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Impact of Board Gender Diversity and ESG Practices on Firm Performance: Evidences from India

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Abstract

Women participation in corporate boards has been identified as a noteworthy factor in improving governance and overall firm performance. Many researchers indicate that diversity in terms of gender in corporate board contributes in improving firm's decision making, risk management and overall perspective. ESG factors are crucial in determining the ethical and sustainable impact of a firm's operations. Firms which aimed to bring more ESG practices in their operations tend to perform better in the long run. The main objective of this study is to examine the impact of the board gender diversity and ESG practices on firms' performance and data were extracted from SP Global, Money control and NSE Database for the period 2019 to 2025. There are 28 companies and 140 observations considered as sample of the study. Tools used for this study are Descriptive analysis and Multiple Regression. This research would help to identify the factors influencing Board Gender diversity and control variables on Environment, Social, Governance and ESG and its effect on firm performance. From the findings of the study, it was identified that ATR, BINDEP, BSIZE, LEV and LNTA have significant impact on ESG. It is also observed that ATR, BSIZE, BINDEP and LNTA have significant effect on social and Environmental variable whereas BINDEP, WOB, BSIZE and LNTA have significant impact on Governance variable.

Keywords: Asset Turnover ratio, Women on board, Board Independence, Environmental, Social & Governance, Board Size

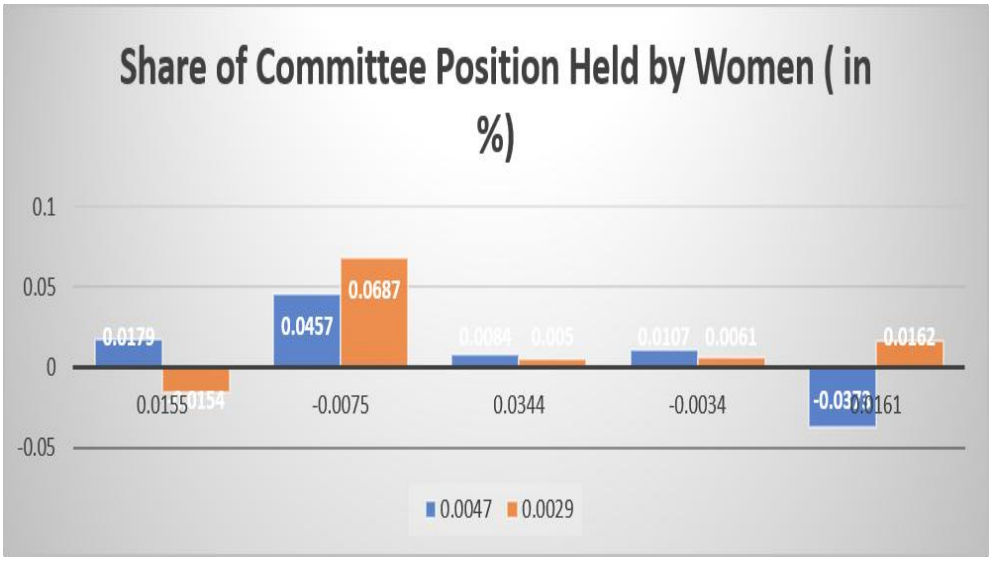
1.INTRODUCTION

To achieve the Gender equality, adopted as one of the seventeen Sustainable Development Goals(SDGs) by the United Nations (UN), the Securities Exchange Board of India (SEBI) has mandated that all the firms in India to disclose their gender diversity norms in their business responsibility reports annually. Furthermore, SEBI has instructed Indian firms to add one independent women director in their board based on the market capitalisation. Many research studies identified the impact of board gender diversity on financial reporting Dobija et al(2022), Davis (2023) et al. Bank specific credit risks has been significantly reduced by the firms which has greater gender diversity in their boardrooms (Kinateder et al 2021). Globally, women representation in boardroom has improved by 24% since 2018. The percentage of women in corporate boardrooms was notably higher in firms located in North America (28.6%) and Europe (34.4%) than globally. In terms of country-wise, France have topped globally by having 44.5% female in their corporate boards.

The scenario in India is progressing from 6% women on board to 14% now. In addition to this , Female representation in Indian corporate boards has reached 18% in NIFTY-500 companies.

Based on the report of "Corporate India: Women on Board" published by Institutional Investor Advisory Services (IiAS), it is projected that Indian corporates will have 30% women representation in their boards by 2058. In India, firms owned by privates have more female representation on various committees than firms owned by the Government.

