Board gender diversity and firm performance: Evidence from China

In Partial Fulfillment of the Requirements
for the Bachelor of Science in Accounting

by

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ABSTRACT: This research examines the relationship between board gender diversity and firm performance of Chinese public listed companies and the necessarily of adding female to the board. I constructed the OLS regression model following Carter et al. (2003), including four indicators as dependent variables and independent, control variables. Using 3079 list companies in China, I find that the positive association between gender diversity and Tobin’s Q, ROA, ROE, ROIC, there of these relationships are significantly. These results demonstrate that gender diversified boards are a wise choice for companies.

Keywords: gender diversity; firm performance; corporate governance; public listed chinses company.

Data Availability: The data are available from the sources mentioned in the paper.
I. INTRODUCTION

Over the last two decades, Board gender diversity has become more and more widely discussed topic. Nowadays, the absence of women on the corporate boards in the previous has already draw substantial attention from the policy makers and researchers. For example, The Higgs Review (2003) stated that although around 30% of managers in the UK corporate governance are women, women account only 6% of non-executive directorships. The Norwegian Parliament passed a law in December 2003 requiring all public-limited companies to have at least 40% female representation on the board by July 2005; however, at the time, female only accounted for 9% of the seats (Ahern and Dittmar 2012). The gender diversity in the board room is such an unbalanced phenomenon. Several researches about board gender diversity addressed the importance of female role in the corporate governance. Although in some firms, it is costly to increase the number of female directors, it still necessary to change the composition of the broad (Adams and Ferreira, 2004). One of the reasons is that female directors obviously have less attendance problem than the male and they also provided the evidence that women could add additional beneficial incentives and perspectives in the board.

However, according to the prior studies, the effect of gender diversity on the firm performance is inconclusive: some reported a significantly positive relationship between board gender diversity and firm performance, but others reported a significantly negative relationship. Carter et al. (2003) contributed the first empirical research which prove that the board diversity could improve financial value, evidence from Fortune 100 firms. Nguyen et al. (2015) concluded that gender diversity in the broad has a positive effect on the financial performance by collecting corporate governance characteristics of the publicly listed companies. On the contrary, Adams and Ferreira (2009) showed that gender diversity transfer more effort to monitoring and the executive director become more sensitive to own equity. This result expressed a negative effect of gender quotas for director which could cause fewer takeover defenses and decrease the well-governed firm’s value. Besides, they think that the scarcity of women in the board room is not a big issue. Recommendation about supporting a better diverse board of directors should base on the ethical value, rather than to an expectation of increased gender diversity (Gregory-Smith et al. 2013).

In this paper, I would prepare a comprehensive analysis about the relationship between board gender diversity and firm performance using a large sample of Chinese publicly listed firms. Actually, the previous research mainly focused on the European and North American firms. There are few scholars to examine the relationship between board gender diversity and firm performance in Asia, especially in China. Compared with western countries, appointing female directors in the broad room in Asia is harder. Due to differences in institutional and sociocultural norms, the promotion of gender-diversified boards in Asia may be superficial because of the traditional patriarchal society (Nam 2004). Besides, the rate of female directors in China seemed like to be the minimum rate among western and eastern Asian countries’ rate: compared with 15% in the UK and the 16.1% in the US, only 8.1% of company directors in China held by women. In addition, more than 70% of boards in Asia do not have independent female directors (Yi 2012).

The main aim of this study is to examine the effect of board gender diversity on firm performance using the Chinese publicly listed companies. The major functions of female representation in the corporate governance have four parts: to gain the entrance to wider talent, to increase responsibility in the board meeting, to improve firm performance, to strengthen the corporate governance (Doldor et al. 2012). This paper’s research objective is to find out that what kind of relationship between board gender diversity on the firm financial performance in China is.
Concluded various reviews on literature, my paper stands on reliable previous scholars. I focus on only Chinese publicly listed companies which have not been fully researched by different scholars. As the world’s largest developing economy and the world's second largest economy, China is facing the increasing pressure to catch up the step of developed countries. The business practitioners and policy makers should also actively receive the modern economic development situation, like those of developed countries. Finished reading different perspective papers, I found that the relation between gender diversity and firm performance is inconclusive. Before collecting data and result discussion, my attitude towards the relationship between board gender diversity and firm performance is neutral. I will explore the different female director proportions affected on the firm performance and find out the gender stereotypes’ affection in China.

