

The Gender Diversity and Earnings Management Practices: Evidence from Pakistan

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ABSTRACT

Keywords:

Gender Diversity
Earnings Management Practices
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We examine the role of gender diverse corporate board, audit committee and senior management in curtailing earnings management practices in view of gender socialization theory through dynamic panel estimation model of Blundell and Bond (1998). We estimate discretionary accruals through the well-known model of Kothari, Leone, and Wesley (2005). Using a sample of 100 listed non-financial firms over the period of 2013 to 2018, we document the negative association of gender diverse corporate board with earnings manipulative practices. Evidence also reveals that women with audit committee membership reduces the problem of manipulative practices related to earnings. Interestingly, the results show that gender diverse corporate boards further strengthen the effectiveness of women as a member of audit committee in curtailing earnings management practices. Further, female CEOs are strongly inclined to reduce earnings management thereby ensuring an effective and transparent managerial decisions.

INTRODUCTION

The corporations are usually evaluated by their shareholders on the bases of the earnings reporting practices (Kouaib & Almulhim, 2019). The weak control of shareholders over the management results fraudulent earnings management activities adopted by the senior management (Dong, Wang, Zhang, & Zhou, 2020). These duplicitous management practices have resulted large scale notorious financial scams in the corporations such as Enron, WorldCom of the developed countries. So, by considering the importance of this phenomenon, a growing body of empirical research has emerged in the context of the developed countries and explored the growing influence of managers in misstating corporate financial information (Harris, Karl, & Lawrence, 2019; Fan, Jiang, Zhang, & Zhou, 2019). The scholarly research has identified that corporate managers exploit their discretionary powers for their personal gains and their opportunistic behaviour leads to earnings management practices (Gull et al., 2018). The existing literature supported the well-established notion that gender diversity is substitute monitoring mechanism that can restrict the opportunistic behaviour of management. Theoretically, gender socialization theory

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postulates that females are conservative risk takers and more likely to abide ethical standards. Hence, the gender diversity plays a pivotal role in curtailing opportunistic approach of management (Kouaib & Almulhim, 2019). On the other side, agency theory also suggests that the presence of women in governance structure results better financial reporting standards (Fan, Jiang, Zhang, & Zhou, 2019). Several empirical studies explored the relationship of gender diversity with various outcomes (Owen, Temesvary, & Finance, 2018). For instance, board genders diversity has been studied with board supervision and monitoring (Lanis, Richardson, & Taylor, 2017), reporting quality (Lara et al., 2017) firm performance (García-Meca, García-Sánchez, & Martínez-Ferrero, 2015), renewable energy (Atif, Hossain, Alam, & Goergen, 2020), and dividend payout ration (Saeed & Sameer, 2017). A plethora of empirical evidences also provides a solid foundation on the gender diversity and earnings manipulative practices (Harakeh, Gammal, & Matar, 2019; Kyaw, Olugbode, & Petracci, 2015; Zalata, Tauringana, & Tingbani, 2018; Fan, Jiang, Zhang, & Zhou, 2019). These empirical studies reported that women holding an executive post and/or board member curtails the earnings manipulative practices through proper monitoring and control. The number of studies provided some useful insights regarding the role of gender based diversity and manipulative practices related to earnings. However, the results are still inconclusive. Kouaib and Almulhim (2019) find female directors in board reduces the earnings manipulative practices. Yu, Lord, Peni, and Vähämaa (2010) observed that the presence of female CFOs curtails the earning manipulative related practices. They further reported the negligible impact of female holding an executive position over the earnings manipulative practices. Ye, Zhang, and Rezaee (2010) find the insignificant gender diversity and earnings management relationship.

