

Board Diversity and Firm Performance in All Industries: A Meta-Analysis Study

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ABSTRACT

Using meta-analysis, the authors want to determine the relationship between board of directors' gender diversity and firm performance. 219 studies with 702,192 observational data samples involved in this study. These studies were collected from various journal. Data processing is done using R program. The result showed a positive correlation of 0,0974. Although the result is relatively small, but it was strengthened with the presence of some moderating variables, such as gender equality and shareholder protection in certain countries.

Keywords

Meta-analysis, gender diversity, firm performance

Introduction

Companies around the world are competing due to globalization in the field of trade and investment. The impact of this competition makes the company have production costs and operational costs compared to its competitors. Indirectly, countries that have a high level of competition encourage companies in it to increase labour productivity and capital productivity. Therefore, the company must always produce continuous innovations for the development of production effectiveness, product marketing to the distribution of goods and services. Thus, the knowledge, experience and creativity of each company becomes a factor in achieving the sustainability of a company. Further impact is to help economic development.

In spite of huge studies looking at the relationship between women diversity on boards of directors and firm budgetary execution, the prove is blended. To accommodate the clashing comes about, we factually combined the results from studies and inspected whether results change by firms' rules and cultural settings. We found that female board representation is emphatically related to accounting returns which this relationship is more positive in nations with stronger shareholder assurances -- maybe since

shareholder assurances propel boards to utilize the diverse information, involvement, and values that each part brings to the board. In spite of the fact that the relationship between female board representation and advertising execution is relatively small, the relationship is positive in nations with more prominent gender equality. Maybe since shareholder protections propel boards to utilize the diverse information, involvement, and values that each people brings to the board. In spite of the fact that the relationship between female board representation and market execution is relatively small, the relationship is positive in nations with more prominent gender equality (and negative in nations with moo sex equality) -- maybe since gender contrasts in human capital may impact investors' assessments of the longer-term gaining potential of firms that have more female executives

The company has also undergone many developments, one of which is gender equality on the board of directors (board diversity). This attracts a lot of attention from academics to governments and regulators, even other companies. Studies and debates on this phenomenon are also growing. In the past, gender equality was said to be a social issue. But in fact now, diversity is considered an enhancer of the value of corporate governance and strategy (Singh

et al., 2008). Social investment index criteria (e.g. Domini 400 Social Index) have many parts where one of them is the practice of fairness in employment. Gender equality in company directors will result in the need for widespread information about customer needs, preferences and preferences. Not just on the company. Several governments as regulators have also issued regulations supporting gender equality. Examples are France, Spain and Norway which have required companies to appoint a minimum of 40% of the women's board of directors to a company. In this study, we will combine a variety of existing research from different countries. The combined study will review gender equality relationships on the board of directors to the company's financial performance. Accounting-based measurement (book value) and market value-based measurement will be two proxies used to measure the company's financial performance. Discussion on accounting basis will use ROA and ROE obtained from the company's annual financial statements. While the market value was obtained from Tobin's Q. For the sample we used research that has been published internationally in tiers 1 and 2 for a period from 2005 to 2020.

Literature Review

Social Role Theory

On the basis of the question of how human life behaves differently both men and women in many circumstances but similar in other places, Eagly A. H. (1987). Based on the gender, roles are determined by reflecting gender as a form of culture. With this culture, society builds roles for each gender into traits inherent in men and women. To equip men and women for typically family and work roles, the community undertakes extensive outreach to promote personality traits and skills that facilitate role performance. In addition, gender influences behavior through biological and psychological processes. Biological processes include the level of fluctuations in hormones which act as chemical signals in regulating role performance. Psychology is a process in the person of each individual as a standard they set on themselves Eagly, A. H., & Wood, W. (2012). The concept of Tokenism is an

inseparable part of the social view of the role in the company, especially on the board of directors, Tokenism prevents women from having more impact and the appointment of women is not a means of showing more ability and impact but to appreciate the value of diversity more, Larkin M. B (2011).

Status Characteristics Theory

The theory of status characteristics stated in Terjesen et al., (2009) provides information on how groups with low social status such as women have many advantages compared to groups with higher social status, namely men. Status influence theory may be useful in exploring the education of women and racial minorities. The theory of truth is used to estimate low status groups such as women get higher rank in their social status groups. In this case, for a woman to be highly capable, she must have more evidence of that ability than the evidence needed to judge a white male ability. Instead, the theory satisfies the status that the deficiency standard is higher for high-status low-status individuals (Biernat & Kobrynowicz, 1997; Foschi, 1992). This theory echoes the "twice as good to be half good" statement that many women syringe for. So for women to be able to achieve a higher standard than men, in this case it gives an idea of the relative expectations that directors who sit under (female) leadership must have such as a higher education degree to be chosen. The conceptualization of "double standards" proposed by Foschi and Foddy (1988) is an extension of the theory of status. The conceptualization of "Double Standards" provides a process that can be used to determine the bias that feeds into the ability assessment and eliminates it so that the results do not match the objective evaluated performance. Foschi (1989) also provides a more rigorous description of the criteria that are often used in decision making with "lower" status to be able to give ability, be entitled to promotion, or demonstrate potential and support statements (Biernat & Kobrynowicz, 1997; Foschi, 1992) whereas the group with "lower" social status provided more evidence that they had abilities above the usual standard.

