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# Effect of Gender Diversity on the Performance of Non-financial Listed Firms in Ghana

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## Authors' contributions

*This work was carried out in collaboration between both authors. Author DA designed the study and the first draft of the manuscripts. Author SOA wrote the literature, carried out the analyses and reviewed the draft manuscript. Both authors read and approved the final manuscript.*

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## ABSTRACT

The paper investigates the effect of gender diversity in the boardroom on the financial performance of non-financial listed firms in Ghana using panel data between 2007 and 2011. The fixed and random effects approaches were used in analysing the data. The findings revealed that the percentage of women on board have no statistically significant relationship with firm's financial performance of listed firms in Ghana. It was also discovered that the percentage of women on boards of non-financial listed firms was low. The results draw the attention of policy makers to the position of women in organisations given the enormous positive contribution they offer to the society.

*Keywords: Gender diversity; financial performance; Tobin's Q; return on asset.*

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## **1. BACKGROUND**

Women representation on boards and top management has become an on-going debate and an emerging area of research in various parts around the world. This is mostly evident in countries where the share of women on boards and top positions are low. The feminist conflict theory argues that women have been systematically oppressed by men in the society because of control over limited natural and man-made resources enjoyed wholly by men Skjelsbaek [1]; Dahlerup [2]. The theory holds that, wealth, power or position and status are valuable resources but scarce; the inherent nature of men and the scarcity of these resources means domestication of the role of women in society Skjelsbaek [1]; Dahlerup [2]. This is against the background that women on board of companies are essential assets. According to Robinson [3], participation by women in top management has a positive impact on firm performance. However, Herring [4] asserted that diversity at top level management may create conflict, lower group cohesiveness, increase employee absenteeism and turnover and lower quality and performance thus causing a decrease in the value of business.

The argument in favour of a gender-diverse board is that it may cause a firm to gain more profit and have a unique attribute which adds to shareholders' value (Carter, Simkins and Simpson [5]). There is also the view that women have different professional experiences as compared to their male partners, when it comes to the role of gender in board of directors (Nielsen & Huse [6]). It is also evident that female directors tend to hold advance degrees and shift from one firm to another faster than their male counterparts (Hillman, Cannella and Paetzold [7]).

According to the [8] report of the expert group meeting at Addis Ababa, in developing economies, females are not much encouraged to participate in the decision-making process and factors contributing to this are beliefs regarding risk aversion, lack of confidence and mental instability in female instinct. Ghana's ethnic, cultural and agro-ecological diversity makes a generalization about gender relations and their consequences for women's access to resources, decision making and status extremely difficult (Bortey and Dodoo [9]).

With no formal social security system in Ghana, men are perceived as the main source of livelihood for their families (The women's manifesto in Ghana [10]). They are nurtured to lead their households and to take responsibility for the welfare of all household members and in the process, they are given control over the resources required to effectively discharge their responsibilities (The women's manifesto in Ghana [10]). The Ghanaian male is encouraged to be brave, aggressive and not to display emotions openly (Bortey and Dodoo [9]). Values developed through this nurturing process include assertiveness, independence, achievement orientation, confidence and self-esteem (Bortey and Dodoo [9]). There is a general belief that the Ghanaian race will be lost if its cultural values undergo changes and that the Ghanaian traditions must be closely guarded in order to preserve the Ghanaian race (Loth [11]). The World Bank's [12] report and the 2000 population and housing census by the Ghana Statistical Service [13] revealed that women were pushed into female stereotyped careers, secretarial work and nursing than engineering, accounting and management.

However, the views of people are changing with the passage of time due to the driving force to utilize the female segment of work force and some evidence of stunning female performances on top managerial positions (Krishnan and Parsons, [14]). With all these, women are still not considered as equal competitors of men. A number of studies in workforce diversity have established a relationship between gender diversity and firm performance (Campbell and Vera [15]; Smith, Smith and Verner [16]; Terjesen and Singh [17]; Dejardin [18]). Studies have shown that a gender-diverse organisation is characterized with innovation, creativity and quality decision-making process of the board. Such firms experience quality problem-solving, effective leadership; better understanding of the market place and benefits from global relationships (Gregoric, Oxelheim, Randoy and Thomsen [19]; Broome, Conley and Krawiec [20]; Broome, Conley and Krawiec [21]; Campbell and Vera [22]). Most of these studies have been conducted in the developed countries (Bonn [23]; Gul, Srinidhi and Ng [24]), with very few conducted in the developing countries (Prihatiningtias [25]; Mirza, Mahmood, Andleeb and Ramzan [26]) especially in the context of Ghana.

