

The Impact of Gender Diversity in Board on Corporate Performance: Empirical Evidence from Listed Companies in Sri Lanka

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Abstract

Gender balance in corporate board is an emerging phenomenon in Corporate Governance Initiatives. According to that, the objective this study to explore the nexus between women participation and firm performance of public listed companies in Sri Lanka. This research based on positivistic paradigm with the quantitative methodology. Secondary data were collected and analyzed using panel data. Analyze techniques to obtain quantitative measures of descriptive statistics and regression analyses. The results depict that women participation significantly impact the firm performance of public listed companies in Sri Lanka. The results show that firms with women directors perform better than those without women on their boards. This finding concludes that adequate women proportion is a pivot element in Sri Lankan listed companies' corporate board composition. This evidence provides insight for regulators, practitioners, management of corporate boards and existing and potential investors of vital role of women in corporate board. This study extends the extant research on women participation in corporate board and firm performance by adopting prominent research design and modernized data. This study offers evidence on how selected women participation variables influence firm performance.

Keywords: Gender diversity, women participation, corporate governance, firm performance

1. Introduction

The phenomenon of women on board is a new emerging research area and it has been attracted many scholars towards this subject. Several academics have been undertaking studies to explore the influence of gender balance on the companies' performance. This area of research has gained widespread interest after the institution of legal norms regarding the appointment of women directors on board in firms across the globe, beginning with the European corporate sector (Singh, Shubham & Sardana, 2019). The impact of this increasing inclusion of women in corporate structure has attracted interest from researchers, and the literature on the presence of women in corporate governance positions have increased vastly in recent years (Gomez & Blanco, 2018). Hence, many recent proposals for governance reform explicitly stress the importance of gender diversity in the boardroom. The rationale being that the presence of women on boards should lead to positive outcomes in terms of governance which impacts on operating performance and shareholder value (Singh et al., 2019). Recent academic studies have sought to establish the linkages between board level 'diversity', including female representation, and aspects of corporate performance

and governance (Adams & Ferreira, 2009). Corporate boards perform better when they include the best people who come from a range of perspectives and backgrounds. The boardroom is where strategic decisions are made, governance applied and risk overseen. It is therefore imperative that boards are made up of competent high caliber individuals who together offer a mix of skills, experiences and backgrounds (Davis, 2011).

This paper aims to study the impact of diversity in corporate board specially gender nexus to the firm performance of listed companies in Sri Lanka. Fascinatingly, the Department of Census and Statistics, Sri Lanka found that in Sri Lanka the percentage of women in the workforce had increased from 31.2% in 2010 to 34.7% in 2014 but in 2020 it has reported to decrease to 32.5% (DCS, 2020). On the other hand, University and Higher Education entrance based on the gender diversity shows converse numbers Female is 64% and Male is 36% (UGC, 2019). Moreover, as per the Department of Census and Statistics (2020) it shows that economically active and inactive population percentage. Accordingly, economically inactive male population is 26.1 % and economically inactive female population is 73.9%. Meantime, unemployment rate male is 4.3% and female is 8.6%. These statistics show dilemma situation of women participation in economic development of Sri Lanka.

In Sri Lanka, Sri Lanka Institute of Directors (SLID) and Colombo Stock Exchange (CSE) Jointly initiated the gender Equality in corporate board (SLID, 2019) in order to motivate the women participation to the corporate board. Despite the fact that various empirical studies on this subject have been conducted in a variety of countries, there has been a dearth of study in the Sri Lankan context. In the other side, generalizing those countries' facts and observations to Sri Lanka is unjustifiable because each nation has its own cultural and social viewpoints on the topic of female labor force participation. As a result, this research offered analytical insight on the topic and added to the existing literature by looking at the effect of having a female board member on a company's success in the Sri Lankan context. The aim of the analysis is to see whether there is a connection between the role of Sri Lankan women on boards of directors and the performance of the listed companies' in Sri Lanka.

