



## Effect of Gender Diversity on the Financial Performance of Insurance Firms in Kenya

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### ABSTRACT

The aim of this study was to examine the effect of gender diversity on the financial performance of insurance firms in Kenya. The study analyzed data from the 55 insurance firms licensed by the Insurance Regularity Authority (IRA) in Kenya. Gender diversity was operationalized by the number of female directors serving on the boards of insurance firms operating in Kenya. Primary data was collected from a sample of 412 board directors, Chief Executive Officers (CEOs), Chief Finance Officers (CFOs), Audit Committee members (AUDIND) and Internal Auditors using a questionnaire instrument while secondary data was retrieved from audited financial reports of the year 2017. Data were analyzed using descriptive and inferential statistics. Firm performance was measured by the two accounting-based measures Return On Assets (ROA) and Return On Equity (ROE). The findings from the regression analysis indicate that gender diversity significantly and positively affects the financial performance of insurance firms in Kenya.

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## Introduction

Board diversity has become an important variable in corporate governance in recent times with a number of empirical studies seeking to investigate its impact on firm performance (Rose, 2007). In the diversity discourse, a number of variables are commonly highlighted, among them ethnicity, age, geography, education, gender, independence, skills, expertise and experience (Fraga & Silva, 2012). In some countries such the United States of America (USA), the definition of board diversity includes variables such as presence or absence of ethnic groups such as African Americans, Asians and Hispanics in the board (Carter, Simkins & Simpson, 2003). Such definitions of board diversity are, however, influenced by moral and social rationale rather than economic or business rationale according to Fairfax (2011). Current literature offers justification of gender diversity in the board both on business as well as ethical, moral or social grounds (Campbell & Minguez-Vera, 2008; Fairfax, 2011). For this study, gender diversity, or the presence and the proportion of women in the board, was looked at as a corporate governance mechanism variable, and its effect on firm performance was assessed. Early cross-sectional studies suggest that board gender diversity affects performance positively (Dobbin & Jung, 2011). Resulting from this, some have argued for the case of improved gender composition of the board on the merit of its effects on firm performance. For instance, according to Campbell and Minguez-Vera (2008), the gender composition of the board can have positive effect on both the quality of the board's monitoring role and firm performance. Miller and Triana (2009) argue that diversified boards are more innovative and improve firm reputation in society, therefore, leading to better performance. While there

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has been increased attention on the gender diversity variable and its effect on firm performance, most of the recent empirical studies were based data from the USA (Campbell & Minguez-Vera, 2008; Kang, Mandy & Gray, 2007).

Empirical studies on the effect of gender diversity on firm performance show mixed result at best. For instance, Carter et al., (2003) examined whether board diversity is associated with improved firm financial value in Fortune 1000 firms. Their findings indicate a significant positive relationship between the proportion of women or minorities on the board and firm value. This is consistent with the findings of Campbell and Minguez-Vera (2008), who investigated the effect of gender diversity on firm value using panel data from Spain and found a positive association between gender diversity and firm value. These findings imply that an increased number of female board memberships may generate higher economic gain for firms. Similarly, examining a sample Fortune 500 companies, Miller and Triana (2009) found a positive relationship between board gender diversity and both firm reputation and innovation. Fraga and Silva (2012) investigated the relationship between board diversity and firm performance of Brazilian companies listed in the BM & FBovespa Exchange with respect to gender, age, level of education and independence. Their findings indicate that while greater diversity in educational disciplines and board independence negatively affect performance, diversity in years of schooling and presence of women in board affected firm performance positively.

Despite the above positive association between gender diversity and firm performance, both Rose (2007) and Alvarado, Briones & Ruiz (2011) found no relationship between gender diversity and firm performance. Using data from the period of 1998 to 2001, Rose (2007) carried out a cross-sectional analysis of listed Danish firms. The findings of this study show that even in Danish society known for advancement in gender inclusivity, the boards of the sampled firms are predominantly male dominated, and that, contrary to other empirical research findings, there exists no significant relationship between firm performance as measured by Tobin's Q, and female board representation. Similarly, analyzing data from a sample of companies listed in the Madrid Stock Exchange for a period of three years from 2005 to 2007, Alvarado et al., (2011) concluded that the presence women in company boards is still limited and that board diversity is not related to firm success.