The current study contributes to the literature in a unique way. The previous literature supported the notion that the existence of weak corporate governance mechanism exacerbates the agency conflict thereby empowering the management to provide compromised quality of financial reporting in emerging countries (Waheed & Malik, 2019; Hussain and Shah 2017; Sajjad, Abbas, Hussain, & Waheed, 2019). Jurkus, Park, and Woodard (2011) argued that gender based diversity in governance structure is more beneficial for those markets featured with low level of competition and weak governance mechanism. Thus, we are addressing the intriguing question whether gender diversity reduces the earnings manipulative practices in an emerging economy with weak corporate governance mechanism. Specifically, in case of Pakistan, Yasser and Mamun (2015) ascertained the relationship of gender diversity with earnings quality via static models. However, the findings of these studies might be considered biased and inconsistent due to the problem of endogeneity between gender diversity and earnings management practices. Our work relates to a lesser number of studies that examine the role of women in board, audit committee, and as a CEO in curtailing earning manipulative practices through

dynamic penal estimation model in order to produce unbiased and consistent parameters thereby overcoming the endogeneity, heteroscedasticity, and simultaneity problems. The study also examines the interplay of women in board on the relationship of women in audit and earnings manipulative practices in dynamic penal framework setting.

The remainder of this study is arranged as follows. Section 2 corresponds to the review of prior researches and hypotheses development; Section 3 discusses the research methodology; Section 4 presents the analysis and discussion and section 5 corresponds to conclusion.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

The review of the literature suggests that there exists a wide range of theoretical and empirical opinions explaining the role of gender diversity in restraining manipulative practices related to earnings. Theoretically, gender socialization theory (GST) justified the notion that the role of gender and related social and ethical values are inculcated during the childhood. Therefore, men and women have different leadership and decisions making styles based on their underlying social and ethical values. Under the GST framework, females are risk averse decision makers and most likely adhere the established ethical standards (Kouaib & Almulhim, 2019; Fan et al., 2019). Barua, Davidson, Rama, and Thiruvadi (2010) concluded that women are less likely to expropriate the available resources of the firm since women are more ethical vis-à-vis man and they ascertained the positive association of women as CFOs with quality of earnings. Further moreover, the previous literature also supported the notion that women issue less debt and least likely engage in mergers and acquisitions due to their conservative risk taking behavior (Harris, Karl, & Lawrence, 2019). Under the agency theory framework, the gender diversity is considered as alternative monitoring mechanism to restrain the management's opportunistic behavior. Jurkus et al. (2011) argued that gender diversity in governance structure is more beneficial for firms that are operating in less competitive and weakly regulated markets.

The boards of directors serve as first line of defense to protect the shareholders' interests and play an important role in reducing the agency conflicts (Weisbach, 1988). In light of agency theory, the effective monitoring role of board primarily depends on the independence and diligence of board of directors. Moreover, considerable prior studies affirmed that women in the corporate boards are more independent and active monitors since these directors have more independent thinking ability and less networking in industry than male directors (Akbar, Hussain, Ahmad, & Hassan, 2019; Hussain & Shah, 2017; Fama, Jensen, 1983; Srinidhi, Gul, & Tsui, 2011). Moreover, Women directors are normally risk averse and the tolerant level for opportunistic activities is less than the male directors (Levi, Li, & Zhang, 2014), in view of that women directors are more effective in order to protect the shareholders' interest. Likewise,

Women have been found more delicate to the damage of reputation and the danger of litigations and hence inclined to exhibit more decisive behavior as compared to men in order to elevate earnings quality (Gul et al., 2011). Therefore, it is commonly deliberated on the part of women that their presence curtailed the earnings management (Gul, Fung, & Jaggi, 2009). Arun, Almahrog, and Aribi (2015) contend that those firms tend to receive limited earnings administration hones due to presence of higher number of independent female directors in corporate boards. The findings of Adams and Ferreira (2009) revealed that woman directors are more conscious for attending the meeting of board and their attendance are much better than the male counterparts. They further found that woman directors in the board reduced the possibility of CEO turnover. Furthermore, the existing literature validated that greater diversity in board led to less financial misrepresentation and tax avoidance practices (Lanis et al., 2017; Owen et al., 2018).

Contrarily, several studies have established the negative and/or negligible role of diverse in curtailing manipulative practices related to earnings. Distinctively, these studies affirmed that women at senior level management and/or as board member are not risk averse across financial and non-financial firms (Sheedy & Lubojanski, 2018). Gul et al. (2011) established the negative relationship of board gender diversity and earnings management manipulations. Likewise Krishnan and Parsons (2008) find a positive relationship of earnings quality with gender diversified board. Moreover, several empirical studies have ascertained the negligible role of female directors and earnings quality (Lara et al., 2017; Sun et al., 2011).