Meanwhile, in Ghana, there has been an amendment of the Local Government Act 1993, Act 462 and enactment of the Affirmative Action policy, to provide a framework for addressing historical gender-related injustices in Ghana as a global requirement for member countries of the United Nations (UN). This is to ensure that conventions on these matters are implemented to the full for the benefit of women. If having a positive effect on firm performance is as a result of having more women as top executives or members of boards of directors (Robinson [3]), then this may be a strong argument for having more women in top management.

However, despite the amendment of the policy in Ghana, women are still underrepresented in both the boards of public and private sectors in the economy and this is evident in the firms listed on the Ghana stock exchange and the 2012 parliamentary election where we have women representing only 10.6% of parliamentarians instead of the 40% quota advocated by the African Union for women. The question is, why are women still under represented? Do they really have an impact on the performance of firms and the economy as a whole? The study, therefore, seeks to assess the relationship between gender diversity and firm performance (accounting-based and market-based performance) of non-financial listed firms in Ghana. The rest of the paper is divided into five. Part two reviews the literature. Part three looks at the methodology. The analysis and discussion of the results are in part four and the final part looks at the policy recommendations.

## **2. LITERATURE REVIEW**

The relationship between gender diversity of the board members and firm performance had been explained by several theories. The liberal feminist theory (LFT) has its roots in liberal political philosophy (Fischer, Reuber and Dyke [27]) and liberal feminists seek change through appealing to the liberal values of equality, freedom and the right to choose (Lowe and Bentson [28]). Underlying liberal feminism is the notion that women and men are equal given equal chances (Lowe and Bentson [28]). LFT does not identify any inherent gender differences. Inequality in accomplishments between gender is credited to the differences in social opportunities open to men compared to women. Fischer, Reuber and Dyke [27] posited that women are unlikely to realise their full potential because they are often deprived

from better education and social opportunities. Furthermore, difference between male and female experiences due to socialisation results primarily in dissimilar ways of observing. This is one of the earliest things children learn which shapes and mould their learning (Douglas and Frey [29]). Traditionally, gender segregation commences from tender age where girls are compelled to play mainly with dolls; while boys are made to play with trucks, guns and football (Douglas and Frey [29]). The male child is trained to be rational, logical and objective and to cope with difficult tasks and situations while the girl-child is taught to cultivate their emotions and be soft (Douglas and Frey [29]). The theory provides a useful background into consideration of gender and company performance. It focuses on merits and rationale for lesser performance by women managers. It does not provide a mechanism to explain superior performance by female-dominated companies; why companies with more women on their boards might perform better in financial terms.

Furthermore, resource-based theory (RBT) maintains: "It is not industry structure that bring about competitive advantage and superior performance". Rather, it is the willingness to exploit firm's internal resources to outwit others in the industry. The RBT frames a rationale for expecting higher performance by companies with more women on their boards. The theory explains a firm's ability to reach sustainable competitive advantage when different resources are employed and these resources cannot be imitated by competitors, which ultimately create a barrier (Mahoney and Pandian [30]). Varying performance between firms is as a result of heterogeneity of assets and it is focused on the factors that cause these differences to prevail (Mahoney and Pandian [30]; Amit and Shoemaker [31]; Barney [32]). Diversity in the board room through the inclusion of women brings in innovation and creativity in decision making, which could spur growth and profitability.

### **2.1 Empirical Review**

The types of diversity mostly applied in the boardroom are gender diversity (Adams and Ferreira [33]; Ali, Kulik and Metz [34]), cultural or ethnic diversity (Kusumastuti, Supatmi and Sastra [35]), educational diversity (Bathula [36]) and board independence (Chamberlain [37]; Rashid, Zoysa, Lodh and Rudkin [38]). Among these types of diversity, gender diversity and its relationship with firm performance have received

much attention in recent times as the findings are diverse, ranging from none to positive and negative significant relationship.

The proponents of gender diversity in the boardroom believe that women members, minority members or independent board members bring important information and knowledge to the board (Carter, Simkins and Simpson [39]; Grosvold, Brammer and Rayton [40]). Carter et al. [39] noted that having diversity in board membership (with more women representation) leads to decisions based on the evaluation of more alternatives, which improves innovation, creativity and improves firm performance (Broome, Conley and Krawiec [20]; Broome, Conley and Krawiec [21]; Campbell and Vera [22]). Moreover, a more gender-diverse board may also improve the image of the firm; therefore, it may create positive impacts in performance and shareholder value over a long period.