In this explanatory study, I include several roles of variables, including dependent, independent and control variables, which are similar with the prior relevant research. For the research, the OLS regression is constructed through SPSS application to analysis. Use Tobin’s Q, ROA, ROE and ROIC as explanatory variables to examine the impact of the number of female directors on board. The regression test should run the formula 4 times, respectively with 4 different dependent variables.

Gender diversified boards are a wise choice for companies. My study is constituted to the literatures in several aspects in board gender diversity and firm performance to fill up the blank of Chinese publicity firms. Prior researches did not talk much about Asia, especially focused on China. My paper could provide the reasonable predicted trend of board gender construction in the future. In Asia, especially in China, few scholars have studied the relationship between gender diversity and corporate performance. This study could fill out the blank in time. At this stage, the proportion of female directors has received widespread attention. There are two reasons for this phenomenon. The first is based on the concept of gender equality, and the second is the perspective of female directors on corporate value. This study proves welly the second explanation.

The remaining part of this paper is constructed as follows showed: in the following part, I cite some relevant literature resources, then develop three hypotheses. Next, I explain the methodology in detail which conclude sections about data source and sample selection, variables, and modeling method. Then, I explain the results showed in tables and figure, present the findings, test the reliability and validity, finally get my conclusion and analyze the limitations.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Gender Stereotypes

For a long time, men held a significant proportion in the corporate governance. When interview the managerial position, male job applicants are more likely to be associated with the required attributes than female job applicants (Powell and Butterfield 2002). The historical status of women decreases the probability of women directors and reinforces the stereotype that women own fewer essential attributes to be qualified for the positions, especially in China where traditional patriarchal society grew (Lee and James 2007). Women are unreasonably considered as less competent than men because they prefer to perform subjectively and relate with social affection, not objectively, which people believe are the basic requirement of a director. Besides, Kulich et al. (2007) revealed that the stereotypes of gender have already caused a pay gap between male female directors, which is unfair to the women.
HI: Board gender diversity has a significantly negative effect on the financial performance of Chinese listed firms.

Agency Theory
Within corporate governance layer, agency problem occurs when manager does not stand on the best-interest of shareholders when they are making corporate decisions. One of the solutions is the agency theory that the mechanism of the board of director monitors the managers to behave not in self-interested manner (Hart 1995). The board consists of both executive and non-executive directors and have an important function in the company to make a separation of ownership and control. And the empirical result showed that female director could be more active to monitor whole activities (including Gul et al. 2008 and Adams and Ferreira 2009). The effect of board also dependent on the quality of firm governance. Gul et al. (2008) believed that the gender diversity board could made up partly of the weak governance.

Firm Performance
Firm performance is a term that describes the power of the business implementing their beneficial activities. During the previous studies, Sudarsanam (2003) divided into two types of financial indicators to measure the value of firm performance: (1) marked based indicators, such as Tobin’s Q and stock portfolio ratios; (2) financial statement ratios, such as return on equity, return on assets, return on invested capital and so on. Specifically, according to Brav et al. (2008), I calculated the Tobin’s Q as the market value divided by the companies’ total assets. It is commonly used when people research the relationship between corporate governance and firm performance and the impact of diversity board, which could be divers in age, gender or religion. As for the financial statement ratios, they are mainly focused on the financial report of income statement. One companies’ performance highly depends on the ability to make money, which could be expressed by the net profit, total earnings or net income (Skinner 1999). The two ways to evaluate the firm performance are both easy to calculate and reasonable to rely on.