Upper Echelon Theory

Upper echelons theory or UET in Hambrick and Mason (1984) stated that one of the keys to success so that the company can survive and develop is based on the board of directors. to achieve this, a board of director should have experiences, knowledges, and values. In this case the ability that has been mentioned will determine the choices related to large-scale decisions is something that will be decided in the board of directors. Other than those already mentioned Managerial Characteristics can be used in estimating whether the company will get good outcome. In the formation of managerial characteristics, the existing characters are determined by each person who can influence company performance, the factors that will most determine are education, years of service, and gender. Hambrick and Mason (1984) have also stated the concept of gender diversification. the first concept is a board of directors that will make strategic decisions more quickly than will

heterogeneous teams. the second is In stable environments, team homogeneity will be positively associated with profitability. the third theory is In turbulent, especially discontinuous, environments, team heterogeneity will be positively associated with profitability.

Carpenter et al., (2003) studied the relationship between women and minorities in this study. The results showed that there was a positive and significant influence on the relationship between women and minorities in the Board of Directors and company performance, thus stating that diversity in the board of directors would make it heterogeneous in taking decision. A diversified Board of Directors will have an understanding that has their respective advantages so that they will get better results in decision making such as having new prespective, new creativity, creating open discussions and innovation, besides diversification also shows a positive image for the company.

Topic

Female directors are certainly different from men. Usually, women directors have added power in marketing and sales (Groysberg & Bell, 2013). In addition, female directors also usually have higher university degrees (Carter et al., 2010; Hillman et. Al., 2002). Another example, because women used to shop at the market, a female director had a different understanding of consumers. This will be very useful when there is a board meeting (Campbell & Vera, 2008: Simpson et. Al., 2003). The different advantages of this man that can drive the company's performance.

H1: Board diversity produces a positive relationship to the company's financial performance

To measure a company's financial performance, usually management and academics have different perspectives. This has led to differences in measurement using both an accounting and market point of view. This difference can also cause different results of the research achieved and lead to gaps in research results. If using an accounting point of view, the measurement is based on the results reflected in the financial

statements. Meanwhile, market results are seen in the consideration of shareholders (if the shares are listed on the stock exchange). Do shareholders appreciate the company, if so, the share price will increase. (Loyd et al., 2013; (van Ginkel & van Knippenberg, 2008)).

H2: Board diversity has a positive impact on the company's accounting income and the company's market value

The women's board of directors has a good contribution to the company's financial performance, but it all depends on how far the board of directors is able to use the benefits, knowledge, experience and values held by each of its members. Research in social psychology in groups shows that each group that has different members has different abilities to process the unique values of each member (Stasser & Birchmeier, 2003). This has an impact on company profits if there are interactions that provide and collect information, resources and decisions (Hambrick, 2007). This will benefit the company and can increase revenue for the company.

In addition, good legal protection will also allow prosecution against the board of directors who do not uphold the law. This study found that women's representation on the board of directors and positive financial performance is more likely to occur in countries that have good legal protection.

H3: Companies in countries with stronger levels of shareholder protection will moderate the relationship between gender diversity on the board of directors and the company's financial performance.

The recognition of gender diversity on the board of directors will result in a positive relationship with the company's financial performance in the context of broader gender equality (Hausmann et al., 2012). Women directors in countries with good gender equality will enable them to contribute better and have wider influence on the board of directors. This has led to external parties assessing companies that have female directors.

H4: Countries that have a good level of gender equality will moderate the relationship between the gender diversity of the board of directors and the company's financial performance.

Methods

One type of research that uses quantitative and systematic approach to conduct previous library studies is meta-analysis. Meta-analysis (Glass, 1976) is a statistical analysis of a large series of various individual studies with the aim of finding an integrated conclusion. In the '30s, researchers used certain techniques that combined previous research data on agriculture. The results are used to estimate the results and see their significance.

Meta-analysis begins with problem identification, data collection, data encoding, disclaimer of existing research results until the presentation of the results using meta-analysis (Yang & Gyekis, 2012). Usually, the research that has been collected will be categorized on the basis of sample size, control group, experimental group, journal publication to various other categories.