## **Literature Review**

Diversity at the workplace has been a hot topic of discussion both at company level and in academia for decades. This debate includes board diversity, a key corporate governance mechanism covering subjects such as ethnicity, age, geography, education, gender, independence, skills, expertise and experience (Fraga & Silva, 2012). Board gender diversity is therefore a key aspect of board composition (Wagana & Nzulwa, 2016). Among other diversity variables, gender diversity is a significant issue facing modern corporate boards according to Kang et al., (2007). Marinova, Plantenga and Remery (2010) argue that board gender diversity "is increasing approached as a value-driver in organizational strategy and corporate governance" (p.2). Hence, there is need to examine the effect of gender diversity on the performance of insurance firms in Kenya. A detailed review of literature follows to help reveal the existing empirical debate on the effect of gender diversity on performance.

Many recent empirical studies have attempted to determine how board gender diversity affects firm performance. An early attempt was that of Carter et al., (2003) who investigated Fortune 1000 firms to determine how gender diversity affects firm value. Though the definition of diversity, in this case, went beyond gender and included ethnicity, the study revealed significant positive relationship between board diversity and firm value. The study also found that the proportion of women on the board increased with firm size and board size and decreased when the board had higher number of insider directors. Erhardt, Werbel and Shrader (2003) analyzed data on the boards of 127 large US firms to investigate the effect of gender diversity on financial performance and found a positive association between board diversity and firm financial performance. This finding is consistent with the findings of a study by Catalyst (2004) that examined the link between board gender diversity and firm performance using data from 353 Fortune 500 companies. Measured by ROE and Total Return to Shareholders (TRS), the study reported that companies that had better representation of women on the board had higher performance on both ROE and TRS measures. According to this study, analysis of the same data by industry across five industries yielded the same result, confirming strong positive relationship between gender diversity and firm financial performance. In Spain, Campbell and Minguez-Vera (2008) analyzed six-year panel data from 68 non-financial listed firms to investigate the effect of gender diversity on firm value. The findings show that the percentage women serving in the board of directors has a positive impact on firm value. The study recommended improvement in the balance between men and women serving boards, potentially implying the necessity of regulatory influence. The work of Adams and Ferreira (2008) adds to the debate on the effect of board gender diversity. Their analyses of data from S&P 1500 companies led to a number of interesting conclusions. While the authors found the average effect of gender diversity of firm performance to be negative, the findings revealed that: (a) Diverse boards spent more effort the monitoring activities; (b) The turnover of CEOs of more diverse boards were found to be more sensitive to stock performance; and (c) Companies with more diverse boards showed higher equity-based compensation for directors. Adams and Ferreira (2008) conclude that any attempt to legislate to balance board gender diversity must be motivated by reasons other than contribution to firm performance. Fraga and Silva (2012) investigated diversity of Brazilian boards on variables such as gender, age, education and independence to ascertain the link between diversity and financial performance. Five-year data from 71 listed companies was analyzed and performance measure using Tobin's Q. The findings indicate that although female representation on Brazilian boards was minimal, those firms that had at least one female director outperformed those that did not have any female director. Joecks, Pull and Vetter (2012) evaluated six-year data from 151 listed German firms to determine any relationship between women directors and firm performance. Performance was measured by ROE. While their initial findings report negative association

between gender diversity and firm performance, strong positive relationship is reported after achievement what the authors referred to as a 'critical mass' of 30% female board representation. From a sample of 117 market leaders in Denmark, Sweden, Finland, Norway and Germany, Rose, Munch-Madsen and Funch (2013) found no support for any impact from female board representation either. However, they reported positive result on ROA, ROE and Return on Capital Employed (ROCE) from environmental factor relating to common law environment.