Influence of Female Directors on Firm Performance
As for, why female directors could influent firm performance under the consideration of agency theory? On the one hand, Adams and Ferreira (2009) claimed that female directors do not belong to the “old boys club” and they could be more relevant with the concept of emphasized independent theory. On other hand, female directors could facilitate the communication and avoid risk as the conservatives when making decision (Srinidhi et al. 2011). In the literature, the influence of female director is prominently positive on the firm performance. More direct prior empirical evidence would be showed at the following.

H2: Board gender diversity has a significantly positive effect on the financial performance of Chinese listed firms.

Relation Between Gender Diversity & Firm Performance
The direct association between board gender diversity and firm’s financial performance has few exclusive evidences to prove. It is difficult to interpreted clearly. Most of literature has ambiguous interpretation for the effect of diversity on firm performance. There are different measurements to evaluate the financial performance. And the results are inconsistent.
Carter et al. (2010) claimed that there is not significant relationship between the number of female directors and the number of ethnic minority directors on firm performance, measured as Tobin’s Q and return on assets, using the data of U.S. firms from S&P 500 index during 1998-2002. They suggested that the female directors and firm performance seems like to be endogenous. Under different circumstances, during different time, the same component of gender diversity could cause different degrees of effect on firm performance; On the contrary, Carter et al. (2003) used the same method and a similar sample, Fortune 1000 in 1997 and concluded that there was a positive relationship between diversity boards and firm performance, measured as Tobin’s Q; Adams and Ferreira (2009) researched the sample of S&P 1500 during 1996 to 2003 and found several evidence of negative relationship between gender diversity and firm performance, using the ratio of firm’s market-to-book value and return on asset.

**H3**: gender diversity has no significantly effect on the financial performance of Chinese listed firms.

### III. RESEARCH METHODOLOGY

#### Data Source and Sample Selection

For this research, data had been collected from listed firms’ annual reports in China. Our sample comprises all 3079 public listed companies in China Stock Market Accounting Research (CSMAR) database during the period from 2007-2016, 10-year-period. CSMAR database provides a premium financial service on gathering data in China by Shenzhen GTA Education Tech Ltd. They provide comprehensive data, including both quantitative and qualitative. The information I needed about firm performance ratios are acquired from the reports of financial indices and financial statements. And the board characteristics are fulfilled by the reports of corporate governance.

Due to the limitation of this database, the latest data of year, 2017 and 2018 was not included in the research because the information in corporate governance part are not available during this two-year period. However, it did not conclude all the public listed Chinese companies because a few companies didn’t contain complete records. Some might lose the number of total directors, and some might not record how many times they will hold the board meeting during each financial year. In these cases, I deleted those companies’ information to make sure the data consistency. Finally, the whole observation was totally 3079 public listed companies in China.

#### Model Specification

The study will discover and analysis the relationship between board gender diversity and firm performance. In this explanatory study, I include several roles of variables, including dependent, independent and control variables, which are similar with the prior relevant research. For the purpose on studying the relationship, the ordinary least squares (OLS) regression is constructed through SPSS application. The test would study the relationship between the responsible variable and more than one explanatory variables. From the analysis of variance part, I could test the hypothesis significances using F ratio and t-statistics.

Use Tobin’s Q, ROA, ROE and ROIC as explanatory variables to examine the impact of the number of female directors on board. The regression test should run the formula 4 times, respectively with different dependent variables. The basic equations for building the model are as follows:
\[ \text{Firm performance} = \alpha + \beta_1 \text{PFEMALE} + \beta_2 \text{BMEETING} + \beta_3 \text{BSIZE} + \beta_4 \text{FSIZE} + \beta_5 \text{PINDEPENDENT} + \gamma \]

For each time, let Tobin’s \( Q \), ROA, ROE or ROIC respectively represent the firm performance. Among them: \( \gamma \) is the random disturbance term, \( \alpha \) is the \( y \)-intercept term of the model, \( \beta_1 - \beta_5 \) are the coefficients of each control variable. Tobin’s = Market Value/ Total Assets.  
ROA = Return on Assets  
ROE = Return on Equity  
ROIC = Return on Invested Capital  
PFEMALE = Percentage of Female Directors  
BMEET = No. of Board Meeting held in a year  
BSIZE = Total No. of Board of Directors  
FSIZE = Total Assets of the Firm  
PINDEPENDENT = Percentage of Independent Directors