In this meta-analysis, we use R program. First, we obtained studies from journals indexed in Scopus and published internationally in tier 1 and 2. Then,

we search over the effect size and code the studies into the data set we need. We convert correlation into Fisher's z and combine all the effect size. At last, we convert it back to correlation.

Sample

The most center of this think about is the relationship between differences within the board of executives and the two measurements of corporate budgetary execution. The think about is complemented by an investigation that considers the relationship between differing qualities in sheets and possibly more proximal results, to be specific the degree to which sheets of executives lock in in exercises to fulfill their two fundamental obligations (checking and methodology improvement).

All of the investigate included in this ponder was conducted at the company level and a few of the considers moreover included intermittent multi-time thinks about. In expansion, past considers must incorporate impact sizes or incorporate information that can be utilized to calculate impact sizes in this meta-analysis think about. The analysts too prohibited considers that as it were measured the impact estimate of board differing qualities in combination between sex, race, or ethnicity. In expansion, investigate on non-profit organizations is additionally avoided from this ponder.

To gather suitable inquire about information, analysts conducted looks on a few databases such as JSTOR, Emerald, Elsevier, Springer, and Wiley which were distributed from 2005 to 2020, with keywords such as gender, women, boards, diversity, governance, directors, and financial performance. The investigate found from the look will be carried out by checking the quality of the diary, where the inquire about is distributed utilizing the Scimago Journal & Country Rank.

Data Analysis

The studies were conducted in 32 countries, with 1 study report mixed samples. The number of studies we use in this meta-analysis are 105 studies with 343,763 observed samples.

Country	Number of Study	Shareholder Protection Index	Gender Gap Index
Australia	5	5.146	0.001
Canada	2	5.514	0.001
China	8	4.509	0.003
Costa Rica	1	4.233	0.033
Denmark	1	5.006	0.004
France	4	4.861	0.002
Germany	2	5.257	0.011
India	3	4.458	0.003
Indonesia	2	4.486	0.010
Ireland	1	4.681	0.002
Italy	2	3.429	0.001
Japan	1	5.327	-0.010
Jordan	1	4.411	0.018
Malaysia	7	5.197	0.002
Mauritius	2	4.834	0.002
Mixed	3	-	-
Netherlands	2	5.315	-0.010
New Zealand	1	5.461	-0.002
Nigeria	2	4.077	0.015
Norway	3	5.857	0.007
Pakistan	4	3.591	0.014
Palestin	1	-	-
South Africa	1	4.866	0.025
South Korea	2	3.669	0.014
Spain	6	4.027	0.049
Sri Lanka	1	4.185	0.004
Sweden	1	5.458	-0.002
Taiwan	1	5.155	-
Tanzania	1	4.096	0.008
Turkey	1	3.876	0.007
United Kingdom	9	5.441	-0.007
United States	23	5.501	0.004
Vietnam	1	3.710	0.001
Grand Total	105		

Discussion

In many studies, female in board represent in many ways, such as number of women, percentage, the presence, and using Blau index. Hahn (2007) and Honeine & Swan (2011) include gender diversity correlation with firm performance. These studies also included in our meta-analysis since they give effect size result. Each country provides different access for women to obtain information, knowledge and skills (Hausmann et al., 2012). To measure gender parity score, we rely on The World Economic

Forum's Global Gender Gap score (Hausmann et al., 2012), which measure country's score from their education attainment, political empowerment, economic participation, and health and survival.

We argue that women's board representation will be more assertive about the company's financial performance in a more justified arrangement with shareholder securities. The greater shareholder effect tends to strengthen company administration while weaker securities weaken the administrative component (Hausmann, Tyson, & Zahidi, 2012). Subsequently, in nations with weaker shareholder securities, board of directors may be less likely to request and consider the one of a kind involvement, information, and values of female board individuals, decreasing the probability that female directors' cognitive outlines may be utilized in board choice making.

Since women on boards of directors are still moderately uncommon -- with numerous included as it were recently (e.g., Burke & Mattis, 2010), the authenticity of female executives may be more beneath address in a few settings. We contend that female on boards of directors will be more emphatically related to firm financial execution in settings with more prominent gender equality, in nations where women have more break even with get to resources and openings in terms of instruction, financial support, business, and political strengthening.

Results

Hypothesis 1 in this study is that gender differences within the board has a positive relationship with the company's financial performance. The finding comes out that there's a moderately little positive relationship, to be specific 0.0974 with a certainty interim of 0.0719 to 0.1206.

Table 2 Meta-analysis result for correlation of board gender diversity and firm financial performance

Correlation	Board gender diversity -> firm financial performance
<i>Number of Study</i>	219
<i>Total Sample Size</i>	702,192
<i>Corrected R</i>	0.0974***
<i>Standard Error (SE)</i>	0.0101
<i>z</i>	4.8327
<i>p-value</i>	<.0001

Correlation	Board gender diversity -> firm financial performance
95% CI	[0.0719,0.1206]

Source: Data processing result (R program)
Note. SE = Standard Error, CI = Confidence
Interval * $p < .1$. ** $p < .05$. *** $p < .01$

Hypothesis 2 is that gender diversity within the board has a positive relationship with the company's market values and the company's accounting income. The finding shows that for the relationship between the gender diversity of the board and company income there's a positive relationship of 0.0836 with a certainty interim of 0.0619 to 0.1276.