This paper has been divided into five sections. Section 1 and Section 2 pertains to the introduction and literature review respectively. Section 3 in cover the research design. Data analysis is covered under Section 4. Section 5 highlights the Conclusion and recommendation.

2. Literature review

The term "diversity" refers to a set of various characteristics gathered in one place. Diversity on a board of directors can take several forms, including race, gender, age, and other factors (Singh et al., 2019). Das and Dev (2016) according to their research, the number of women on the board of directors is a good indicator of a company's ethical behavior and board diversity. Women's liberation, according to studies are expected to benefit businesses due to the synergies that gender diversity brings (Paul, 2017). According to Sanan (2016), the number of businesses having no elected female directors has decreased over time, which is positive news for good corporate governance, however, whether it can boost organizational performance is still a question that needs to be asked. Theories describe the positions of board members are identified, as well as the impact of gender diversity on firm results. The agency theory, stewardship theory and resource dependence theory are mostly used to explain the relationship between gender diversity in the boardroom and a firm's performance. Theories suggested that since participants with diverse perspectives, ages, lifestyles, and genders can influence firms' managers and impact firm performance, board diversity may affect firm performance and improve board independence (Al-Shammari & Al-Saidi 2014).

However, empirical research finding shows contradictory and mixed results. Luckerath and Rovers (2013) reported that having more women on the board of directors would improve the company's success. There was also a positive and clear association between firm worth and the percentage of women on the board of directors (Carter et al., 2003). Adams and Ferreira (2008) have stated that gender diversity in top management is likely to bring a forward push in the financial health of the firms with weaker shareholder rights. It was discovered that companies with a greater proportion of female directors on their boards had greater Tobin's Q and return on investment than companies with zero (Terjesen et al., 2016). In Sri Lanka, Wellalage & Locke, (2013) did a study and reported that board diversity in terms of race and age improves a company's financial results. Meantime, Rupawaththa (2017) found positive relationship between female presence in the director board and financial performances.

Conversely, some research revealed cases where seeing more women on the board of directors has harmed the company's performances. Companies that named female directors performed poorly than companies that appointed male directors during times of falling capital prices (Ryan and Haslam, 2005). Mc Guinness (2017) shows the evidence from Honk Kong that considers the concept of gender inequality putting a burden on stakeholders and thereby adversely impacting results. Similarly, Ahern and Dittmar (2012), show there is a drop in Tobin's Q over time in businesses with a quota reserved for women on boards.

Al-Shammari & Al-Saidi, (2014) investigated from 2009 to 2011, researchers looked into the relationship between Kuwaiti women serving on boards of directors and the success of Kuwaiti companies listed on the Kuwait Stock Exchange. The participation of Kuwaiti women, according to the report, is not an effective mechanism for improving firm efficiency. Further, a study based on India shows no any positive association between firm performance rather destring the value of the firm(Singh et al., 2019).

In Sri Lankan context, Wellalage and Locke (2013), in a study found that board heterogeneity has a negative impact due to increased chances of conflicts. Despite the fact that many studies have been conducted for a variety of countries, there are only a few scientific evidences that examine the relationship based on Asian data. Simultaneously, there is a scarcity of related studies focused on Sri Lanka, leaving the situation in the country uncertain. Based on the comprehensive literature review the below hypothesis were developed.

H1: The proportion women on the board is positively associated to firm performance.

H2: Size of Board has positive association with firm performance.

H3: Firm size is positively associated with firm performance.

H4: Leverage is positively associated with firm performance

3. Methodology

This study investigates the impact of gender diversity in director board on firm's performances in Sri Lanka. The study uses the quantitative approach because the research aims to examine the relationship between variables. Since, this is the correlational research which involves the systematic investigation of relationship between two or more variables, the panel multiple regressions analysis technique and method of Ordinary Least Square (OLS) will be used to estimate the parameters of the model.

3.1 Sample

The population of the study has 293 companies listed in the Colombo Stock Exchange (CSE) representing twenty industry sectors. In selecting sample, the banking, finance and insurance sector companies excluded due to special mechanism adherence is mandatory for that industry but for other industry Corporate Governance is option. Due to data unavailability some companies were removed and finally 156 companies were selected. The sample period of the study was eight years from 2011 to 2018.