Similar to studies from developed markets, findings from emerging markets offer mixed results though a large number of empirical works show positivity between gender diversity and performance. While a number of studies from emerging markets (Julizaerma & Sori, 2012; Oba & Fodio, 2013; Shehata, 2013; Garba & Abubakar, 2014; Haldar, Shah & Rao, 2015; Jonty & Mokoteli, 2015; Tu, Loi & Yen, 2015; Oyewale, Oloko & Olweny, 2016; Hassan & Marimuthu, 2018; Lee-Kuen, Sok-Gee & Zainudin, 2017) report positive relationship, others (Yasser, 2012; Dabor, Isiyavwe, Ajagbe & Oke, 2015; Kilic, 2015; Abu, Okpeh, & Okpe, 2016; Solakoglu & Demir, 2016; Hassan & Marimuthu, 2018) indicate either none or negative association between the two variables. Several studies done in Malaysia on the relationship between gender diversity and performance have also reported positive results. For instance, Julizaerma and Sori (2012) looked at data from 280 listed firms using ROA as a proxy. The study reported positive association between gender diversity and financial performance, suggesting the positive influence of female directors. Using five-year data from 70 largest banks in the ASEAN region, Tu et al., (2015) measured the impact of board diversity on performance measured by ROA and ROE. The study covered both Board of Management (BOM) and Board of Directors (BOD) of the subject banks. The result showed significant positive correlation between the percentage of female BOM members and firm performance. However, that between female BODs and performance was found to be neutral. Both Khan *et al.* (2017) and Lee-Kuen *et al.* (2017) examined the role of gender diversity of listed non-financial firms in Malaysia, analyzing five-year data and measuring performance using ROE and Tobin's Q respectively. Both studies found that gender diversity and firm performance are positively associated. The findings of Haldar et al., (2015) in India confirmed this positive relationship and support the findings in Malaysia. In Nigeria, studies by Oba and Fodio (2013), Garba and Abubakar (2014) and Oyewale *et al.* (2016) produced similar trend. Oba and Fodio (2013) analyzed three-year data from 30 listed firms from all sectors except utilities and financial sectors. Using ROCE to measure of performance, the study reported a positive association between both the presence female directors and their proportion in the board and firm performance. The authors recommended managerial and regulatory interventions to achieve gender balance in boards of companies. Garba and Abubakar (2014) employed ROA, ROE and Tobin's Q to measure how board gender diversity impact performance of insurance firms in Nigeria. Six-year data from 12 listed insurers was analyzed. Their findings revealed gender diversity in the boards of insurers in Nigeria has positive influence on firm performance. The findings of Oyewale *et al.* (2016) from listed manufacturing firms in Nigeria is consistent with the earlier findings from Nigeria reviewed here. Both Shehata's (2013) findings from Egypt and that of Jonty and Mokoleti (2015) from South Africa support the positive effect board gender diversity has on firm financial performance as reviewed here.

