Article

Does Board Gender Diversity Bring Better Financial and Governance Performances? An Empirical Investigation of Cases in Taiwan

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Abstract: Gender diversity, one of the core streams of top management team (TMT) diversity research, poses a theoretical argument valuable for firms—whether gender diversity among board members can lead to improved performance. Increased research attention on the relationship between gender diversity and the financial and governance performance of firms has produced inconclusive results. This study shapes the gender diversity of corporate boards by defining six compounding elements, which is the major contributor to the literature of gender diversity. This study aims to provide a more complete and precise assessment of the impact of gender diversity on a firm's performance and corporate governance performance from the Taiwanese experience. The evidence in Taiwan suggests that increased board gender diversity does not have a positive effect on financial and governance performance. Only the ratio of female independent directors is found to have a significantly positive association with a firm's performance, supporting prior findings that directors with greater independence are better able to perform their monitoring function and thus contribute to performance. The results also demonstrate that female directors having concurrent posts is a critical factor in enhancing corporate governance performance. Female directors with prior experience as serving directors or supervisors in other companies can offer diverse opinions and network ties, thus contributing to improved cohesion and corporate governance. The findings of this research can contribute to both literature and practice in board gender diversity issues and can serve as an empirical basis for enterprises in optimizing their board composition.

Keywords: gender diversity; board of director; firm performance; corporate governance

1. Introduction

In recent years, increased attention has focused on the issue of gender balance in private enterprise, particularly in terms of the representation of women on corporate boards of directors [1]. The political and economic implications of issues related to gender diversity have become increasingly prominent in many countries, with many European countries taking the lead in terms of promoting gender equality on corporate boards. For example, in 2003, Norway was the first country to pass relevant legislation, requiring all listed companies to have women make up 40% of their directors, and the EU passed similar legislation with a 40% goal by 2020. Other individual EU members, including France and Italy, have also passed similar laws at the national level [2].

The increased representation of women on corporate boards is a distinct trend in the western business community. Different values, personalities and skill sets aligning with the different genders may lead to the adoption of different methods for decision making and leadership styles, which may have significant implications for board operations and function [3,4]. However, while this

trend is a milestone for gender equality, does it really have any impact on a firm's performance and corporate governance?

An increasing number of studies have focused on top management team (TMT) research during the last several decades since [5] introduced the upper echelons (UE) perspective. TMT is defined as the relatively small group of the most influential executives at the apex of an organization. Gender diversity, one of the cores of TMT diversity research, presents a valuable theoretical argument about the relationship between board gender diversity and corporate performance [6–8].

Increased research attention on the relationship between gender diversity and a firm's performance has produced inconclusive results. Agency theory suggests that corporate boards serve a key role in resolving agency issues and ensuring a good balance between shareholders and management. To this end, diversity in the boardroom brings a broader range of knowledge, skills, experience, ideas and behaviors, which can reduce the extent of agency conflict and have a positive impact on board performance [9–11]. Authors of Reference [12] found that the ratio of white female directors and ethnic minority directors positively correlated to the return on assets (ROA) and shareholder returns. However, Reference [13] found an association of diversity with increased task conflict. Group performance may be decreased when groups are heterogeneous rather than homogeneous due to such diversity resulting in increased difference of opinion and difficulty in achieving consensus or due to reduced organizational commitment and performance. The inclusion of more female directors may exacerbate difficulties in achieving consensus and reducing team decision-making effectiveness. Reference [13] suggested that increased diversity among team members has a negative impact on decision making outcomes, organizational commitment and a firm's performance. Board diversity may increase communication problems and thereby degrade the board's decision-making process and increase organizational and operational risk [14].