In contrast, the opponents argue diversity leads to conflict, diminishing group unity, increased absenteeism and lower turnover, (Herring [4]; Adams and Ferreira [33]). Francoeur, Labelle and Desgagne [41], found no relationship between diverse board and firm performance. Furthermore, there are other debates regarding the diversity in boardrooms. Diverse boards may take more time to take decisions and may experience more conflicts (Smith, Smith and Verner [16]). Even women board members do not support the inclusion of more women on boards (Broome, Conley and Krawiec [20,21]). In relation to the investment area, Jianakoplos and Bernasek [42] conclude that women show relatively more risk aversion, which results in low financial performance in the stock market. A heterogeneous team often exhibits results in communication bottlenecks may be dysfunctional (Earley and Mosakowski [43]). Campbell and Vera [22] concluded that a heterogeneous group is less cooperative and so tends to generate more psychological disagreement.

According to Katzenbach [44] many firms have underutilized human resources, including females and people of diverse racial and ethnic backgrounds. By better utilizing the contributions of women and minorities, firms can become more creative and accepting change. Robins and Wiersema [45] concluded these paid off in terms of return on investment. Shrader, Blackburn and Iles [46] found a positive relationship between women on board and firm's financial

performance. Blackburn, Doran and Shrader [47] and Rosener [48] concluded that firms with large percentages of women in management enjoy a better advantage of a total pool of managerial resources and perform well financially. Shrader, Blackburn and Iles [46] argue that firms employing a greater percentage of women managers have been successful at acquiring a significant bundle of difficult to obtain resources. Powell [49] posits that women make at least as good, if not better managers than men. There are evidences that firms with heterogeneous management teams are able to facilitate strategic change (Wiersema and Bantel [50]).

The RBT provides a solid backdrop for this investigation. Women leaders and women on boards comprise a growing and perhaps heretofore, somewhat neglected resource for firms. There is evidence that women are more oriented toward supporting and maintaining relationships than men (Hisrich and Brush [51]; Rosener [48]). Women are also strong in the areas of idea generation and innovation and are generally more satisfied with their jobs than men (Rosener [48]). Therefore, as more women assume leadership, board and management positions, organisational learning, climate and performance should improve.

A research conducted by Verboom and Ranzijn [52] revealed that there is a relationship between the number of women at the top management and bottom-line layer of a firm and firm performance. The evidence from the US (Gul, Srinidhi and Ng [24]), Australia (Bonn [23]) Norway (Gregoric, Oxelheim, Randoy, Thomsen [19]), Denmark (Smith, Smith and Verner [16]), Spain (Vera and Martinez [53]), Canada (Francoeur, Labelle and Desgagne [41]), the UK (McKinsey and Company [54]) and the Netherlands (Rovers [55,56]) also confirm that women in the boardrooms' impact positively on financial performance. However, other studies have found negative, curvilinear and even no relationship between gender diversity and firm performance (shrader, Blackburn and Iles [46]; Richard, Barnett and Dwyer [57]; Bonn, Yoshikawa and Phan [58]). The current study explores the situation in Ghana. This is to fill the gap by way of the inconsistencies left by prior studies.

In terms of measurement, Carter et al. [39], Thomsen et al. [59], Carter, Simkins and Simpson [5] using Tobin's Q, as the indicator of

financial performance, found a positive relationship between the percentage of female directors on the board and firm performance. Similarly, financial performance (ROA, ROE) is positively affected by gender diversity of board members (Dominguez, Sanchez and Alvarez [60,61]; Vera and Martinez [53]; Clarke [62] cited in Suk [63]). According to Ali, Kulik and Metz [34], a relationship between board diversity and firm performance exists, but moderated by industry type. The study explores the relationship in the context of Ghana.

### 3. RESEARCH METHODOLOGY

The data employed in this research are drawn from the Fact books of Ghana Stock Exchange and Annual report's database of Data Bank. The years 2007 to 2011 was selected due to the availability of data required to test the hypotheses. The calculation for the ROA and Tobins' Q was done using collected data for years 2007-2011.