While many global empirical studies report a positive relationship between gender diversity and firm performance, a significant number of studies also show negative or no meaningful relationship between the two variables. Findings from several studies are reviewed here. Yasser (2012) examined how gender diversity affects performance of firms listed in the Karachi Stock Exchange (KSE-100 Index). Three-year data for 90 firms was analyzed using two-stage least square estimation. Performance was measured through EVA. The results indicated that there is no significant relationship between gender diversity and firm performance in Pakistan, implying that the business case for explaining the contribution of gender diversity to performance is not supported. Dabor et al., (2015) drew the similar conclusion based on 10-year panel data from a sample of 248 randomly selected Nigerian firms using ROE and ROA as a measure of firm performance. The work of Abu *et al.* (2016) in the Nigerian banking sector lends support to these findings too. In Turkey, Kilic (2015) examined five-year panel data from a sample of 26 banks to investigate how gender diversity affects performance using ROA and ROE as a measure of performance. The findings revealed a negative relationship between the variables. Consistent with Yasser (2012), the study concludes no support for the economic argument of gender diversity of boards. Solakoglu and Demir (2016) reached conclusion slightly varying from that of Kilic (2015). From a sample of 89 listed multi-sector firms from Turkey, Solakoglu and Demir reported a weak relationship between gender diversity and firm performance. Finally, based on five-year data from a sample of 60 top listed Malaysian firms selected on market capitalization criteria, Hassan and Marimuthu (2018) examined the effect of gender diversity on firm value. The findings revealed that gender diversity has no impact on firm value in Malaysia. Though statistics on gender diversity of Kenyan boards is limited (Ekadah & Mboya, 2012), a number of empirical studies investigating the effect of female directors on firm performance in Kenya can be found in extant literature too. To begin with, Ekadah and Mboya (2012) analyzed 12-year data from 32 commercial banks in Kenya, documenting on average one female director in a board of eight directors, a good indication of the absence women from financial sector boards. According to the authors, the period of study covered two board cycles of six years each, a sufficient basis for drawing conclusions and generalizing for the diversity of sector boards and assessing its effect on firm performance. The study concluded that the gender diversity of boards has no effect on the performance commercial banks in Kenya. Letting, Aosa and Machuki (2012) also investigated the Kenyan industry to assess the effect board gender diversity on firm performance. Letting et al., (2012) examined data from a survey of 40 firms listed on the NSE. Using ROA and ROE to measure performance, the study revealed significant positive relationship between gender diversity and firm performance measured by ROA. This finding is contrary to that of Ekadah and Mboya (2012). However, letting et al., (2012) found dividend yield and women on the board to be negatively correlated. A similar study by Tarus and Chepkuto (2014) reported findings consistent with Letting et al., (2012) on the measure of ROA.

Gitundu, Sifunjo, Kibet and Kiprop (2015) and Gitundu, Kiprop, Kibet and Kisaka (2016) both examined the effect of corporate governance on the performance of privatized Kenyan companies, focusing on variables that include board gender diversity and its effect on performance. Gitundu et al., (2015) analyzed seven-year data from listed public firms to measure the effect of change of corporate governance of privatized public corporations. While the study reports a positive effect of corporate governance on performance, the board gender diversity variable was found to have a negative effect on ROA. Gitundu et al., (2016), on the other hand, reports women directors having a positive influence on cost efficiency of privatized public firms and recommend the enhancement of diversity in corporate boards to attract managerial and technical expertise.

Similarly, Nyatichi (2016) examined data from firms listed in the NSE to investigate the relationship between corporate governance and firm performance. Contrary to Gutundu et al., (2015), Nyatichi (2016) reported a positive relationship between gender diversity and firm performance measured by ROA and ROE. Similar studies done Mohamed and Atheru (2017) on Airtel Kenya and Rana and Mwangi (2017) on NSE quoted agricultural firms reported positive correlation between board gender diversity and performance. In the case Rana and Mwangi (ibid), a positive and significant relationship between gender diversity and ROA has been found. To bring this empirical review to conclusion, let's look at results from recent meta-analysis of extant studies. First, Pletzer, Nikolova, Kedzior and Voelpel (2015) investigated the relationship between female directors and firm performance by meta-analyzing 20 studies covering 3097 companies published in peer-reviewed academic journals. Half of these studies were done in developing countries. The sample study in this analysis had an average board size of eight directors and female representation of 14%. Only those studies that used ROA, ROE and Tobin's Q as proxy for firm performance were selected for analysis. The study found an overall mean weighted correlation of between the percentage of women on boards and firm performance to be small or insignificant ( $r = .01$  at 95% confidence interval). The study concluded that the mere presence of female directors does not translate to improved firm performance. Second, in a study that statistically combined data from 140 independent studies, Post and Byron (2015) investigated how gender diversity affects firm performance measured by ROA and ROE, among other measures. The study finding indicates a positive association between female board representation and accounting measures (ROA, ROE) and such a positive relationship is more pronounced in countries with higher shareholder protection. The study also found that female representation is positively related to the two key board functions of strategy and monitoring. However, the authors concluded that there is no significant relationship between female representation in the board and firm market performance. Finally, Terjesen, Couto and Francisco (2015) investigated whether gender diversity influences board independence and effectiveness. Terjesen et al., (2015) analyzed data 3876 firms from 47 countries using ROA and Tobin's Q as proxies for firm performance. The study recorded an average board size of 5.40 directors and female board representation of 0.1 (average 1 female director). The study revealed that firms with higher number of female directors show better performance on ROA and Tobin's Q measures. The study also suggests that higher board diversity enhances both board independence and overall effectiveness.