Similarly, the contribution that women make in the boardroom and their influence on corporate governance performance remains undecided. Reference [15] found that companies with more female directors tend to have better corporate governance and tend to show greater consideration to a broader range of stakeholders. An empirical study by Reference [16] also found that gender diversity in the boardroom had a positive impact on the firm's social responsibility performance. Authors of References [17,18] pointed out that companies with a higher ratio of female board members had a higher chance of being featured in Fortune's "Best Work Environment" and "Most Valuable Companies" lists. However, Reference [13] explained that some studies have found a negative relationship between female directors and corporate governance performance, possibly due to such diversity resulting in increased difference of opinion and difficulty achieving consensus or due to reduced organizational commitment and performance.

Moreover, most previous studies on female board participation have been descriptive, focusing on the number of women serving on corporate boards over time [19,20]. Some analysis-oriented research has focused on why women are a minority on corporate boards [21] and predictors of women's boardroom representation [22]. Other qualitative studies have focused on the experiences of female directors and the perceptions of the role of board members [23]. While a few quantitative studies have largely focused on the number ratio of female director participation, they failed to account for other compounding factors such as a female director's education level, independence, network capacity and seniority. This study shapes gender diversity of corporate boards by defining six compounding elements of female directors including number, education, network capacity, seniority, independence and concurrent posts, which is the major contributor to the literature of gender diversity. This thorough and detailed examination of gender-related elements allows for further deeper analysis and exploration of potential implications. The second contribution is the use of the Corporate Governance Evaluation System, which is a verifiable, quantitative and sustainable accounting indicator of management risk to measure corporate governance performance. This can avoid disadvantages incurred by the lack of rigorous, cross-company, cross-period indicators of corporate governance in previous studies. Finally,

it is the first study in examining the board gender diversity impact empirically on both financial and governance performances within the context of Taiwan.

The results of this study not only extend the management literature on board gender diversity issues, but also help provide a better understanding of the characteristics of female directors and their impact on firms' governance and performance. In practice, such insights have considerable practical value for further improvement of human resource management practices, corporate board systems and governance structures.

2. Literature Review and Hypotheses Development

Women have traditionally faced a degree of "gender occupational segregation" and "vertical isolation" in the workplace, resulting in what is widely referred to as the "glass ceiling". However, increased economic development and education around the world has narrowed the gap in educational standards between men and women, and women are securing increased political and economic influence in countries around the world [24]. The board of directors is a company's key decision-making body, responsible for approving important strategic and financial decisions including mergers and acquisitions, capital structure changes, general manager appointments and compensation decisions. Corporate directors are primarily responsible for consulting, monitoring and marshalling external resources [25].

Past studies have used agency theory to investigate the association between board diversity and performance. Based on this theory and previous empirical studies, this study proposes hypotheses relating to the impact of board gender diversity on the performance and governance of firms.

2.1. Female Directors and Firms' Financial Performance

Theories suggest that the presence of female board members affects a firm's operating results, primarily because female directors serve a strong supervisory function and are more sensitive to risk. Companies with a higher ratio of female directors can effectively control board decisions and a firm's operations, thus improving the efficiency of corporate supervision and business performance.

Authors of Reference [26] surveyed the Standard & Poor's 500 (S&P 500) for the period 1998–2002 in terms of the return on assets (ROA) and Tobin's Q (i.e., the ratio of company market to its replacement cost of assets) to assess the impact of board gender makeup on company performance. Their results showed a positive correlation between the number of female directors and the ROA, but not with Tobin's Q. Reference [10] affirmed that the ratio of female board directors positively correlated with a firm's financial performance. Reference [27] found that female directors had a strong positive impact on the ROA and return on equity (ROE), findings which agree with the results of many other studies which find a positive correlation between the ratio of women directors and a firm's performance.

Authors of Reference [28] surveyed the Fortune 500 companies to determine that the ratio of female key executives was positively related to shareholder return and cumulative stock return. References [3,29] individually surveyed firms in Spain and Norway and found that companies with higher ratios of female directors exercised better control over board decisions and a firm's operations, thus improving corporate supervision and performance. A 2012 report by the Credit Suisse Research Institute examined a broad sample of companies, the Morgan Stanley Capital International Index (MSCI) All Country World Index (ACWI), over a six-year period (December 2005–December 2011) and found that among large capital (over \$10 billion) companies, those with women on the board outperformed those with all-male boards by 26% on average over that time period, and the comparable figure for small to mid-capital ones was 17%. Furthermore, firms dominated by men recovered more slowly after the 2008 financial crisis than those with a more balanced male to female ratio [30].