3.2 Independent Variables

Board Size

The study's first explanatory attribute was board size, which was calculated using the natural logarithm total number of board members. The aim of using the natural logarithm value of the board size is to reduce board size disparity between companies. Generally, suggest that the board size has relationship with firm performance. (Campbell & Mínguez-Vera 2008; Prihatiningtias, 2012).

Percentage of women on board (P-woman)

P-woman represents percentage of women on board with respect to the total number of directors. This measure serves as a proxy for assessing gender balance on the board of directors. Many researchers have previously established the advantages of having a representative board, such as a favorable association between women on boards and corporate innovation, improved decision-making, and multiple viewpoints, among other things (Torchia et al., 2018). Diversity on board provides various opportunities in terms of strategic alliances that firms can build, based on its relationships with other groups (Halder et al., 2015). Hence, P-woman has been used based on several studies by (Campbell and Mínguez-Vera 2008; Giraldez & Berenguer, 2018; Welbourne, 1999; Halder et al., 2018).

Blau Index

The Blau Index, that has been used as a proxy for women directors on boards, it is a Gibbs- Martin index of sociology, psychology and management studies which is calculated using the below formula:

$$1 - \sum_{t=0}^n p^2 i$$

where p denotes the proportion of board directors in each male and female category and n symbolises the total number of directors on board. The variable has been used to enhance the robustness of the study with respect to women on board (Campbell & Mínguez-Vera, 2008).

Shannon Index

The Shannon Index, a reputed diversity index found in the literature, aims to state in quantitative terms, the uncertainty in predicting the species identity of any person chosen randomly from a given set of data. It is calculated using the formula:

$$1 - \sum_{t=0}^n p_i \ln(p_i)$$

Here, p denotes the proportion of board directors in each male and female category and n symbolises the total number of directors on board, similar to the Blau index. This variable has also been chosen to enhance the robustness of the study in terms of gender diversity on board (Campbell & Mínguez-Vera, 2008)

3.3 Dependent Variable

Tobin's Q

Tobin's Q is widely regarded as one of the best market-based indicators for a variety of reasons. Very important factor is TQ unlike other accounting measures, it considers the risk factor and It is not subject to distortions. Next, it is a strong metric for a company's competitive edge because it represents the market's expectations for potential profits (Montgomery & Wernerfelt, 1988). Tobin's Q is calculated using the Chung and Pruitt (1994) formula, which is, market valuation of shares plus debt divided by the total assets. A unity value for the Tobin's Q ratio acts as a significant benchmark for the measurement of firm performance. All the firms having a value greater than 1 are construed to give better returns to the investors as compared to the firms having value less than 1.

3.4 Control Variables

Leverage

The ratio of gross long-term debt to total assets is used to calculate a company's leverage, which indicates how many of the company's total assets are backed by debt. Since, borrowers can intervene with the operation of the company depending on their own needs, the right of the management to make decisions is harmed by leverage (Hutchinson & Gul, 2004).

Firm Size

The natural log of the total assets was used to calculate the firm's size. Women's success on boards varies depending on the scale of the company, according to the literature, women have a lot of success in smaller companies. It is therefore important to understand company scale because the size of the firm has a significant impact on financial output, since, big companies have more ability to control performance. Hence, many researchers included firm size as a control variable (Haldar et al., 2015; Singh et al., 2017).

Table 01: Measurement and description of variables.

Tobin Q	Market valuation of shares plus debt divided by the total assets
P-Women	Percentage of women directors on board with respect to the total directors.
Blau Index	A measure of gender diversity.
Shanon Index	A measure of gender diversity.
Board Size	Number of Board members
Leverage	Computed as the ratio of total long-term debt to the total assets.
Firm Size	Measured in terms of the natural log of the total assets.