**Variable Measurement**

**Firm performance**

As the previous part illustrates, there were two types of indicators to measure firm performance. The two indicators can complement each other and reflect performance more comprehensively. Finally, I chose the Tobin’s \( Q \) based on the market value, and chose three ratios related with the financial statement, which respectively were return on equity, return on assets and return on invested capital. Tobin ‘s \( Q \) is a measure of the profitability of shareholders. A larger Tobin ‘s \( Q \) indicates that the estimated market value of an enterprise is higher than the book value of its assets; ROE measures the operating efficiency of the company’s total assets, indicating the level of firm input and output ability; ROA reflects the ability of the company to use its own capital to obtain profits; ROIC represent the earning ability from stakeholder’s invested capital.

**Board gender diversity**

I measured the board gender diversity in two ways: (1) Percentage of female on the board, which is calculated by the number of female directors dividing by the number of total directors sitting on the board room (the total directors include both the management department and supervisory department); and (2) Dummy variable indicating 1 if there is at least one woman as the director in the board, or zero if there is no woman.

**Control variables**

The first involved control variable was board size. It measured through the total number of directors sitting on the board. In the research of Hermelin and Weisbach (2003), there is a remarkable negative relationship between board size and firm performance. Even though, they also mentioned several researches provide the opposite opinions and results. Larger boards might not easy to manage, but smaller boards might be easier to coordinate and communicate. Therefore, the size of the board of directors affects the efficiency of the board’s participation in corporate
governance. This study would control the impact of the size of the board of directors and the number of board members.

Secondly, firm size was included as one control variable. I used the natural logarithm of total assets as an indicator to measure the size of a firm, to facilitates the elimination of large differences in total assets between enterprises and to make the regression results more convincing. Orser (2000) found that the greater the firm size is, this firm could own more resources and is easier to receive financing from outside stockholders. The larger scale of enterprises would also have stronger ability to avoid market risk and more optimistic firm performance.

In addition, the share of independent directors, number of board meetings were included as the control variables. One of the most important function of boardroom is to supervise. High percentage of independent directors could highly Prevent executive-level opportunistic behavior and strengthen internal governance mechanisms so that the board can better perform its functions (Adams and Ferreira 2003). Equally important, if the board meeting holds more frequently, the boardroom could perform their responsibility better. Therefore, this study concludes the share of independent directors, number of board meetings as the control variables.

Taken together, each variable’s measurement is showed in the following Table 1:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Types of Variables</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobin’s Q</td>
<td>Dependent variable</td>
<td>Market value/Total assets</td>
</tr>
<tr>
<td>ROA</td>
<td>Dependent variable</td>
<td>EBIT/Total assets</td>
</tr>
<tr>
<td>ROIC</td>
<td>Dependent variable</td>
<td>Net Profit/Total assets – Current liabilities</td>
</tr>
<tr>
<td>ROE</td>
<td>Dependent variable</td>
<td>Net income/Shareholders' equity.</td>
</tr>
<tr>
<td>Board gender diversity (%)</td>
<td>Independent variable</td>
<td>Number of female directors / Number of directors sitting on the board</td>
</tr>
<tr>
<td>(PFEMALE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board gender diversity (1/0)</td>
<td>Independent variable</td>
<td>Dummy variable: if there is at least 1 woman on board =1; otherwise =0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Board Meetings (BMEETING)</td>
<td>Control variable</td>
<td>Total number of board meetings held within the financial year</td>
</tr>
<tr>
<td>Board size (FSIZE)</td>
<td>Control variable</td>
<td>Number of directors sitting on the board</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Size (FSIZE)</td>
<td>Control variable</td>
<td>Natural logarithm of total assets of the firm</td>
</tr>
<tr>
<td>Percentage of independent directors</td>
<td>Control variable</td>
<td>Number of independent directors / Number of directors sitting on the board</td>
</tr>
<tr>
<td>(PINDEPENDENT)</td>
<td></td>
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</tr>
</tbody>
</table>
IV. RESULTS