Authors of Reference [21] surveyed new directors of the 100 largest companies in the FTSE Index between 2001 and 2004, finding that new female directors were more likely than their male counterparts to have MBA degrees and international experience. Moreover, female directors were more likely to have significant experience as board members of smaller firms, but less experience in Chief Executive

Officer (CEO) or Chief Operating Officer (COO) positions. Reference [30] found that female directors were less likely to have attendance problems and their presence actually improved the attendance of their male counterparts. In addition, their results also showed that female directors were more likely to be assigned to supervisory-related committees.

Few studies have reached opposite conclusions. Based on data from 1939 companies over the years 1996–2003 from the Investor Responsibility Research Center, Reference [31] found some positive developments resulting from gender diversity on corporate boards including improvements to board input, corporate outcomes, committee tasks and equity incentives. However, the study found that the average effect of gender diversity on a firm's performance was negative and was driven by companies with fewer takeover defenses. Their explanation is that greater gender diversity could lead to over-monitoring in those firms. That study also suggested that mandating gender quotas for directors could reduce the firm value for well-governed firms.

Other studies have found that the presence of female directors does not have a significant impact on company performance, possibly because some companies include token female directors for their symbolic value to project an image of diversity. For example, Reference [32] studied companies listed in Denmark from 1998 to 2001 and found that, while Denmark has the world's highest rate of female labor participation and a very high degree of gender equality, no association was found between the presence of female directors and the firm's value in terms of Tobin's Q. Reference [33] studied the Fortune 500 and found that investors did not show any particular reaction to the announcement of the appointment of female directors. Reference [19] suggested that without legal quota requirements, the appointment of female directors had important symbolic value, both within and outside the company. Reference [23] found that some female directors reached their status or positions out of tokenism.

The current literature has established a positive relationship between female directorship and a firm's performance [10,26,28]. This study thus hypothesizes:

Hypothesis 1. *Increased board gender diversity has a positive impact on a firm's financial performance.*

2.2. Female Directors and Corporate Governance

Corporate governance is the framework of mechanisms by which companies can be directed and controlled [34]. Agency theory suggests that more diversified corporate boards are more independent and thus better able to perform their monitoring function [11,31]. Over time, the role of gender in the boardroom has become a significant aspect of corporate governance, as women differ from men in terms of ethical and social behavior [35]. According to Reference [36], female directors are less economically oriented and more philanthropically driven than male directors. Some studies have shown that increased female representation on the board can promote improved corporate governance. Authors of References [3,29] believe that female directors are good supervisors, allowing them to compensate for shortcomings in external governance. Institutional female directors on boards play an important role in managerial monitoring and remuneration policies, thus affecting the corporate governance system [37]. The presence of female directors on boards also reduces the level of fraudulent financial reporting and enhances sustainability accounting practices [38,39].

Authors of [31] found that female directors had better attendance records than their male counterparts and typically served as committee members (audit, nominations, corporate governance, etc.). Business expert directors have career experience as directors in other large firms in similar markets and offer diverse opinions and network ties [40]. Reference [41] found that better corporate governance could be achieved through increased diversity in director experience and opinion.

However, the greater inclusion of female directors may exacerbate difficulties in achieving consensus, reducing team decision-making effectiveness and thus reducing performance [13]. The majority of previous studies have established a positive relationship between female directors and governance performance [29,37,41]. This study therefore hypothesizes:

Hypothesis 2. *Increased board gender diversity has a positive impact on a firm's governance performance.*

3. Materials and Methods

The purpose of this study is to investigate the effects of board gender diversity on a firm's governance and performance. The main explanatory variable is gender diversity, and the interpreted variable is performance. Measurement models are described below.