3.5 Model

Three different ordinary least squares (OLS) regression analyses were run using the dependent variable as Tobin's Q and all the control variables, by changing the independent variables in each model as P-woman, Blau Index and Shannon index. Since we have used three proxy variables, i.e. P-woman, Blau Index and Shannon Index, three OLS regression models were developed and the results were obtained for each of them. These are the econometric model have been developed to test the hypothesis.

Model 01

$$TQ_{i,t} = \beta_1 + \beta_2 (\text{P-Women})_{i,t} + \beta_3 (\text{board size})_{i,t} + \beta_4 (\text{leverage})_{i,t} + \beta_5 (\text{firm size})_{i,t} + \varepsilon_{i,t}$$

In Model 2, we replace P-woman with Blau Index which is another proxy variable for gender diversity on board.

Model 02

$$TQ_{i,t} = \beta_1 + \beta_2 (\text{Blau Index})_{i,t} + \beta_3 (\text{board size})_{i,t} + \beta_4 (\text{leverage})_{i,t} + \beta_5 (\text{firm size})_{i,t} + \varepsilon_{i,t}$$

Model 3, Blau replace with another proxy variable i.e. Shanon Index.

Model 03

$$TQ_{i,t} = \beta_1 + \beta_2 (\text{Shanon Index})_{i,t} + \beta_3 (\text{board size})_{i,t} + \beta_4 (\text{leverage})_{i,t} + \beta_5 (\text{firm size})_{i,t} + \varepsilon_{i,t}$$

Where,

TQ_{it} = Tobins' Q, our proxy for financial performance of firm i in period t .

$P\text{-Women}_{it}$ = Percentage of women on board of firm i in period t .

$Blau_{it}$ = Blau Index, which is a proxy for gender diversity, of firm i in period t .

$Shannon_{it}$ = Shannon Index, which is a proxy for gender diversity, of firm i in period t .

$F\text{-Size}$ = Firm Size of firm i in period t .

$Lever$ = Leverage of firm i in period t .

$\varepsilon_{i,t}$ = random disturbance term

4. Results

4.1 Descriptive statistics

Table 4.1 shows descriptive statistics results of the study. In the descriptive statistics mean, median, maximum, minimum and standard deviation show for the analysis. From the results, Tobin Q shows the maximum of 3.31 and the minimum of 0.34 meanwhile, standard deviation shows 2.21. Whereas, women proportion shows 13 percentage with the maximum of 81 percentage minimum of 0 percentage. The fraction of women on boards shows that there is variation in the participation of women on boards among the companies. The average representation of women is 0.08 which shows very low proportion and variation between minimum 0.000 and maximum 66% which shows even many corporate companies

do not have the gender balance in Sri Lanka at the same time standard deviation depicted 0.12. Blau Index shows the mean of 0.21 and Shannon Index shows mean of 0.16. But, Blau Index standard deviation reported .020 meantime Shannon Index standard deviation depicted 0.4.

Table 4.2: Descriptive statistics

Variables	Mean	Median	Maximum	Minimum	Standard Deviation
Dependent Variables					
TQ	1.42	1.23	3.31	0.34	2.21
Independent Variables					
P-Women	0.08	0.00	0.66	0.00	0.12
Blau Index	0.21	0.32	0.52	0.10	0.20
Shannon Index	0.16	0.21	0.48	0.02	0.40
Control Variables					
Firm size (Ln)	21.98	22.0	26.34	12.07	1.66
Leverage (Ratio)	0.19	0.14	1.62	0.00	0.18