Moreover, the plethora of empirical studies provided a solid gourd over the link between male and their penchant for unlawful exercises in view of leadership style. Schminke et al. (2002), in view of varying leadership styles and the influence that they can spur in individuals and their moral decision-taking behaviors, locate that more dynamic headship prompts more prominent congruity in a moral decision. The previous supported the notion that women prioritize their individual welfare, aptness, and regular rehearses on very low levels and are more inclined to avert opportunistic behavior when settling on authoritative choices (Atif, Hossain, Alam, & Goergen, 2020). Women adopt less risky decision-taking behavior as compared to men (Powell and Ansic, 1997). Krishnan and Parsons (2008), in light of data example of 770 US firms (Year 1996-2000), find that the nature of revealed earnings is enhanced identified with the presence of gender diverse boards in senior management as by causing to mitigate earnings smoothing and loss evasion. Powell and Ansic (1997) contend that female executives are more disposed to be risk averse and vigilant as compared to male individuals. However, Sun et al. (2011) find insignificant association between earnings manipulation and the gender based diversity in senior

management. Furthermore, the audit committee assumes its essential obligation in terms of screening the financial recording process of a firm (Akbar et al., 2019). Thiruvadi and Huang (2011) earnings administration is observed to be limited in the presence of female directors in audit committees. On other hand, Sun et al. (2011) concluded that the inclusion of women in audit committees has statistically insignificant relationship with earnings quality. Based on empirical support, this current study proposed the following hypothesis:

H1: Based on gender socialization theory, the gender diverse board is negatively associated with earnings management practices.

H2: Based on gender socialization theory, the women as chief executive officer diminishes earnings manipulation practices.

H3: Based on gender socialization theory, the women membership in audit committee is negatively associated with earnings management practices.

RESEARCH METHODOLOGY

Data Specification

The sample set of the current research is selected from available population of 580 listed firms in PSX. We excluded the 146 financial sector firms since they have different financial and regulatory framework. Afterward, 334 firms were excluded either due to incomplete data or firms having less than 03 years data during the sample period. Finally, we considered 100 non-financial firms over the period of 2013-2018.

Operationalization of Variables

Earnings Management

We considered the Kothari et al. (2005) for the estimation of discretionary accruals as a proxy for earnings management practices. The Kothari Model is as follows:

$$\frac{TA_{it}}{A_{it-1}} = \alpha_1 \left(\frac{1}{A_{it-1}} \right) + \alpha_2 \left(\frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} \right) + \alpha_3 \left(\frac{PPE_{it}}{A_{it-1}} \right) + \alpha_4 \left(\frac{ROA_{it}}{A_{it-1}} \right) + \varepsilon_{it} \dots(1)$$

Whereas, TA_{it} stands for total assets, A_{it-1} is equal to lag value of total assets, ΔREV_{it} is Change in Revenue, ΔREC_{it} is Change in net Receivables, PPE_{it} represents the property, plant and equipment, ROA_{it} is lag value of return on assets, ε_{it} is the error terms.

Table 01- The Description of Variables

Symbol	Estimation criteria
DACC	Discretionary accruals : it is estimated through Kothari et al. (2005)
NW_DIR	The No of Female Directors on board
W3_DIR	The dummy variable is computed as 1 for board with at least 3 female member, otherwise 0
WD_DIR	The dummy variable is computed as 1 for at least 01 female member, otherwise 0
W_DIR (%)	The % proportion of female directors in board to total No of directors.
W_CEO	The dummy variable is computed as 1 for Female CEO and otherwise 0
NW_AUD	It calculate as total No of famles as a member of audit committee
W_AUD (%)	The % proportion of female directors to total No of member in audit committee.
B_SIZE	It is calculated as total No of directors
N_IND	Total No of non-executive member of the board.
B_IND (%)	The % proportion non-executive.
DUAL	The dummy variable is computed as 1 if one person holds the post of CEO & Chairman, else 0
MEET	Total No of board meetings/ year .
BIG_5	The dummy variable is computed as 1 for firm audited by big4, otherwise zero
LEV	Total Debt/Total Assets
LOSS	The dummy variable is computed as 1 if a report losses in a given year, otherwise 0
F_SIZE	Ln(total Assets)
CFOT	It is computed as Cash flow scaled divided total assets.