3.1. Main Explanatory Variable—Gender Diversity

This research expands on the assessment of the impact of board gender diversity including number, education, network capacity, seniority, independence and concurrent post, as shown in Figure 1. These six indicators are defined as follows: FMBNUM: the number of female directors; FMBEDU: the ratio of female directors with Master and Ph.D. degrees over the total numbers of female directors; FMBSNY: the number of years that female directors have served as directors; FMBNET: the number of female directors' related parties serving as board members, supervisors or high-level managers in the same company; FMBIND: the ratio of female independent directors over total numbers of directors; FMBCUR: the number of female directors' other concurrent posts as a serving director or supervisor in other companies. These six indicators were subjected to statistical analysis to determine how gender diversity affected governance performance.

Figure 1. Explanation of board gender diversity.

3.2. Interpreted Variable—Performance

Two performance metrics are used in the study. Tobin's Q ratio is defined as the market value of a company divided by its assets' replacement cost [42]. It takes into consideration not only past profitability but also the expectations about the firm's future. The ROA ratio is defined as the annual net income divided by the book value of the total assets at the end of the year. This study utilizes Tobin's Q ratio and the ROA ratio to proxy for a firm's performance.

In 2014, the Taiwan Stock Exchange Corporation (TWSE) launched the Corporate Governance Evaluation System (hereafter called Taiwan Corporate Governance Index, TCGI). The measurement of corporate governance is based on The OECD Principles of Corporate Governance. The TCGI includes five facets (shareholder rights and interests, composition of director and management, fair treatment of shareholders, financial reporting transparency and corporate social responsibility). The first two facets were combined and the evaluation adjusted to four facets in 2018 [43]. All quantitative data related to these facets are collected and ranked for each company listed on the Taiwan Stock Exchange Corporation and Taipei Exchange. The TCGI ranks these companies' corporate governance levels from A+ to D-. Thus the TCGI is adopted here as a verifiable, quantitative and sustainability accounting oriented indicator of corporate governance performance in this study.

3.3. Measurement Model

This paper uses regression analysis to test the relationship between board gender diversity and a firm's performance and governance. Firstly, since Tobin's Q and the ROA, the dependent variables of a firm's performance are continuous data, and two multiple regressions (stepwise selection) equations need to be estimated:

1. The relationship between board gender diversity and the firm's Tobin's Q:

$$\text{Tobin's Q} = \beta_0 + \beta_1 \text{FMBNUM} + \beta_2 \text{FMBEDU} + \beta_3 \text{FMBSNY} + \beta_4 \text{FMBNET} + \beta_5 \text{FMBIND} + \beta_6 \text{FMBCUR} + e \quad (1)$$

2. The relationship between board gender diversity and the firm's ROA:

$$\text{ROA} = \beta_0 + \beta_1 \text{FMBNUM} + \beta_2 \text{FMBEDU} + \beta_3 \text{FMBSNY} + \beta_4 \text{FMBNET} + \beta_5 \text{FMBIND} + \beta_6 \text{FMBCUR} + e \quad (2)$$

Secondly, since the TCGI rank, the dependent variable of a firm's governance is ordinal data and needs to be coded in calculations. The rules of the TCGI ranking and the codes used in ordinal regression models are summarized in Table 1. Codes are from 1 to 7, with 1 meaning D- and 7 meaning A+. Ordinal regression is used to predict an ordinal dependent variable given one or more independent variables [44]. This study utilizes the statistical product and service solutions (SPSS), produced by International Business Machines Corporation (IBM), to examine Hypothesis 1 and Hypothesis 2.

Table 1. Rules for TCGI ranking and codes used in ordinal regression model.