#### 3.1 Empirical Model

As the paper used panel data, it is important to consider whether to use fixed or random effect models for the analysis. According to Reyna [64] the fixed effect model explores the relationship between predictor and outcome variables within an entity, in this case the firm and each entity had its own individual characteristics that may or may not influence the predictor variables. On the other hand, random effects have the rationale that the variation across entities is assumed to be random and uncorrelated with the predictor or independent variables included in the model (Reyna [64]). Thus, the following research models were developed:

Fixed effects model

$$\begin{aligned}
 TOBINSQ/ROA_{i,t} &= \alpha + \beta_1 BLAU_{i,t} \\
 &+ \beta_2 FIRMSIZE_{i,t} \\
 &+ \beta_3 BOARDSIZE_{i,t} + \beta_4 LEV_{i,t} \\
 &+ \varepsilon_{i,t}
 \end{aligned}$$

Random effects model

$$\begin{aligned}
 TOBINSQ/ROA_{i,t} &= \alpha + \beta_1 BLAU_{i,t} \\
 &+ \beta_2 FIRMSIZE_{i,t} \\
 &+ \beta_3 BOARDSIZE_{i,t} + \beta_4 LEV_{i,t} \\
 &+ \mu_{i,t} + \varepsilon_{i,t}
 \end{aligned}$$

Where  $\varepsilon_{i,t} \sim iid(0, \sigma_\varepsilon^2)$  and  $\mu_i \sim iid(0, \sigma_\mu^2)$

TOBINSQ= firm financial performance (market-based: Tobins' Q)  
 ROA = firm financial performance (accounting-based: ROA)  
 $\alpha$  = Constant (the intercept, or point where the line cuts the Y axis when X=0)  
 $\beta$  = coefficient (the slope, or the change in Y for any corresponding change in one unit of X)  
 $\varepsilon$  = Within-entity error  
 $\mu$  = Between-entity error (due to the belief that there are differences across non-financial firms, i.e. manufacturing, mining, distribution, printing, ICT and other non-financial firms, that may influence the dependent variable)  
 i = entity  
 t = time

#### 3.2 Measurement of Variables

Blau index (BI) was used as a proxy for gender diversity in the boardroom (board of directors). BI considers gender categories (Vera and Martin [65]). This characteristic could not be found when dummy variable, percentage, or proportion of women in the boardroom is utilized to measure gender diversity in the boardroom (Campbell and Vera [15]; Sacco and Schmitt [66]). Therefore, the Blau index was believed to be appropriate to be used in the study to measure gender diversity in the boardroom. Blau index formula (Harrison and Sin [67]):

$$Blau\ Index = 1 - \sum_{i=1}^n P_i^2$$

Where

$P$  = the proportion of group members in the  $i$ th category  
 $n$  = is the total number of board members.

Referring to this formula, the values of the Blau index can spread from zero (the minimum value), that occurs when each object in the group has a similar category, to positive one (the maximum value), when equal portions of each category are present in a group. However, the maximum value of the Blau index may vary based on the total number of categories. When there are only two

categories, for example, men and women in the categories for gender diversity, the maximum value of the Blau index is 0.5 if a similar number of men and women are present in an observed group. When more categories are applied, the maximum value of the Blau index gets closer to one. With respect to gender diversity, data on board members' gender from firms were collected from the annual reports. None of the boards were found to be female dominated, i.e. there were no boards with more than 50 percent women.

### **3.3 Control Variables**

The selection of these control variables was based on prior work by Campbell and Vera [15], Pudjiastuti and Mardiyah [68], Webb [69], Bathula [36], Carter et al. [39] and Dahya and Connell [70], which generally suggest that those control variables have relationships with firm performance.

#### **3.3.1 Firm size**

Firm size, proxied by total assets, is commonly used as a control variable in corporate governance research (Heenetigala [71]; Radlach and Schlemmbach [72]). These studies have found that firm size positively affects financial performance. In the present study, size was measured by the natural logarithm of total assets of the firms. The natural logarithm was used to normalize the data and minimize the value of standard deviation (Hair, Black, Babin and Anderson [73]).

#### **3.3.2 Leverage**

Leverage or financial gearing is used to evaluate the gearing or long-term financial stability or solvency of a business (Atrill, McLaney, Harvey and Jenner [74]). As leverage directly influences firm performance, it is included as one of the control variables in this study. Accordingly, leverage was measured by the ratio of debt to equity

#### **3.3.3 Board size**

Board size, that is the number of board members, is also known to influence firm performance. Board size was measured by the natural logarithm of the total number of board members, which are members of the Board of directors and the Top management. Board size has also been used as a control variable in prior

studies, such as Bathula [36], Campbell and Vera [15], Adams and Mehran [75], Rose [76] and Kiel and Nicholson [77].