Econometric Model

We estimated the following econometric models through Blundell and Bond (1998) technique, as the Arellano and Bond (1991) regression model sometimes produced inconsistent results due to finite-sample bias, whereas the Blundell and Bond model is tested to be more efficient and less sample biased.

$$DACC_{it} = \beta_0 + \beta_1 L.DACC_{it} + \beta_2 W_DIR_{it} + \sum_{i=1}^n \gamma_{it} ControlVariable + \mu_i + \eta_t + \varepsilon_{it} \dots(3.1)$$

DACC denotes the discretionary accruals based on Kothari Model et al., (2005). L.DACC represent lag of dependent variable, W_DIR_{it} represents women directors on board, Whereas, While $\sum \gamma_{it} ControlVariable$ consist of Board size, Board independence, CEO duality, Board meetings, An audit by big 5 auditors, Leverage, Financial loss, Cash flow from operating activities, Firm size, year wise dummy variables and industry dummies, ε_{it} is error term.

$$DACC_{it} = \beta_0 + \beta_1 L.DACC_{it} + \beta_2 W_DIR_{it} + \beta_3 NW_AUD_{it} + \beta_4 NW_DIR * NW_AUD_{it} + \beta_5 W_CEO_{it} + \sum_{i=1}^n \gamma_{it} ControlVariable + \mu_i + \eta_t + \varepsilon_{it} \dots(3.2)$$

In equation (3.2), we include independent variables such as the women in audit (NW_AUD_{it}), and NW_DIR*NW_AUD_{it} an interactive term of number of women directors on board and in audit committee. Furthermore, we also included women as a CEO (W_CEO_{it}) as exogenous variable. ε_{it} is error term.

DATA ANALYSIS

Descriptive Statistics & Correlation Matrix

Descriptive statistics of our sample firms are reported in Table 02. The statistics report value of 0.123 as the mean estimation of discretionary accruals (DACC) calculated by the Kothari model (2005), showing the overall proportion of Pakistan firms that are indulged in practices of income manipulation. As to report for a number of women directors in board and audit (NW_DIR and NW_AUD), on average our sample firms have 0.794 number of women in board and 0.276 women in the audit which means even less than 1 female presence in most companies. On these board, the mean level of women (W_DIR %) is just 10.2%, Women CEO (W_CEO) is 0.44, while the extent of women executives on audit

committees (W_AUD %) is just 8.9%. Table 02 additionally provides clear insight to control factors. Average boards (B_SIZE) have 8.06 executives, where 15.2% represents % of independent directors on board (B_IND %). The average number of executive meetings (MEET) that are noticed to be held over a period of one year is 5.488 and 20% of our sample firms are identified with CEO duality (DUAL). The mean leverage (LEV) is 0.628 over our sample firms and the mean value of big five auditors (BIG_5) is 0.48. In the end, as to account for budgetary loss (LOSS), 0.2 firms are found to report a loss in their financial statement. The correlation matrix is presented in Table 03. The findings report that presence of female in corporate board (NW_DIR) and audit committee (NW_AUD) are negatively correlated with earnings management practices in Pakistan. Furthermore, the correlation coefficient value of W_CEO is also negative which means that female as executive is negatively correlation earnings manipulations.

Table 2-Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
DACC	0.213	1.450	0.000	29.29
NW_DIR	0.794	1.093	0.000	11.06
W_DIR (%)	0.102	0.141	0.000	0.571
NW_AUD	0.276	0.537	0.000	2.000
W_AUD (%)	0.089	0.176	0.000	0.667
W_CEO	0.044	0.206	0.000	1.000
B_SIZE	8.076	1.635	4.000	16.00
B_IND (%)	0.152	0.210	0.000	1.000
MEET	5.488	2.611	2.000	28.00
BIG5	0.486	0.500	0.000	1.000
DUAL	0.200	0.401	0.000	1.000
LEV	0.628	0.788	.0150	12.12
LOSS	0.200	0.401	0.000	1.000
CFOT	0.107	0.393	-0.747	8.179
F_SIZE	6.728	0.688	4.720	8.743
N_IND	1.185	1.792	0.000	13.00