Figure 1: Share of Committee Positions Held by Women in Private and Public (Government) Companies In India



The current scenario of board gender diversity practices followed by Indian and foreign corporates has motivated the researchers to study the impact of board gender diversity of and ESG practices on financial performance of selected Indian firms . The researchers have identified 28 Indian firms those are listed in National Stock Exchange included as sample for the study. The rest of the paper is structured as follows; Chapter-2 discuss about the literature survey and research gap, chapter-3 documents methodology adopted for the study, chatper-4 presents the analysis and discussions and chapter-5 concludes the paper.

II. Literature Review

The nexus between gender diversity in corporate boards and financial performance has gathered significant focus in academic and business research. After an extensive literature survey, the researchers have presented significant findings from the relevant research studies.

Positive Impact of Gender Diversity on Firm Performance

Campbell and Mínguez-Vera (2008) have pioneered in finding the relationship between gender diversity in boards and firm performance. They have considered 68 Spanish firms as samples for their study. Tobin's Q used as a proxy for firm performance and number of directors on the board, percentage of women on the board, return on assets and total assets of firm as independent variables. It was observed from the results of panel regression that a strong relationship existed between board gender diversity and firm performance. Adams, R. B., & Ferreira, D. (2009) has agreed that a positive relationship existed between gender diversity and firm performance in US firms. **Lückerath-Rovers (2013) identified that the Dutch firms those who had female representation in their board have fared better financial performance than the boards with full male representation.** Shakil et al (2021) have examined the relationship between gender diversity in board and performance of ESG of 37 US banks. After applying panel regression to the data, the researchers have identified a positive significant relationship existed between the gender diversity in board and ESG performance. Pulino et al (2022) analysed the impact of ESG disclosures on financial performance of Italian firms. They have included 263 large firms listed in Italian stock exchange. The researchers applied panel regression to the data and found that ESG disclosure had a positive impact on the performance of the firms. Menicucci, E., & Paolucci, G. (2022) have examined the effect of the board diversity on ESG performance of 105 banks in Italy. They have considered the following independent variables viz., Size, Age, Diversity, and Independence of the board. The results revealed that board's size and diversity had a positive effect on the performance of ESG whereas no significant relationship existed between board age and performance of ESG. They also argued that gender balanced boards had a significant effect on the ESG scores.

Negative or No Impact of Board Gender Diversity on Firm performance

Manita et al (2018) have attempted to study the nexus between board gender diversity and disclosure of ESG. They have considered 379 US firms which were included in the Standard & Poort's 500 index as a sample of the study. Panel regression model was applied to the data. It was found that no significant relationship existed between the gender diversity in board and disclosure of ESG.

Several studies have found that decline in firm performance when implementing female representation in boards due to the following parameters such as implementing mandatory gender quotas **(Ahern and Dittmar (2012)) ,competency gaps or perceived bias in leadership (Dobbin and Jung (2011)) , conservative decision making (Matsa and Miller (2013)), industry specific needs (Adams & Funk (2012)) and potential challenges in board dynamics (Jeong and Harrison (2017)).**

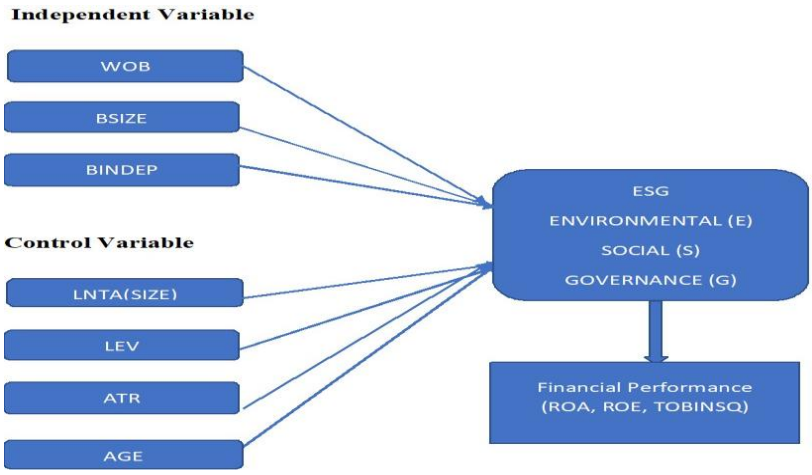
A company's corporate financial interests are referred to as "Environmental, Social, and Governance," and they are largely focused on producing moral and environmentally sound outcomes. Capital markets utilise ESG as a technique to evaluate companies and project their financial performance. Even though they are all seen as non-financial performance indicators, corporate governance, sustainability, and ethics all contribute to the provision of frameworks for minimising an organization's effect, such as its carbon footprint. ESG began to develop as a much more proactive (rather than reactive) trend by the late 2010s and into the 2020s. The term "ESG" has expanded to cover a wide variety of important topics, including the impact on society and the environment as well as how governance structures may be changed to increase stakeholder well-being.