Companies' TCGI Relative Rank	TCGI Rank	Codes Used in Model
Top 5%	A+	7
6–20%	A	6
21–35%	B	5
36–50%	C	4
51–65%	C-	3
66–80%	D	2
81–100%	D-	1
Unsuitable or data unavailable	NA	-

3.4. Data and Sample

This subsection describes the sample selection process and the data analysis process. All data were drawn from the Taiwan Economic Journal (TEJ), a database containing comprehensive financial information on all companies listed on the Taiwan Stock Exchange Corporation and Taipei Exchange, as the source of all firms' financial data and the information of board gender diversity. After eliminating missing data, the sample size consists of 1065 firms for Tobin's Q, 1063 firms for the ROA, and 964 firms for the TCGI in 2016.

4. Results

4.1. Descriptive Statistics and Correlation

Table 2 presents the descriptive statistics for variables used in the study. The mean of the number of female directors is 0.93. The mean of the ratio of female directors with Master and Ph.D. degrees over the total number of female directors is 0.05. The mean of the number of years that female directors

served as directors is 7.34. The mean of the number of female directors' related parties serving as board members, supervisors or high-level managers in the same company is 0.39. The mean of the ratio of female independent directors over the total number of directors is 0.03. The number of female directors' other concurrent posts as a serving director or supervisor in other companies is 2.88.

Table 2. Descriptive and Correlations Statistics for TCGI.

	Variable	Means	Standard Deviation	1	2	3	4	5	6
1	FMBNUM	0.9315	1.013	1					
2	FMBEDU	0.0506	0.08681	0.573 **	1				
3	FMBSNY	7.3429	8.90	0.490 **	0.193 **	1			
4	FMBNET	0.3942	0.58911	0.598 **	0.250 **	0.569 **	1		
5	FMBIND	0.0306	0.06781	0.490 **	0.510 **	0.037	0.017	1	
6	FMBCUR	2.8822	4.2084	0.402 **	0.382 **	0.389 **	0.345 **	0.176 **	1

** p < 0.01.

4.2. Effects of Board Gender Diversity on a Firm's Governance and Performance

The regression results are displayed in Table 3. In Tobin's Q model, only FMBIND had a significantly positive association with Tobin's Q. In the ROA model, all compounding factors except FMBIND had non-significant negative associations with the ROA. Only FMBIND had a significantly positive association with Tobin's Q and the ROA. Thus, Hypothesis 1 is not supported.

Table 3. Regression results.

Regression	Multiple Regression		Ordinal Regression
	Tobin's Q	ROA	TCGI
	Coefficient (p-Value)		Estimate (p-Value)
FMBNUM	0.39 (0.265)	−0.006 (0.863)	0.132 (0.168)
FMBEDU	0.007 (0.841)	−0.037 (0.304)	−0.904 (0.297)
FMBSNY	−0.43 (0.157)	−0.041 (0.177)	−0.018 * (0.027)
FMBNET	0.03 (0.330)	−0.025 (0.412)	−0.165 (0.236)
FMBIND	0.065 * (0.033)	0.072 * (0.019)	0.623 (0.57)
FMBCUR	0.017 (0.596)	−0.014 (0.65)	0.093 *** (0.000)
Intercept	1.113 *** (0.000)	7.993 *** (0.000)	-
Adjusted R ²	0.003	0.004	-
Pseudo R-Square	-	-	Cox & Snell 0.042 Nagelkerke 0.043 McFadden 0.011
F_Value	4.546 *	5.549 *	-
χ^2 (df)	-	-	41.246 (6 df) ***
Test of Parallel Lines	-	-	0.297
# of obs.	1065	1063	964

* p < 0.05, *** p < 0.001.

In the TCGI model, Table 3 shows the test of parallel lines for the general model with the p value = 0.297, which is greater than the 0.05 level of significance meaning this method is appropriate [45]. FMBSNY had significantly negative associations with the TCGI and FMBEDU and FMBNET had non-significant negative associations with the TCGI. Only FMBCUR had a significantly positive association with the TCGI. Thus, Hypothesis 2 is not supported. The results showed that board gender diversity does not guarantee a positive effect on either a firm's governance or performance. The study also found FMBSNY had non-significant negative associations with Tobin's Q, the ROA.

Thus, the presentence of female directors with greater seniority can't enhance a firm's governance and performance.