Table 03 – Correlation Matrix

	DACC	NW_DIR	WD_DIR	NW_AUD	W_CEO	B_SIZE	B_IND	MEET	DUAL	LEV	LOSS	CFOT	F_SIZE
DACC	1												
NW_DIR	-0.03	1											
WD_DIR	-0.04	0.87	1										
NW_AUD	-0.05	0.66	0.609	1									
W_CEO	-0.02	0.29	0.266	-0.05	1								
B_SIZE	-0.05	-0.01	-0.08	-0.04	0.053	1							
B_IND	0.08	-0.02	-0.05	-0.07	0.156	0.053	1						
MEET	-0.04	0.01	0.007	0.071	-0.03	0.042	0.01	1					
DUAL	-0.02	0.20	0.201	0.083	0.123	-0.18	0.03	-0.08	1				
LEV	0.02	0.04	0.035	0.095	-0.07	0.003	-0.1	-0.09	0.22	1			
LOSS	-0.02	0.01	-0.02	0.024	-0.02	-0.16	0.01	-0.08	0.21	0.35	1		
CFOT	0.24	-0.03	-0.02	-0.05	0.007	0.026	-0.21	-0.02	-0.13	0.04	-0.11	1	
F_SIZE	-0.05	-0.33	-0.30	-0.25	-0.12	0.408	0.03	0.17	-0.16	0.24	-0.25	-0.03	1

Table 04- Board Gender Diversity and Earnings Management

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

Variables	Model 1		Model 2		Model 3	
	Coef.	Z Test	Coef.	Z Test	Coef.	Z Test
L.DACC	-0.274***	-14.78	-0.005***	-0.4	-0.006***	-0.47
NW_DIR	-0.049***	-5.45				
WD_DIR			-0.053***	-2.24		
W3_DIR					-0.167***	-3.94
BIG_5	-0.126***	-3.46	-0.187**	-2.36	-0.209**	-2.51
LEV	0.122***	32.16	-0.049**	-2.24	-0.050***	-2.27
B_SIZE	-0.351***	-7.07	-0.233***	-2.78	-0.231***	-2.69
N_IND	-0.013*	-1.88	-0.009**	-2.56	-0.009***	-2.66
MEET	0.019***	5.83	-0.004	-1.3	-0.003***	-2.94
DUAL	-0.047***	-4.48	-0.308***	-6.87	-0.377***	-7.85
LOSS	0.037***	5.28	-0.439***	-12.71	-0.439***	-11.97
CFOT	0.790***	13.51	0.844***	45.08	0.861***	46.1
F_SIZE	0.113***	6.83	0.025	0.34	0.077	0.93
INTERCEPT	-0.027***	-0.18	0.954	1.39	0.79	0.95
AR TEST (2)	0.9986			0.4091	0.3968	
SARGAN TEST	0.391			0.4846	0.349	
INDUSTRY	Yes				Yes	
YEAR	Yes				Yes	
NUM ID	100				100	

Table 05-The relationship of Gender Diversity in Board, Audit Committee, and women as a CEO, With Earnings Management

Variables	Model 1		Model 2	
	Coef.	Z test	Coef.	Z test
L.DACC	-0.096***	-13.51	-0.054***	-7.41
NW_AUD	-0.070**	-2.12	-0.040**	-2.03
NW_DIR	-0.034**	-2.45	-0.025***	-2.87
W_CEO			-0.120**	-2.19
NW_DIR*NW_AUD	-0.076***	-11.42	-0.0022***	-4.57
N_IND	-0.018***	-2.81	-0.015***	-2.84
F_SIZE	0.092*	1.87	-0.033	-0.9
BIG_5	-0.019	-0.38	-0.068	-1.27
LEV	0.077***	7.49	0.054***	5.78
CFOT	0.857***	59.95	0.857***	46.87
B_SIZE	-0.292***	-3.33	-0.311***	-3.36
DUAL	-0.3917***	-6.06	-0.214***	-5.63
MEET	-0.005*	-1.62	-0.005*	-1.69
LOSS	-0.201***	-9.37	-0.221***	-9.64
INTERCEPT	-0.449	-0.86	0.744	1.38
AR TEST (2)	0.6783		0.5673	
SARGAN TEST	0.293		0.196	
INDUSTRY	Yes		Yes	
YEAR	Yes		Yes	
NUM ID	100		100	