### **3.4 Dependent Variables**

The dependent variables used in the study were firm:

#### **3.4.1 Return on assets**

Return on assets (ROA), the proxy for financial performance is the net profit before interest and tax expenses divided by the total assets (Atrill et al. [74]). ROA is used in order to measure both the efficiency and the effectiveness of assets (Adams and Mehran [78]; Jackling and Johl [79]). Prior studies employed ROA in examining the relationship between the presence of women board members and firm financial performance (see Dobbin and Jung [80]; Cabo, Nogues and Mangas [81]).

#### **3.4.2 Tobin's Q**

Tobin's Q was used to proxy the market-based financial performance of the firm. It defines firm value or market value of a company (Campbell and Vera [15,22]; Carter et al. [39,82]; Gul, Srinidhi and Ng [24]). Tobin's Q was calculated by summing the book value of total debt and the share price multiplied by the total number of outstanding share divided by the book value of total assets.

### **3.5 Data Analysis Method**

The statistical software used to run the multiple regression was EViews as it could analyse panel data, which is collected from a longitudinal study. The Hausman test was conducted beforehand to choose whether to use fixed or random effects to run the multiple regression analysis.

## **4. RESULTS AND DISCUSSION**

Table 1 presents the statistics of the number of women and men on boards of listed non-financial firms in Ghana. From Table 1, the numbers of women in 2007 were 22 out of 190 board members representing 11.58%. In 2008, the number of women decreased to 21. There were 24 in 2009, 26 in 2010 and a decrease to 23 was observed in 2011. In the whole, from 2007 to 2011, the number of women on board was 116 out of 907 representing 12.78%. This implies that representation of women on board is still low.

Table 2 presents the descriptive statistics on the data. The Blau index reflects the diversity in the gender of board members. It refers to the proportion of men and women board members. From 2007 to 2011, the value of the index on average was .97, with a minimum value of .64 and a maximum of 1.0. The minimum value of .64 means that there were firms in which the board members were both men and women, but the men were more than the women. In contrast, the value of 1.0 means there were firms in which all the board members were men. The mean value of 0.97 indicates under representation of women on the boards of Ghanaian listed non-financial firms.

Tobin's Q is a market-based financial performance measure or usually referred to as the firm value. In terms of the share value, a firm with the value of Tobin's Q higher than one is assumed to have a promising future. The mean value of Tobin's Q from 2007 to 2011 was 66435.51. Since the mean value is too large, the median value is chosen to explain the variable. The median value of Tobin's Q was 2.54. This result means that, on average, from 2007 to 2011 the value of Ghanaian non-financial firms reflected relatively positive signs of developing in the future. The ROA reflects the profitability of firms based on accounting numbers taken from the financial reports. The ROA is a ratio of net income and total assets. On average, from 2007 to 2011, the value of ROA was 1.38. The maximum value was 3.30 and the minimum was -63.53. The natural logarithm of total assets was the representation of the firm size. The log of the value of total assets was taken in order to normalize the data (Hair et al. [73]; Baltagi [83]). The maximum value of the logarithm of total assets from 2007 to 2011 was 26.01 and the minimum value was 8.10. The mean value was 16.74.

The board size was represented by the logarithm of total board numbers. The number of board members in the current study was the total numbers of directors. The mean value of the board members was 2.06, with the minimum value of 1.10 and the maximum of 2.64. The leverage was measured by debt to equity ratio. The smaller the value of this ratio, the more viable the firm is in terms of its ability to pay debt using its assets. When the value of the ratio is larger than one, the financial performance of the firm may be questionable since it clearly has a potential to not be able to pay the debt even after liquidating all the assets.

However, a small value of the ratio is also not a positive indicator since it demonstrates the inability of a firm to manage its assets to increase its income (Attrill et al. [74]). The mean value of the debt to equity ratio from 2007 to 2011 was 0.55. The maximum value was 2.05 and the minimum was .00. Publicly listed non-financial firms were seen to have a value of more than one, but many others had few debts compared to their assets.