5. Discussion

The results of this study do not suggest that having more female directors guarantees a positive effect on a firm's performance. Moreover, the ratio of female directors with high educational achievement and the presence of female directors with high seniority does not produce a positive effect on financial and governance performance. It is also notable that the mean of FMBNET was relatively high, which may support previous findings that many female directors may be nominated through tokenism, or through good network relationships within the company [19,23].

Only FMBIND had a significantly positive association with Tobin's Q and the ROA, indicating that the higher ratio of female independent directors over total numbers of directors could enhance financial performance. This finding is aligned with agency theory and prior studies which suggest that more independent directors are better able to perform their monitoring function and thus contribute to performance [3,29,31].

The results of this study show that female directors' concurrently serving on the boards of other firms was the only critical factor in enhancing governance performance. Serving as a board member is a tremendous learning experience [23]. Furthermore, minority directors with previous board experience can build social networking ties with other directors, enabling them to create the perception of similarity with the majority [14]. Therefore, this result is consistent with prior literature which stated that female directors with prior experience as a director or supervisor in other companies can effectively introduce diverse opinions and network ties, thus contributing to consensus and better corporate governance and sustainability practice [39–41].

6. Conclusions

The evidence in Taiwan suggests that board of directors' gender diversity does not support a positive effect on a firm's financial and governance performance. Only the independence of female directors has a significantly positive association with a firm's performance, which is aligned with agency theory and prior findings that directors with greater independence are better able to perform their monitoring function and thus contribute to performance. The results also demonstrate that female directors concurrently serving in directors or supervisory positions in other firms is a critical factor for enhancing corporate governance. They may bring diverse opinions and network ties to improve corporate governance. Whereas most previous studies on the impact of board gender ratios focus simply on the number of female directors, this study presents a detailed empirical examination of the relations between board gender diversity and a firm's financial and governance performance in terms of six compounding factors. Furthermore, the use of Corporate Governance Evaluation System allows for the verifiable and quantitative assessment of the impact of board gender diversity on governance performances in Taiwan. This research can inform the literature and practice of board gender composition, and provide an empirical reference for enterprises in optimizing board performance. However, the results are limited by the relatively brief investigation period, and future work can further validate the findings by prolonging the investigation period.