III.METHODOLOGY

The research used 28 companies based on market capitalization The study used seven-year data 2019 to 2025.

The following Independent Variables (IVs) identified by the researchers for analysis (Refer Figure-2);

Figure 2: Framework for Analysis



Women on Board (WOB), Number of Independent Directors (BINDEP), Total Number of Board of Directors (BSIZE).

Control Variables used for analysis are as follows;

Natural log of Total Assets (LNTA) used as proxy for Size of the firm , Leverage (LEV), Asset Turnover Ratio (ATR) .

Dependent Variables are as follows;

ESG metrics (ESG), Return on Assets (ROA), Return on Equity (ROE) and Tobin's Q

Multiple Regression is applied to analyse the data. The Model is as follows;

- $ESG = X_1 (AGE) + X_2 (WOB) + X_3(BSIZE) + X_4(BINDEP) + X_5 (LNTA) + X_6 (LEV) + X_7 (ATR) + \varepsilon$
- $ENV = X_1 (AGE) + X_2 (WOB) + X_3(BSIZE) + X_4(BINDEP) + X_5 (LNTA) + X_6 (LEV) + X_7 (ATR) + \varepsilon$
- $SOC = X_1 (AGE) + X_2 (WOB) + X_3(BSIZE) + X_4(BINDEP) + X_5 (LNTA) + X_6 (LEV) + X_7 (ATR) + \varepsilon$
- $GOV = X_1 (AGE) + X_2 (WOB) + X_3(BSIZE) + X_4(BINDEP) + X_5 (LNTA) + X_6 (LEV) + X_7 (ATR) + \varepsilon$
- $ROA = X_1 (AGE) + X_2 (WOB) + X_3(BSIZE) + X_4(BINDEP) + X_5 (LNTA) + X_6 (LEV) + X_7 (ATR) + \varepsilon$
- $ROE = X_1 (AGE) + X_2 (WOB) + X_3(BSIZE) + X_4(BINDEP) + X_5 (LNTA) + X_6 (LEV) + X_7 (ATR) + \varepsilon$
- $TOBINSQ = X_1 (AGE) + X_2 (WOB) + X_3(BSIZE) + X_4(BINDEP) + X_5 (LNTA) + X_6 (LEV) + X_7 (ATR) + \varepsilon$

IV. Analysis And Discussion

Impact of Board Gender Diversity on Environment, Social, Governance and ESG

The regression analysis explains how diverse corporate characteristics (AGE, ATR, BINDEP, BSIZE, LEV, LNTA, WOB,) impact the three components of ESG (Environmental, Social, Governance) and the combined ESG score. (Refer Table -1)

Table – 1 Impact of Board Gender Diversity on Environment, Social, Governance and ESG:

	E	S	G	ESG
AGE	0.5429	0.4444	0.3358	0.1563
ATR	0.0002*	0.0005*	0.0522	0.0016*
BINDEP	0.0000*	0.0009*	0.0000*	0.0000*
BSIZE	0.0008*	0.0001*	0.0001*	0.0000*
LEV	0.0121*	0.2279	0.1308	0.0036*
LNTA	0.0000*	0.0000*	0.0018*	0.0000*
WOB	0.0055*	0.0170*	0.0039*	0.0937
C	0.0000*	0.0049*	0.1124	0.0000*
R-squared	0.3632	0.2853	0.3732	0.3923
F-statistic	9.3416	6.5370	9.7535	10.5742
Durbin-Watson stat	1.9504	2.0687	2.0128	1.7814

***Significant @ 5% level**

Age of the firm is not statistically significant for all ESG components including overall ESG Score. The Asset Turnover Ratio (ATR) depicts a statistically significant effect on E ($p = 0.0002$), S ($p = 0.0005$), and the overall ESG score ($p = 0.0016$), except on G ($p = 0.0522$). This indicates that higher asset turnover is significantly associated with better environmental and social performance and overall ESG ratings. The Independence of the Board has a high significant across all ESG parameters (E: $p = 0.0000$, S: $p = 0.0009$, G: $p = 0.0000$) and on the overall ESG score ($p = 0.0000$). It shows that board independence positively affects the environmental, social, and governance performance, as well as the overall ESG rating. Size of the board have a postive significant relationship with all ESG metricies (E: $p = 0.0008$, S: $p = 0.0001$, G: $p = 0.0001$) and the overall ESG score ($p = 0.0000$). It could be inferred that Larger the size of the board better the performance of ESG. Leverage of a firm is statistically significant for E ($p = 0.0121$) and the overall ESG score ($p = 0.0036$), and insignificant for S ($p = 0.2279$) and G ($p = 0.1308$). This shows that higher leverage is linked with better environmental performance and overall ESG scores. Size of the firm, measured in terms of total assets, highly significant for all ESG parameters (E: $p = 0.0000$, S: $p = 0.0000$, G: $p = 0.0018$) and the overall ESG score ($p = 0.0000$). This suggests that larger

companies, in terms of total assets, tend to have better ESG performance across all dimensions. Women on Board is statistically significant for E (p = 0.0055), S (p = 0.0170), and G (p = 0.0039), except for the overall ESG score (p = 0.0937). The representation of women on boards positively impacts the individual ESG components.