H0:Based on this empirical review, it was hypothesized that there exists no statistically significant relationship between board gender diversity and firm performance.

## Research and Methodology

The study used correlational research design and covered all the 55 insurance (52) and reinsurance (3) firms licensed by Kenya insurance industry regulator (IRA) in the years 2017 and 2018. The subject of the study were 645 board members, audit committee members, CEOs, CFOs and internal auditors distributed as follows:

**Table 1: Population and sample distribution**

	Category of respondents	Population	Sample
1	Board of directors	369	186
2	Audit committee	111	61
3	CEOs	55	55
4	CFOs	55	55
5	Internal auditors	55	55
	TOTAL	645	412

Source: Authors

A statistical sample of board of directors and audit committee was derived using the model 
$$n = \left( \frac{Z_{0.25} * \sigma}{\xi} \right)^2$$
 where, n is the sample size,  $\xi$  is the margin error (equal to half the confidence interval width) of 0.25 for board of directors and the audit committee members, and  $\sigma$  is the standard deviation of the number of board of directors and audit committee members. For the remaining three categories, a census was done given that the companies have one each. The primary data was collected using a questionnaire instrument with a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The secondary data for the population of the study and the audited financial reports for year 2017 were acquired from the databases of IRA and the Association of Kenya Insurers (AKI). The data collection instruments were subjected to pilot testing for reliability using Cronbach's Alpha and for validity using KMO and Bartlett's Test of Sphericity.

The data was analyzed using descriptive and inferential statistics. For descriptive analysis, frequency distribution, percentage, means and standard deviation were computed. For inferential analysis, factor analysis, correlations, chi-square, analysis of variance and regression analysis were done. As a prerequisite analysis for regression tests, tests for normality, multicollinearity test, test for heteroskedasticity and test for homoskedasticity were carried out.

## Result and Discussion

The study sought to investigate the effect of gender diversity (GENDIV) on the performance of insurance firms in Kenya. This section presents the findings of the study under the gender diversity variable.

### Percentage distribution for gender diversity

Table 2 presents the percentage distribution of the parameters of gender diversity. It shows that 60.2% of the respondents either agreed (47.6%) or strongly agreed (12.6%) that the proportion (%) of women directors in the board positively affects the performance of insurance firms in Kenya, while 35.1% were either opposed (10.2%) or uncertain (24.9%). On the question of whether firms with more female directors will perform better than those with more male directors, 53.3% were positive while 42.8% were either negative (16.5%) or uncertain (26.3%). On whether female directors are more objective than male directors, 52.6% of the respondents were affirmative while 43.1% were either negative (17.1%) or uncertain (26%). When asked whether female directors are less susceptible to conflict of interest than male directors, 54.5% of the respondents were in agreement while 42.2% were either opposed (16.5%) or uncertain (25.7%) about the statement. The study also found that 49.4% of the respondents either agreed or strongly agreed that female directors are more independent minded the male directors. Notably, 47.4% of the respondents to the same statement either disagreed (18.6%), strongly disagreed (4.8%) or were uncertain (24%). On the aspect of the protection of stakeholder interests, 55.4% of the respondents were positive that female directors are more likely to protect the interests of all stakeholders that male directors, while 41.4% either disagreed (9%), strongly disagreed (7.8%) or were uncertain (24.6). On the parameter of board transparency, 59.3% of the respondents opine that boards with more female directors are more likely to be more transparent than those with more male directors, while 37.5% either disagreed (7.8%), strongly disagreed (5.1%) or were uncertain (24.6%) about the statement. When questioned on the parameter of corporate disclosure, the study found that 56.5% of the respondents agreed (31.4%) or strongly agreed (25.1%) that boards with more female directors are more likely to provide complete corporate disclosure than those with more male directors. On the contrary, 40.2% of the respondents disagreed (9%), strongly disagreed (12%) or were uncertain (19.2%) about the statement. Finally, 62.8% of the respondents were affirmative about whether the law should specify the minimum representation female directors in corporate boards. However, 33.9% of the respondents were either opposed (15.9%) or were uncertain (18%) about the assertion.