Table 3 gives correlations between dependent variables ROA and Tobin's Q and independent and controlling variables; Blau's index, board size, leverage and size of the firm. This correlation shows association between these variables. From the table, there is a correlation between the variables. Some of the correlations are positive and others are negative. Some have weak, moderate, strong and very strong correlation strength. There is a positive relationship between the Blau index and ROA. However, this relationship is weak at a point of .03. The relationship between the Blau index and the Tobin's Q is also positive but very weak at the point of .02.

## 4.1 Panel Data Analysis

### 4.1.1 Gender diversity and firm financial performance

Table 4 shows that there was no statistically significant relationship between the Blau Index and Tobin's Q. There was a relationship between the board size, leverage and Tobin's Q. Board size significantly and negatively influences Tobin's Q. Moreover; leverage is significantly and positively associated with Tobin's Q. The firm size did not influence Tobin's Q. This means that gender diversity in the board of a firm, does not affect the market value of the firm. However, the larger the size of the board of the firm, the lower the Tobin's Q and the higher the value of debt to assets ratio, the higher the market-based financial performance of the firm. It should be noted here that fixed effect was utilized to analyse the relationship between the Blau Index and Tobin's Q. The results from the fixed effect could not be generalized to a wider population (Baltagi [83]; Reyna [64]) - it is specific to the samples only.

From Table 5 the results of the analysis showed that Blau Index and ROA had no statistical significant relationship. The size of the firm had a statistically significant negative relationship with ROA at the 1% significance level. The leverage,

on the other hand had a statistically significant positive relationship with ROA at the 5% significance level. The board size did not influence the ROA. However, the larger the size of the firm, the lower the ROA and the higher the value of debt to assets ratio, the higher the accounting-based financial performance of the firm. It should be noted that random effect was utilized to analyse the relationship between the Blau Index and ROA.

**Table 1. Statistics of the number of women on boards (2007-2011)**

Gender	2007	2008	2009	2010	2011	Total
Male	168	169	153	153	148	791
Female	22	21	24	26	23	116
Total	190	190	177	179	171	907
% of women to total	11.58	11.05	13.56	14.53	13.45	12.78
Average % of women	12.78					

Source: field work, 2013

**Table 2. Descriptive statistics**

Variables	Mean	Median	Std. deviation	Minimum	Maximum
Blau Index	.97	.98	.05	.64	1.00
Board size	2.06	2.08	.32	1.10	2.64
Debt to Equity	.55	.55	.32	.00	2.05
ROA	1.38	1.34	6.18	-63.54	3.30
Size	16.74	17.05	3.16	8.10	26.01
Tobin's Q	66435.51	2.54	301729.20	.00	1605507.00

Source: field work, 2013

**Table 3. Correlation matrix**

Variables	Blau index	Board size	Debt	ROA	Size	Tobin's Q
Blau Index	1.00					
Board size	.03	1.00				
Debt	.02	.09	1.00			
ROA	.03	.08	.37	1.00		
Size	.02	.29	-.29	-.42	1.00	
Tobin's Q	.02	.17	.01	-.04	-.03	1.00

Source: field work 2013

**Tables 4. Blau index and tobin's Q**

Tobin's Q	Coefficients	Std. error	Prob.
Blau index	-46617.43	174039.20	.79
Board size	-10337.83	4488.10	.02
Debt	1.03	.48	.04
Size	-505.55	2373.94	.83
C	205119.40	189364.60	.28

Source: field work, 2013

**Table 5. Blau index and ROA**

ROA	Coefficients	Std. error	Prob.
Blau index	114.15	95.76	0.24
Boardsize	3.62	2.33	0.12
Debt	0.00	0.00	0.03
Size	-8.17	1.50	0.00
C	1.09	97.93	1.00

Source: field work, 2013



## 5. CONCLUSION AND POLICY RECOMMENDATIONS

The aim of this study was to examine the effect of gender diversity on the financial performance of non-financial listed firms on the Ghana stock exchange. The results which is in line with the results of a study conducted by Bonn, Yoshikawa and Phan [58], showed no statistical relationship between gender diversity and firm financial performance which was measured by ROA and Tobin's Q. The representation of women on boards in Ghana is very much lacking and this has contributed to the outcome of the results of this study. The findings however seem to suggest that greater emphasis need to be taken by firms to appoint more women as board of directors so as to increase board diversity and also necessitate the need for the full implementation of the affirmative action policy on women. Until the percentage of women on boards in Ghana is increased, it cannot be determined how their presence will affect the performance of firms in the country.

### COMPETING INTERESTS

Authors have declared that no competing interests exist

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