With respect to the model fit statistics ,it is indicated from the results of R^2 that the current models elucidate a moderate proportion of the variance in ESG scores (E (0.3632), S (0.2853), G (0.3732), and overall ESG (0.3923)) . It also observed that the overall ESG model has the highest descriptive power. It could be inferred from the F-test that the models are statistically significant and the independent variables jointly explain the variance in the dependent variables (E: 9.3416, S: 6.5370, G: 9.7535, ESG: 10.5742).It is revealed from the Durbin-Watson test that there is no autocorrelation existed in the residuals of the model.

Impact of Board Gender Diversity and ESG on the Financial Performance

Table 2- Impact of Board Gender Diversity and ESG on the Financial Performance

	ROA	ROE	TOBINSQ
ESG	0.0136*	0.0774	0.0388*
AGE	0.7065	0.0012*	0.3831
ATR	0.0181*	0.0003*	0.1678
BINDEP	0.8097	0.3201	0.9979
BSIZE	0.4016	0.5265	0.0188*
LEV	0.0672	0.0946	0.0864
LNTA	0.1699	0.9902	0.0816
WOB	0.7368	0.1669	0.3668
C	0.0318*	0.2567	0.0038*
R-squared	0.4241	0.4473	0.4155
F-statistic	10.6409	11.6906	10.2717
Durbin-Watson stat	1.9599	2.0556	1.8800

***Significant @ 5% level**

It could be identified from the Table-2 that there existed a significant relationship between ESG , ROA (p = 0.0136) and Tobin's Q (p = 0.0388), except ROE (p = 0.0774). One could infer that better the performance of ESG, higher the ROA and Tobin's Q. Age of a firm is significant with ROE (p = 0.0012) except for ROA (p = 0.7065) and Tobin's Q (p = 0.3831). Asset Turnover Ratio (ATR) is significant for ROA (p = 0.0181) and ROE (p = 0.0003), except for Tobin's Q (p = 0.1678). Independence of the board is not statistically significant for all the dependent variables (ROA: p = 0.8097, ROE: p = 0.3201, Tobin's Q: p = 0.9979), suggesting that board independence does not influence financial performance of a firm. Size of the board is significant for Tobin's Q (p = 0.0188) but insignificant for ROA (p = 0.4016) and ROE (p = 0.5265). This infers that if the size of the board is large then it positively influences market valuation (Tobin's Q) . Leverage, Size of the firm and Women on Board are insignificant in explaining the impact on all the dependent variables i.e., ROE, ROA, and Tobin's Q. It is observed from the R^2values that the model describes a moderate proportion of the variance in the selected financial performance variables (ROA (0.4241), ROE (0.4473), and Tobin's Q (0.4155)) . The model of ROE has the highest descriptive influence among the three. The results of F-test revealed that all models are significant in explaining the variance in the dependent variables (ROA: 10.6409, ROE: 11.6906, Tobin's Q: 10.2717) . It is revealed from the Durbin-Watson test that there is no autocorrelation existed in the residuals of the model.

V. Conclusion & Scope For Further Research

In conclusion, board gender diversity and strong ESG practices are not just ethical imperatives but also strategic advantages that can lead to better financial outcomes for Indian companies. Integrating these aspects into the core business strategy is crucial for sustainable growth and competitive edge in the global market. Incorporating women into company boards is increasingly recognized as a vital component for enhancing corporate governance and overall performance. Research suggests that gender-diverse boards can bring diverse perspectives, improve decision-making, and enhance risk management. The study used five-year data of 28 companies in India from the core sectors. Board Size, Board Independence and Women on Board has significant impact on ESG whereas Women on Board does not impact the financial outcome along with ESG. Incase of the financial outcome as ROA and TOBINSQ, there is significant impact of ESG on the financial outcome. So, the Companies should include more female directors on their boards given that strong corporate governance is regarded by SEBI and other regulatory authorities than the financial outcome of the companies. Variations in regulatory environments, industry sectors, and firm characteristics play crucial roles in determining the extent and nature of this impact. Future research should continue to explore these contextual factors to provide more nuanced insights into the relationship between board gender diversity and financial outcomes. Companies with more women in leadership positions are generally more proactive in adopting and disclosing sustainable and socially responsible practices.

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