**Table 2:** Percentage for gender diversity

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree	Missing
The proportion (%) of women directors in the board positively affects the performance of insurance firms in Kenya	4.8%	5.4%	24.9%	47.6%	12.6%	4.8%
Firms with more female directors will perform better than those with more male directors	7.8%	8.7%	26.3%	32.0%	21.3%	3.9%
Female directors are more objective than male directors	10.2%	6.9%	26.0%	26.9%	25.7%	4.2%
Female directors are less susceptible to conflict of interest than male directors	9.6%	6.9%	25.7%	29.9%	24.6%	3.3%
Female directors are more independent minded the male directors	4.8%	18.6%	24.0%	29.9%	19.5%	3.3%
Female directors are more likely to protect the interests of all stakeholders that male directors	7.8%	9.0%	24.6%	30.8%	24.6%	3.3%
Boards with more female directors are more likely to be more transparent than those with more male directors	5.1%	7.8%	24.6%	35.9%	23.4%	3.3%
Boards with more female directors are more likely to provide complete corporate disclosure than those with more male directors	12.0%	9.0%	19.2%	31.4%	25.1%	3.3%
The law should specify the minimum representation female directors in corporate boards	8.4%	7.5%	18.0%	34.7%	28.1%	3.3%

Source: Authors

The findings imply that while the aggregate response on the role of female directors in the board is marginally (55%) positive, there seems to be significant uncertainty in the opinion of the respondents about this role. On average, 24% of the respondents were uncertain about various parameters of gender diversity in the board.

**Descriptive statistics for gender diversity**

Table 3 presents the descriptive statistics of the parameters for gender diversity. The study shows that the mean range of gender diversity was from 3.31 to 3.57. The median and mode for the study was 4.00 and 4 respectively. The standard deviation ranged from 1.213 to 1.428. This reflects relatively smaller dispersion in the respondents’ opinion around more female directors and firm performance than around more female directors and complete corporate disclosure.

**Table 3:** Descriptive statistics for gender diversity

	Valid	Missing	Mean	Median	Mode	Std. Deviation
The proportion (%) of women directors in the board positively affects the performance of insurance firms in Kenya	334	0	3.43	4.0	4	1.213
Firms with more female directors will perform better than those with more male directors	334	0	3.39	4.0	4	1.332
Female directors are more objective than male directors	334	0	3.39	4.0	4	1.418
Female directors are less susceptible to conflict of interest than male directors	334	0	3.43	4.0	4	1.360
Female directors are more independent minded the male directors	334	0	3.31	3.0	4	1.289
Female directors are more likely to protect the interests of all stakeholders than male directors	334	0	3.46	4.0	4	1.337
Boards with more female directors are more likely to be more transparent than those with more male directors	334	0	3.55	4.0	4	1.255
Boards with more female directors are more likely to provide complete corporate disclosure than those with more male directors	334	0	3.39	4.0	4	1.428
The law should specify the minimum representation female directors in corporate boards	334	0	3.57	4.0	4	1.364