4.2 Results of Regression

The Table 4.3 depicts the results of estimation model 01, model 02 and model 03. Results revealed that the overall models are significant at 95% confidence interval level. R-squared value of all models around 62 percent shows the amount of variation in the dependent variable is explained by the independent variables in the models. Model 01 represent the relationship between TQ and the P-Women. Model 02 shows the relationship between TQ and Blau Index and model 03 shows the relationship between TQ and Shannon Index. Diversity is measured through 03 models for the robustness of results. Model 01 shows significant positive association with P-women and TQ since the p-value higher than the 5 percent significant level. It reflects that when proportion of women increase firm performance also increase meantime board size also shows positive significant relation with TQ. Furthermore, in model 02 reveals that shows significant positive relation with Blau Index and TQ since the p-value higher than the 5 percent significant level. It emphasizes that Blau Index also shows the positive association with firm performance. However, board size shows weak positive association between firm performance. Moreover, model 03 reported the same results like other two model. It shows marginally significant positive relation with Shannon Index and TQ since the p-value higher than the 5 percent significant level. So that the gender diversity on the board is positively associated with firm performance. As a result, there is an evidence to accept the hypothesis(H1).

Table 4.3: Results of Regression Analysis

Explanatory Variables	TQ (01)	TQ (02)	TQ (03)
C	4.54(5.83)	24.95(8.08)	13.71(8.29)
Board size	0.00(0.15) ***	0.12(1.71) *	0.10(2.71) ***
P-Women	0.18(-0.89) ***		
Blau Index		1.74(1.03) ***	
Shanon Index			0.94(1.84) **
Firm size	0.13(4.26) ***	0.92(7.17) ***	0.45(6.53) ***
Leverage	0.30(2.00) **	0.66(0.39)	0.22(0.69)
R-squared	0.63	0.62	0.61

Adjusted R-squared	0.59	0.56	0.56
F-statistic	5.66	11.00	10.77
Prob (F-statistic)	0.00	0.00	0.00
No of firms	156	156	156
No of observation	1248	1248	1248

Note: This table displays the results from the estimation of the econometric model using generalized least square fixed effects method. The model fit is also presented; along with the coefficient the t statistic is reported in parentheses; the superscripts of *, ** and **** statistical significance to 10%, 5% and 1% respectively.

As a summary, diversity of gender on the board is positively associated with firm performance. There is an evidence to accept the hypothesis(H1) P-women shows positive association (High- Significant), Blau Index shows positive association (High -Significant) and Shanon Index shows positive association (Less-Significant). At the same time, Board size is positively related with firm performance in all three model. So, it shows the evidence to accept the hypothesis (H2). Further, Firm size as used a control variable in all three model which shows significant positive association between company performance measured by TQ. Therefore, Firm size is positively related with firm performance. So, it shows the evidence to accept the hypothesis(H3). Conversely, other control variable leverage shows significant relationship in model 01 but in model 02 and model 03 show insignificant association between TQ. So, Leverage is negatively related with firm performance. So, it shows the evidence to reject the hypothesis (H4).

5. Conclusion

The key goal of this research is to look at the relationship between women's representation on board of directors and the firm performance of listed companies in Sri Lanka. In the background of developing economies, a multitude of research of this kind have been conducted. As a result, this study contributes to the literature by discussing nature in a developing economy with a focus on Sri Lanka. Based on the results of panel data review, the findings regarding the correlation between gender diversity in the boardroom and company performance represent a positive sign for women empowerment. In theoretical view, the agency theory, stewardship theory, and resource dependency theory all affirm the positive relationship between gender balance on the board of directors and firm performance. The finding witnesses the theoretical expectation in Sri Lankan context. Further, based on the results it evidences that Women on board and active participation significantly matter in corporate board and Women representation is significant impact on firm performance. This finding reveals that consistence with theoretical expectation and Corporate Governance code best practices. Because, theory and code of best practices recommend gender balance in corporate board for the control, monitor and participate for the value enhancement.

The study's findings show that the inclusion of women on boards impact on the success of the companies. The required clause seems to have been taken seriously by the companies, as shown by their affirmation of the rule of the corporate governance by the management. This could be taken as a managerial implication of this study. Meantime, this analysis has a few shortcomings that include opportunities for potential studies in future. Only eight financial years of data were used in our analysis. The findings would be much more reliable if the data was collected over a longer period of time. The paper just looked TQ only as a firm performance, however performance will be assessed using ROA, ROE or more. Other sectors, such as insurance and financial services, may be investigated in the future.

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