Table 3 Meta-analysis result for correlation of board gender diversity and firm financial performance (accounting income)

Correlation	Board gender diversity -> firm financial performance (accounting income)
Number of Study	136
Total Sample Size	231,723
Corrected R	0.0836***
Standard Error (SE)	0.0108
z	5.1926
p-value	<.0001
95% CI	[0.0619,0.1276]

Source: Data processing result (R program)
Note. SE = Standard Error, CI = Confidence
Interval * $p < .1$. ** $p < .05$. *** $p < .01$

In the mean time, for the relationship between the gender diversity of the board and the market value of the company, it was found a positive relationship of 0.0962 with a certainty interval of 0.0748 to 0.1294.

Table 3 Meta-analysis result for correlation of board gender diversity and firm financial performance (market price)

Correlation	Board gender diversity -> firm financial performance (market price)
Number of Study	83
Total Sample Size	89,926
Corrected R	0.0962***
Standard Error (SE)	0.0110
z	4.1926
p-value	<.0001
95% CI	[0.0748,0.1294]

Source: Data processing result (R program)
Note. SE = Standard Error, CI = Confidence
Interval * $p < .1$. ** $p < .05$. *** $p < .01$

These comes about show that the gender diversity within the board with the company's financial performance in accounting based and market based estimation have a positive relationship. Any case, these two analyzes still have a really high degree of heterogeneity, specifically 97% to 98%. At that point the investigation is proceeded by analyzing the directing variable of the level of shareholder protection and the level of gender equality in each nation.

Hypothesis 3 is that companies in nations that have a stronger level of shareholder protection will moderate the relationship between gender differences on the board and the company's financial performance. To find out the moderating effect, we use omnibus tes (QM). If QM shows result more than 0 an p value less than 0.5, it means that the variable moderates the correlation. Based on the comes about of this investigation, it was found that nations that had a shareholder protection index esteem of more than 4 focuses have a positive relationship of 0.1283 with a certainty interim of 0.0619 to 0.1264 and QM 5136.94 ($p < .0001$). This result underpins hypothesis 3 where the confidence interval is more than 0 and QM has greater value than 0.

Table 4 Meta-analysis result for correlation of board gender diversity and firm financial performance (moderated)

Correlation	Board gender diversity -> firm financial performance (market price)
Moderating var	Shareholder protection
Number of Study	117
Total Sample Size	196,286
QM	5136.94
p-value	<.0001
Corrected R	0.1283***
Standard Error (SE)	0.0125
z	4.4826
p-value	<.0001
95% CI	[0.8261,0.1495]

Source: Data processing result (R program)
Note. SE = Standard Error, CI = Confidence
Interval * $p < .1$. ** $p < .05$. *** $p < .01$

Hypothesis 4 is that nations that have a great level of gender equality will moderate the relationship between the gender diversity of the board and the company's financial performance. The comes about of the meta-analysis appeared a positive relationship of 0.1273 with a certainty interval of

0.0920 to 0.1496 and QM 1925.242 (p-value <.0001).

Table 5 Meta-analysis result for correlation of board gender diversity and firm financial performance (moderated)

Correlation	Board gender diversity -> firm financial performance (market price)
Moderating var	Gender equality
Number of Study	92
Total Sample Size	116,639
QM	1925.242
p-value	<.0001
Corrected R	0.1273***
Standard Error (SE)	0.0102
z	3.824
p-value	<.0001
95% CI	[0.0920,0.1496]

Source: Data processing result (R program)
Note. SE = Standard Error, CI = Confidence Interval
* $p < .1$. ** $p < .05$. *** $p < .01$

This positive relationship value underpins hypothesis 4, specifically that a nation that includes a great level of gender equality will direct the relationship between the gender diversity of the board and the company's financial performance.

Conclusion

All the comes about of the meta-analysis conducted appear a positive relationship between the gender diversity within the board and the company's financial performance. In spite of the fact that this relationship esteem tends to be small, for companies that record huge deals or benefits, this impact will have a critical effect. Based on the comes about of all meta-analysis calculations, it is found that the relationship between the gender diversity of the board and the company's financial performance is most noteworthy in nations that have a level of gender equality.

Limitations and Future Studies

Due to time limitation, the number of samples is limited and there are only 2 moderating variables tested in this study. We believe that there are still many studies sample out there and another moderating variable that will moderate these variables correlation.

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