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

REGRESSION RESULTS

We examined the relationship of gender diversity in corporate board and audit committee with earnings management practices through dynamic panel estimation model. The regression results table 04 reveal

the impact of women diversity in board and earnings management. This table considers three dimensions/proxies to measure women diversity in the board such as number of women directors (NW_DIR), women dummy variable (WD_DIR) and the board identified with at least the number of three women (W3_DIR). In table 04, Model 1 considers number of women directors (NW_DIR) as the first proxy of women diversity and the results signify that coefficient value of NW_DIR ($\beta = -0.049$) is negatively significant with DACC. In Model 2, women diversity is operationalized by using dummy variable of women diversity (WD_DIR), and its results ($\beta = -0.053$ and t value $= -2.24$) are consistent with Model 1. Moreover, in model 3, another proxy of women diversity in board is used i.e., Dummy variable of at least three women on board (W3_DIR). The coefficient value of W3_DIR ($\beta = -0.167$ and t value $= -3.94$) is also negatively significant with DACC. The coefficient values of all proxies of women diversity are negatively significant with DACC at the significance level of 0.01. The results are consistent with notion that presence of women in board leads to less financial misrepresentation (Adams & Raganathan, 2017; Fan et al., 2019; Owen et al., 2018). Similarly, the results provide empirical supports to the claim that organizations that have gender diverse boards decline the dimension of earnings management and show higher monitoring abilities (Srinidhi et al., 2011; Sun et al., 2011; Fan et al., 2019)

Moreover, Model 1 in Table 05 presents the relationship of women directorship in audit committee and earnings manipulation. The coefficient value of number of women in audit ($\beta = -0.070$ and t value $= -2.12$) and women directors in board ($\beta = -0.034$ and t value $= -2.45$) suggest that both variables have negative impact on the DACC. These results reveal that the presence of women in board and audit committee trim down the magnitude of earnings management practices (Sun et al., 2011). The study further used an interactive term i.e., NW_DIR*NW_AUD to explore the moderating effect of females in board and audit committee on DACC. The negative coefficient value of moderator ($\beta = -0.076$) uncovers the significant moderating role of women in board and audit committee on DACC at 0.01 significance level. Thiruvadi and Huang (2011) put forward the proposition that arrangement of female chiefs in audit committees can limit episodes of earnings manipulation. In line with these investigations, our results recommend that females in audit committee effectively prompt handling the issue of earnings management. Further, Model 2 in table 5 illustrates empirical proof for the impact of women, particularly remaining as CEOs, on earnings manipulation. The negative coefficient value of W_CEO ($\beta = -0.120$; t -test value $= -2.19$) at a significance level of 0.05 signifies that women in top management certainly alleviate observance in practices of earnings management. In line with well-established notion of previous literature that women prioritize their individual welfare and are more inclined to avert

opportunistic behavior when settling on authoritative choices (Gull et al., 2018; Harakeh et al., 2019). The overall results are consistent with social gender socialization theory (Harris et al., 2019)

CONCLUSION

We examine the gender diversity and manipulative practices related to earnings in an emerging economy through dynamic panel framework. The empirical results suggest that women in corporate boards and audit committee are viable to curtail the earnings management practices. The results also supported the notion that female CEOs are more beneficial to curtail the opportunistic behaviour of managers and reduced agency conflict. Furthermore, females in corporate boards further strengthen the effectiveness of women presence in audit to curtailing earnings manipulative practices. Consistent with previous empirical that gender diversity restricts the corporate managers from earnings management practices in the firms, thus the study provides empirical support to agency theory and gender socialization theory in Pakistani context.

This research has far reaching implication for the developing economies. The findings of our study provide a better insights to the management and policy makers to design policies to aggressively adopt more diverse boards since the presence of female directors reduces the problem of manipulative practices related to earnings, which diminishes the chances of default risk thereby ensuring effective and transparent managerial decision making. Our research is of relevance to those readers who support the gender diversity and equality. However, our study is limited to listed non-financial firms of PSX. So there is a need to further explore this area by analysing other proxies of gender diversity such personal characteristics, and qualification among many others. A comparative analysis of developed and developing countries with a larger dataset can be another interesting avenue for future research.

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