship between PW and ROA is insignificant. Among variables used as controlled variables, leverage has an insignificant negative impact on ROA. On the other hand, size has a significant positive impact on ROA at all levels. R² indicates that 10.8% of the variation in the ROA is due to the variables GD, leverage, and size where the model is significant at 1%. CM and ROA also have an insignificant relationship between them. Control variables of the models include an insignificant relationship between leverage and ROA and a significant relationship between size and ROA. 10.6% R² shows the combined impact of these variables on ROA.

Model 3

$$ROS_{it} = -1.204 - 0.347PW_{it} - 0.254LEV_{it} + 0.206Size_{it} + \epsilon_{it}$$

$$ROS_{it} = -1.098 + 0.276CM_{it} - 0.225LEV_{it} + 0.196Size_{it} + \epsilon_{it}$$

The third model of the study including GD, ROS, leverage, and size indicated that the Fixed-Random Regression with Robust Standard Errors results for the relationship between PW and ROS are insignificant with a coefficient value of 0.347. Leverage has an insignificant negative impact on ROA where size has a significant positive impact on ROS at all levels. Model is significant at 1% with an

R² value of 10.4%. CM and ROS also have an insignificant relationship between them. Control variables of the models include an insignificant relationship between leverage and ROS and a significant relationship between size and ROA. 11.2% R² shows the combined impact of these variables on ROS.

Model 4

$$ROE_{it} = 0.717 + 0.986PW_{it} + 0.913BS_{it} + \epsilon_{it}$$

$$ROE_{it} = 0.695 + 0.595CM_{it} + 0.964BS_{it} + \epsilon_{it}$$

Impact of GD on ROE is insignificant in the fourth model of the study under Fixed-Random Regression with Robust Standard Errors for both PW and CM. Control variable BS is positively related to ROE at 1% in for both proxies of GD. Value of coefficient indicates that a 1% increase in BS increases ROE by 91.3% and 96.4% in the latter case, i.e., for CM. The R² value is 15% for the impact of PW and BS which means 15% of the variation in ROE is being caused by the PW and BS, significant at 1%. CM and BS cause 15.7% of the change in ROE at 1% significance.

Model 5

$$SHR_{it} = 0.120 - 0.049PW_{it} + 0.463ROA_{it} + 0.092Sales_{it} + \epsilon_{it}$$

$$SHR_{it} = 0.144 + 0.136CM_{it} + 0.455ROA_{it} + 0.091Sales_{it} + \epsilon_{it}$$

The last model under consideration is an attempt to find the impact of GD, ROA and sales on the reputation of the firm, i.e. SHR. According to the Fixed-Random Regression results PW has no significant impact on shareholder return. Sales and ROA have a significant positive relationship with SHR, significant at 1% and R² is 13.3%. CM also has an insignificant effect on SHR. Sales and ROA in this model are significant at 1%. Where models predictability represented by R², in this case, is 13.3%. Both proxies used for measuring the impact of GD on the reputation of the firm show an insignificant impact.

DISCUSSION

The current study is very controversial in the context of Pakistan as it is a male-dominated society, along with some other reservations. Few studies have been conducted on this topic in the Pakistani context. The first study found out that there is a negative link between a boardroom's gender diversity and a firm's financial performance, based on the reasons that their attitudes and behaviors negatively affect a firm's financial performance [Mirza, Mahmood, Andleeb, Ramzan 2012]. Females in boardrooms either cause negative or have no impact on a firm's financial performance [Smith, Smith, Verner 2006]. Over time, the Pakistan economy has become active and, along with that, there is a visible change in the status of women in Pakistan. Education and technical skills of female directors could be one of the things which affects a firm's financial performance. The previous study revealed that there is no significant relationship between gender diversity in boardrooms and a firm's financial performance [Yasser 2012]. So, the results of previous studies are consistent with the current study.

Similar results have been reported for Nordic boards, where results have indicated an insignificant relationship between a boardroom's gender diversity and a firm's financial performance. This suggests that board diversity could be increased without hurting a firm's financial performance. The insignificant relationship between the presence of women in boardrooms and a firm's financial performance is also proved by past studies [Marinova et al. 2016, Rose 2007]. In the recent economic scenario, risk management is one of the highlighted issues around the globe; women are known to be risk-averse and they could add value to the economy [Yasser 2012]. Hence, instead of taking this finding as a setback for women, it must be seen as an opportunity for them to make a difference in the world economy by getting equipped with technical and vocational training.