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References

1. Wang, Y.-H. The Impact of Gender Diversity of Corporate Boards on Corporate Governance: An Empirical Investigation. In Proceedings of the International Conference on Management and Information Technology (ICMIT), Auckland, UK, 16–17 October 2019.
2. Annette, E. Quotas Get More Women on Boards and Stir Change from Within Horizon: The EU Research & Innovation Magazine. 2018. Available online: <https://horizon-magazine.eu/article/quotas-get-more-women-boards-and-stir-change-within.html> (accessed on 30 January 2020).
3. Nielsen, S.; Huse, M. Women directors and board strategic decision making: The moderating role of equality perception. *Acad. Manag. Rev.* **2010**, *7*, 16–29.
4. Salloum, C.C.; Azoury, N.M.; Azzi, T.M. Board of directors' effects on financial distress evidence of family owned businesses in Lebanon. *Int. Entrep. Manag. J.* **2013**, *9*, 59–75. [CrossRef]
5. Hambrick, D.C.; Mason, P.A. Upper echelons: The organization as a reflection of its top managers. *Acad. Manag. Rev.* **1984**, *9*, 193–206. [CrossRef]
6. Jain, T.; Jamali, D. Looking inside the black box: The effect of corporate governance on corporate social responsibility. *Corp. Gov. Int. Rev.* **2016**, *24*, 253–273. [CrossRef]
7. Rao, K.; Tilt, C. Board composition and corporate social responsibility: The role of diversity, gender, strategy and decision making. *J. Bus. Ethics* **2016**, *138*, 327–347. [CrossRef]
8. Byron, K.; Post, C. Women on boards of directors and corporate social performance: A meta-analysis. *Corp. Gov. Int. Rev.* **2016**, *5*, 428–442. [CrossRef]
9. Baranchuk, N.; Dybvig, P.H. Consensus in Diverse Corporate Boards. *Rev. Financ. Stud.* **2009**, *22*, 715–747. [CrossRef]
10. Lücknerath-Rovers, M. Women on boards and firm performance. *J. Manag. Gov.* **2013**, *17*, 491–509. [CrossRef]
11. Sarhan, A.A.; Ntim, C.G.; Al-Najjar, B. Board diversity, corporate governance, corporate performance and executive pay. *Int. J. Financ. Econ.* **2018**, *24*, 761–786. [CrossRef]
12. Erhardt, N.L.; Werbel, J.D.; Shrader, C.B. Board of director diversity and firm financial performance. *Corp. Gov. Int. Rev.* **2003**, *11*, 102–111. [CrossRef]
13. Jehn, K.A.; Northcraft, G.B.; Neale, M.A. Why Differences Make a Difference: A Field Study of Diversity, Conflict, and Performance in Workgroups. *Adm. Sci. Q.* **1999**, *44*, 741–763. [CrossRef]
14. Westphal, J.D.; Milton, L.P. How Experience and Network Ties Affect the Influence of Demographic Minorities on Corporate Boards. *Adm. Sci. Q.* **2000**, *45*, 366–398. [CrossRef]
15. Konrad, A.M.; Kramer, V.W. How many women do boards need? *Harv. Bus. Rev.* **2006**, *84*, 22.
16. Hafsi, T.; Turgut, G. Boardroom Diversity and its Effect on Social Performance: Conceptualization and Empirical Evidence. *J. Bus. Ethics* **2013**, *112*, 463–479. [CrossRef]
17. Bernardi, R.A.; Bosco, S.M.; Vassill, K.M. Does female representation of boards of directors associate with Fortune's "100 best companies to work for" list? *Bus. Soc.* **2006**, *45*, 235–248. [CrossRef]
18. Bernardi, R.A.; Gupta, S.T. Social desirability response bias, gender and factors influencing organizational commitment: An international study. *J. Bus. Ethics* **2008**, *81*, 797–809. [CrossRef]
19. Burke, R.J.; Mattis, M.C. *Women on Corporate Boards of Directors: International Challenges and Opportunities*; Kluwer Academic: Dordrecht, The Netherlands, 2000.
20. Daily, C.M.; Certo, S.T.; Dalton, D.R. A decade of corporate women: Some progress in the boardroom, none in the executive suite. *Strateg. Manag. J.* **1999**, *20*, 93–99. [CrossRef]
21. Singh, V.; Vinnicombe, S. Why So Few Women Directors in Top UK Boards? Evidence and Theoretical Explanations. *Corp. Gov. Int. Rev.* **2004**, *12*, 479–488. [CrossRef]
22. Hillman, A.J.; Sphropshire, C.; Cannella, A.A. Organizational Predictors of Women on Corporate Boards. *Acad. Manag. J.* **2007**, *50*, 941–952. [CrossRef]
23. Huse, M.; Solberg, A.G. Gender related boardroom dynamics: How women make and can make contributions on corporate boards. *Women Manag. Rev.* **2006**, *21*, 113–130. [CrossRef]
24. Hernandez-Nicolas, C.M.; Martín-Ugedo, J.F.; Mínguez-Vera, A. The influence of gender on financial decisions: Evidence from small start-up firms in Spain. *E+M Ekon. Manag.* **2015**. [CrossRef]
25. McGuinness, P.B.; Lam, K.C.K.; Vieito, J.P. Gender and other major board characteristics in China: Explaining corporate dividend policy and governance. *Asia Pac. J. Manag.* **2015**. [CrossRef]