Descriptive Analysis

In my sample, there are totally 3079 companies with 21748 observations over last 10-year period. Table 2 shows a general comparison of key variables for companies with and without woman on board. There are 4832 observations (22.2%) without woman on board, and 16916 observations (77.8%) with at least one woman on board. When compared with the companies without woman on board, the companies with at least one woman on board had, in generally, less frequently board meetings times, larger number of total directors, smaller firm scales, lower percentage independent directors. Additionally, they had, on averagely, lower value of Tobin’s Q, and significant higher value of ROE, ROA and ROIC.

<table>
<thead>
<tr>
<th>TABLE 2</th>
<th>Mean values &amp; standard deviation of key variables for companies with and without female directors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Companies without</td>
</tr>
<tr>
<td></td>
<td>woman on board</td>
</tr>
<tr>
<td></td>
<td>Number of Observations</td>
</tr>
<tr>
<td>Board gender diversity (%)</td>
<td>4832</td>
</tr>
<tr>
<td>Board gender diversity (1/0)</td>
<td>4832</td>
</tr>
<tr>
<td>Number of Board Meeting</td>
<td>4832</td>
</tr>
<tr>
<td>board size</td>
<td>4832</td>
</tr>
<tr>
<td>firm size</td>
<td>4832</td>
</tr>
<tr>
<td>percentage of independent</td>
<td>4832</td>
</tr>
<tr>
<td>directors</td>
<td></td>
</tr>
<tr>
<td>Tobin's Q</td>
<td>4832</td>
</tr>
<tr>
<td>ROA</td>
<td>4832</td>
</tr>
<tr>
<td>ROE</td>
<td>4832</td>
</tr>
<tr>
<td>ROIC</td>
<td>4832</td>
</tr>
</tbody>
</table>

Figure 1 depicts a continue change of 3079 companies’ average number of female directors over time from 2007 to 2016 by line chart. It increased from 0.1421 woman sitting on the board to 0.1877 with a steadily upward trend year by year, and no exception year. But the level of female directors still less than 20%, which is relatively low. Under the effect of gender stereotype, the number of female directors should decrease, at least stay stable. However, the result showed a
totally opposite situation, which is continually increasing. Therefore, the theory of gender stereotype in China is retorted naturally.

**Figure 1**
The time series change of the average number of female directors in the Chinese publicly listed companies

![Graph showing the average number of female directors over years](image)

**Correlation Analysis**
In order to verify the rationality of the model, the correlation analysis was performed on researching the dependent variables and independent variables, control variables and get the following Table 3. I didn’t include the correlation analysis within the independent variables or dependent variables. Following, I would analysis the correlated relationship between each independent variable and control variable with all 4 dependent variables.

Table 3 showed that all the dependent variables (Tobin’s Q, ROE, ROA and ROIC) had a significantly positive correlation with the proportion of female directors. But the number of board meetings is insignificant related to all dependent variables, which failed the test, and their Pearson values are all around 0. In addition, the board size had a negative correlation with all 4 dependent variables, which one of them, ROA, beyond the significant level, and the other three are all significant correlation with board size. Besides, the result revealed the firm size did not have significantly correlated relationship with those 4 dependent variables. At the last part, the percentage of independent variable, there are significantly positive correlation with Tobin’s Q, ROE, ROIC. Only one dependent variable, ROA, failed the test. The results of correlation analysis are mostly consistent with previous study, where the independent variable - percentage of female directors - are positively correlated and have a high significant level of 0.01 to effect on dependent variables. However, the negative correlation with the board size is against many previous foreign researches. The reason might be that the proportion of female directors in Chinese companies is lower than in foreign companies.
Regression Analysis

The result of OLS estimation are showed in Table 4. OLS estimation is useful to research whether there is significant relationship between dependent variables and independent variables. It’s the main methodology of this paper. Tables 4 presents that board gender diversity has significantly positive relationship with firm performance when it’s measured by ROA, ROE and ROIC. This result supported the hypothesis 2 that Board gender diversity has a significantly positive effect on the financial performance of Chinese listed firms. However, there is a failed test, which support H3: gender diversity has no significantly effect on the financial performance of Chinese listed firms., when firm performance when it’s measured by Tobin’s Q. The result is quite similar with the research of Marinova et al (2016).