The third and final hypothesis of the study stated that there is a significant relationship between the presence of women in boardrooms and the reputation of a firm. This was also

rejected in the study. These results are consistent with the findings of previous studies [Fuentes-Medina, Morini-Marrero, Verona-Martel 2013]. Major contributing factors to reputation such as financial factors and corporate social responsibility are not affected by gender diversity in boardrooms. If there is no impact of a boardroom's gender diversity on these factors. Brammer et al. [2009] stated that a boardroom's gender diversity only affects a firm's reputation in the final consumer's sectors. Signaling theory does not apply in Pakistan for having an expected positive impact of GD in boardrooms on a firm's reputation.

However, it is evident from the results that there is no significant impact of a boardroom's gender diversity on a firm's social and financial position along with its reputation. Gender diversity in boardrooms was measured using two proxies, and both of them have confirmed the results. The critical mass theory helped in finding robust results. Although Pakistan is among one of the developing countries and is striving to find its way up to the list of developed countries. According to Bukhari, Ramzan [2013], discrimination is prevalent in the society of Pakistan, and there are many contributors, including social norms, traditions, values and lack of awareness regarding religion, which lead to a society where women lack education and awareness as compared to men.

This discussion leads to the deduction that the insignificant impact of women in boardrooms over corporate social responsibility, a firm's financial performance and reputation are due to a lack of knowledge, skills and awareness. This research could provide a basis and a starting point for the debate that women's rights are being denied at all levels and this has been causing Pakistan a significant setback in the corporate world which could be one of the reasons that Pakistan is lagging in the pursuit of becoming a successful world economy.

CONCLUSIONS

The proven relationship between a boardroom's gender diversity and corporate

social responsibility (CSR) in other countries is found to be inapplicable in the context of Pakistan. Current study results are consistent with the findings of previous studies that are based on the fact that women have less participation in decision making within boardrooms [Majeed, Aziz, Saleem 2015]. Mostly they are inactive and sleeping partners in firms. Similar results were reported by Williams who proved the fact that there is no link between corporate social responsibility and the presence of women on a board [Williams 2003]. In this study, a firm's financial performance was measured using three proxies in order to get robust results. Similar results were reported for all three proxies. The hypothesis was rejected in this study as well, i.e. there is no significant relationship between GD in boardrooms and financial performance of the firm.

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WPLYW ZRÓŻNICOWANIA PŁCI CZŁONKÓW ZARZĄDU NA ODPOWIEDZIALNOŚĆ SPOŁECZNĄ, WYNIKI FINANSOWE I REPUTACJĘ FIRMY

STRESZCZENIE. Wstęp: Obecne badania ujawniają efektywność dla firmy wynikającą ze zróżnicowania płciowego członków zarządu oraz na społeczną odpowiedzialność tej firmy, jak również jej wyniki finansowe i reputację, co prowadzi do zrównoważonego rozwoju biznesowego firmy. W pracy poddano analizie wpływ udziału żeńskich członków zarządu na dywersyfikację działań firmy.

Metody: Jako próbę losową wybrano 100 firm umieszczonych na liście giełdy pakistańskiej. Wyniki finansowe były mierzone przy pomocy trzech wskaźników w celu uzyskania bardziej dokładnych wyników. Dane do analizy pobrano za okres od roku 2010 do 2015. Uzyskane dane zostały poddane analizie regresji Fixed-Random OLS, która wykazała brak wpływu zróżnicowania płci członków zarządu na społeczną odpowiedzialność (CSR), wyniki finansowe oraz reputację firmy.

Wyniki: Uzyskane wyniki pokazują, że HODI łagodzi aktywność związaną ze społeczną odpowiedzialnością. Zgodnie z wynikami przeprowadzonej analizy regresji, PW nie ma istotnego wpływu na zyski finansowe udziałowców. Sprzedaż oraz ROA wykazały pozytywną korelację z SHR.

Wnioski: Uzyskano negatywną korelację pomiędzy zróżnicowaniem płciowym członków zarządu a wynikami finansowymi firmy. Obecność kobiet w zarządzie albo miała negatywny wpływ albo nie miała wpływu na wyniki finansowe firmy. Podobnie, nie zaobserwowano istotnej zależności pomiędzy obecnością kobiet w zarządzeniu a firmą.

Słowa kluczowe: zróżnicowanie płciowe, odpowiedzialność społeczna, działalność firmy, reputacja firmy, Pakistan

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