26. Carter, D.A.; D'Souza, F.; Simkins, B.J.; Simpson, W.G. The Gender and Ethnic Diversity of US Boards and Board Committees and Firm Financial Performance. *Corp. Gov. Int. Rev.* **2010**, *18*, 396–414. [\[CrossRef\]](#)
27. Liu, Y.; Wei, Z.; Xie, F. Do women directors improve firm performance in China? *J. Corp. Financ.* **2014**, *28*, 169–184. [\[CrossRef\]](#)
28. Catalyst. The Bottom Line. Connecting Corporate Performance and Gender Diversity; Catalyst: 2004. Available online: <https://www.catalyst.org/research/the-bottom-line-connecting-corporate-performance-and-gender-diversity/> (accessed on 30 January 2020).
29. Campbell, K.; Mínguez-Vera, A. Gender Diversity in the Boardroom and Firm Financial Performance. *J. Bus. Ethics* **2008**, *83*, 435–451. [\[CrossRef\]](#)
30. Credit Suisse. *Women on Boards. Gender Diversity and Corporate Performance*; Credit Suisse: Zürich, Switzerland, 2012.
31. Adams, R.B.; Ferreira, D. Women in the Boardroom and Their Impact on Governance and Performance. *J. Financ. Econ.* **2009**, *94*, 291–309. [\[CrossRef\]](#)
32. Rose, C. Does female board representation influence firm performance? *Dan. Evid. Corp. Gov. Int. Rev.* **2007**, *15*, 404–413. [\[CrossRef\]](#)
33. Farrell, K.; Hersch, P. Additions to corporate boards: The effect of gender. *J. Corp. Financ.* **2005**, *11*, 85–106. [\[CrossRef\]](#)
34. Cadbury, S.A. The corporate governance agenda. *Corp. Gov. Int. Rev.* **2000**, *8*, 7–15. [\[CrossRef\]](#)
35. Mahmood, Z.; Kouser, R.; Ali, W.; Ahmad, Z.; Salman, T. Does Corporate Governance Affect Sustainability Disclosure? A Mixed Methods Study. *Sustainability* **2018**, *10*, 207. [\[CrossRef\]](#)
36. Ibrahim, N.A.; Angelidis, J.P. Effect of board members' gender on corporate social responsiveness orientation. *J. Appl. Bus. Res.* **1994**, *10*, 35. [\[CrossRef\]](#)
37. Pucheta-Martínez, M.C.; Bel-Oms, I.; Olcina-Sempere, G. Is Board Gender Diversity a Driver of CEO Compensation? Examining the Leadership Style of Institutional Women Directors. *Asian Women* **2017**, *33*, 55–80. [\[CrossRef\]](#)
38. Harakeh, M.; El-Gammal, W.; Matar, G. Female directors, earnings management, and CEO incentive compensation: UK evidence. *Res. Int. Bus. Financ.* **2019**, *50*, 153–170. [\[CrossRef\]](#)
39. Nadeem, M.; Zaman, R.; Saleem, I. Boardroom gender diversity and corporate sustainability practices: Evidence from Australian Securities Exchange listed firms. *J. Clean. Prod.* **2017**, *149*, 874–885. [\[CrossRef\]](#)
40. Terjesen, S.; Sealy, R.; Singh, V. Women Directors on Corporate Boards: A Review and Research Agenda. *Corp. Gov. Int. Rev.* **2009**, *17*, 320–337. [\[CrossRef\]](#)
41. Fondas, N.; Sassalos, S. A different voice in the boardroom: How the presence of women directors affects board influence over management. *Glob. Focus* **2000**, *12*, 13–22.
42. Demsetz, H.; Villalonga, B. Ownership structure and corporate performance. *J. Corp. Financ.* **2001**, *7*, 209–233. [\[CrossRef\]](#)
43. TWSE. 2020. Available online: <https://cgc.twse.com.tw/frontEN/evaluationOverview> (accessed on 30 January 2020).
44. Armstrong, B.G.; Sloan, M. Ordinal regression models for epidemiological data. *Am. J. Epidemiol.* **1989**, *129*, 191–204. [\[CrossRef\]](#)
45. Jabłoński, A.; Jabłoński, M. *Business & Economics*; Springer International Publishing: Berlin/Heidelberg, Germany, 2019; p. 366.