As for the control variables, number of board meeting and board size showed a positive effect. But only when firm performance was measured by ROA, number of board meeting offered a significant effect; and when performance was measured by Tobin’s Q, ROE and ROIC (except ROA), board size offered a significant effect. Besides, firm size had a complex relationship which included both negative and positive with firm performance. And its’ coefficients are all around 0. The firm size showed off a consistent relationship, which is no significant relationship, in correlation and regression analysis. The last control variable, percentage of independent directors,
showed all a negative effect when using 4 different variables. Though, only when firm performance was measured by Tobin’s Q, percentage of independent directors offered a significant effect.

<table>
<thead>
<tr>
<th>variables</th>
<th>OLS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tobin's Q</td>
</tr>
<tr>
<td>Board gender diversity (%)</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>(0.088)</td>
</tr>
<tr>
<td>Number of Board Meeting</td>
<td>0.138</td>
</tr>
<tr>
<td></td>
<td>(0.175)</td>
</tr>
<tr>
<td>board size</td>
<td>0.259*</td>
</tr>
<tr>
<td></td>
<td>(0.195)</td>
</tr>
<tr>
<td>firm size</td>
<td>0.111</td>
</tr>
<tr>
<td></td>
<td>(0.504)</td>
</tr>
<tr>
<td>percentage of independent</td>
<td>-0.704***</td>
</tr>
<tr>
<td>directors</td>
<td>(0.172)</td>
</tr>
<tr>
<td>constant</td>
<td>-13.42</td>
</tr>
<tr>
<td></td>
<td>(12.109)</td>
</tr>
<tr>
<td>N</td>
<td>21748</td>
</tr>
<tr>
<td>R²</td>
<td>0.36</td>
</tr>
</tbody>
</table>

*p < .1; **p < .05; ***p < .01

V. DISCUSSION

Review of Main Results

The paper examines the relationship of Board gender diversity and firm performance and the necessity and feasibility of adding female directors to the board. The companies with woman on the board have better performance than companies with woman. And the average number of female directors are moving upward steadily. The research is important in addressing the benefits of women involvement in the boardrooms. The finding demonstrates a positive association between gender diversity and Tobin’s Q, ROA, ROE, ROIC, which suggests female directors, could provide the situation to achieve better financial performance of the company. In addition, the relationship is significantly, which supported the hypothesis 2, when firm performance is measured by ROA, ROE, ROIC. However, the relationship between Tobin’s Q and gender diversity is not significant, which supports the hypothesis 2.

Comparison with Other Research

The number of female directors has a significantly positive relationship with the return on total assets, return on equity and return on invested capital. Corporate governance should increase
the impact of the percentage of female directors on company performance. The number of female directors and corporate performance is strongly associated, if the number of female directors, so women influence on corporate performance will be even more significant; on the contrary, if the number of women is very low, when companies face the situation of deciding important corporate strategies, their power of voice is often neglected and woman on firm performance will be little.

**Unexpected Results and Possible Explanations**

To a considerable extent, the result satisfies my expectation that the relationship between Tobin’s Q and gender diversity is not significant. Tobin’s Q is the predominant measure used in revealed that this research topic could not stop arguing in the future disputes. The reason might be that the proportion of female directors in Chinese companies is much lower than in foreign companies. And because of the lag of corporate performance fluctuations, the impact of female directors' participation in the current period will be reflected inaccurately in corporate governance.

**Limitation of the Experiment**

However, in this study, there are some limitation that might not cause the result convincing or comprehensive. Firstly, this research is based on data from only publicly listed companies, using standardized data and measurements. The private companies could also contribute some value to research. Secondly, the control variables considered are limited. There might be other variables to be control. Future research could contain more control variable, especially those involving board and organizational characteristics. The use of measurement as a proxy for financial performance has its own limitations. Thirdly, the findings might be questioned with the use of other indicators or ways to measure the firm performance to obtain a better result.

**Reliability and Validity**

The data of this study was acquired from CSMAR database which is enough reliable and authority. The sample conclude 3079 companies which are large enough to generally analysis the findings of Chinese publicly listed market. And the methodology is following the model paper (Julizaerma and Sori 2012). Compare with other researches’ results, there are a lot of similar findings. Marinova et al (2016) did not find there is significant relationship between board gender diversity and firm performance when they used Tobin’s Q as the measurement methods. In the research by Julizaerma and Sori (2012), they found the positive relation between board gender diversity and firm performance when using the financial indicators, ROA as the measurement methods.

Variance Inflation Factor (VIF) test is conducted to measure of the severity of complex (multiple) collinearity in a multiple linear regression model. Table 5 shows the result of VIF test. According to Maran and Indraah (2009), A range with a coefficient of variance expansion less than 10 is acceptable, indicating that no multicollinearity problem exists between the independent variables. The closer the VIF value is to 1, the lighter the multicollinearity; otherwise, the heavier.

<table>
<thead>
<tr>
<th></th>
<th>VIF</th>
<th>1/VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board gender diversity (%)</td>
<td>1.0342</td>
<td>.967</td>
</tr>
<tr>
<td>Number of Board Meeting</td>
<td>1.007</td>
<td>.993</td>
</tr>
</tbody>
</table>
board size & .067 & .484 \\
firm size & 1.022 & .978 \\
percentage of independent directors & 2.036 & .491 \\
Mean VIF & 1.433 & 1.433 \\

**Theoretical Contribution**

Gender diversified boards are a wise choice for companies, not only for the consideration of corporate value, but also for the trend of women becoming stronger in the new era of business. My study is constituted to the literatures in several aspects in board gender diversity and firm performance to fill up the blank of Chinese publicity firms. Prior researches talked about the evidence from developed countries, not much about Asia, especially focused on China. Recently, companies in developed countries face increasing pressure from government to forcedly increase gender diversity in their board room. China is the world's largest developing economy and the world's second largest economy, the business practitioners and policy maker should also actively receive the modern economic development situation, like those of developed countries. How Chinese firm successfully imitate western’s companies, such as Norway and U.K., is such an important question. My paper could provide the reasonable predicted trend in the future.

**VI. CONCLUSION**

The paper is based on the governance data and financial data of China's publicly listed companies. From the perspective of female directors in the board of directors, the paper examines the impact of female directors on corporate performance and examines the necessity and feasibility of adding female directors to the board of directors. Diversity and the management style of female directors provide an empirical basis for corporate value, fully affirming the power of female directors in the emerging economy.

In Asia, especially in China, few scholars have studied the relationship between gender diversity and corporate performance. This study could fill out the blank in time. Also, it is more difficult when appoint new female directors in Asia than in Western countries under the traditional patriarchal societies’ differences in institutional and sociocultural norms. However, the situation in China are becoming more similar with in western countries. The important of gender diversity has already drawn the attention of Chinese government and society. The board appear more gender diversity. At this stage, the proportion of female directors has received widespread attention. There are two reasons for this phenomenon. The first is based on the concept of gender equality, and the second is the perspective of female directors on corporate value. This study proves welly the second explanation.

Increasing the proportion of female directors can help an enterprise achieve good performance and improve its performance. For further research, there is a new grouping method: In view of the different responsibilities of independent directors and non-independent directors and different degree of their participation in corporate governance, follow-up research can divide female directors into female independent directors and female non-independent directors according to the nature of female directors. Then researchers could use grouped samples to separately study the influence of the proportion of female independent directors and the proportion of female non-independent directors on corporate governance performance. This grouping method can make the study of the performance effects of women characteristics more in line with the reality of the intra-organizations.
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