Source: Authors

**Cross-Tabulation between demographic information and GENDIV**

The cross-tabulation in Table 4 presents the relationship between gender of the respondents and gender diversity. The results show that 42.7% of the male respondents were either negative (13.9%) or uncertain (28.8%) that female directors are more likely to protect the interests of all stakeholders than male directors, while 52.1% were positive. Of the female respondents, 61.3% were positive that female directors are more likely to protect the interests of all stakeholders than male directors while 16.8% were uncertain about the statement. Surprisingly more female respondents (21.8%) than male respondents (13.9%) were negative about the statement that female directors are more likely to protect the interests of all stakeholders. Overall, 61% of female respondents and 52% of male respondents were positive about the statement that ‘Female directors are more likely to protect the interests of all stakeholders than male directors’. This finding implies that male respondents were less confident that their female counterparts were likely to perform in the board than themselves.

**Table 4:** Cross-tabulation between gender and GENDIV

		Female directors are more likely to protect the interests of all stakeholders than male directors					Total	
		Missing	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree	
<b>Gender</b>	Male	11	13	17	62	60	52	215
		5.1%	6.0%	7.9%	28.8%	27.9%	24.2%	100.0%
	Female	0	13	13	20	43	30	119
		0.0%	10.9%	10.9%	16.8%	36.1%	25.2%	100.0%
<b>Total</b>		11	26	30	82	103	82	334
		3.3%	7.8%	9.0%	24.6%	30.8%	24.6%	100.0%

Source: Authors

**Factor analysis (EFA) for gender diversity**

The results presented in Table 5 indicate the KMO and Bartlett’s test statistic reveal the suitability of the data for factor analysis. The results show a KMO statistic of 0.917 and a statistically significant Bartlett’s test of p-value 0.000, which is less than 0.05.

**Table 5:** KMO and Bartlett’s test for gender diversity

KMO and Bartlett's Test		
<b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</b>		.917
<b>Bartlett's Test of Sphericity</b>	Approx. Chi-Square	2463.312
	df	36
	Sig.	0.000

Source: Authors

Table 6 shows the loading for the measurement model. The coefficients ranged from 0.483 to 0.892, which indicates that the variables are almost perfectly related to factor pattern and have a clear factor structure with an acceptable level of cross loadings.

**Table 6:** Component matrix for gender diversity

Component Matrix <sup>a</sup>		Component
The proportion (%) of women directors in the board positively affects the performance of insurance firms in Kenya		.483
Firms with more female directors will perform better than those with more male directors		.821
Female directors are more objective than male directors		.851
Female directors are less susceptible to conflict of interest than male directors		.882
Female directors are more independent minded the male directors		.878
Female directors are more likely to protect the interests of all stakeholders that male directors		.892
Boards with more female directors are more likely to be more transparent than those with more male directors		.858
Boards with more female directors are more likely to provide complete corporate disclosure than those with more male directors		.861
The law should specify the minimum representation female directors in corporate boards		.736

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Source: Authors

**Chi-Square test for gender diversity**

The probability of the chi-square test statistic (chi-square = 55.217) was p = 0.000, less than the alpha level of significance of 0.05. The research hypothesis that differences in gender diversity are related to differences in firm performance is supported by the analysis in Table 7.

**Table 7:** Chi-square test for gender diversity

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
<b>Pearson Chi-Square</b>	55.217 <sup>a</sup>	16	.000
<b>Likelihood Ratio</b>	51.193	16	.000
<b>Linear-by-Linear Association</b>	4.435	1	.035
<b>N of Valid Cases</b>	334		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 22.

Source: Authors

### One-Way ANOVA for Gender Diversity and Firm Performance

There is a statistically significant mean score difference between gender diversity and firm performance (see Table 8). The study reveals that gender diversity has a significant mean score difference with firm performance  $F(26, 307) = 8.470, p < 0.01$ .

**Table 8:** One-way ANOVA for GENDIV and firm performance

ANOVA					
Gender Diversity					
	Sum of Squares	df	Mean Square	F	Sig.
<b>Between Groups</b>	162.535	26	6.251	8.470	.000
<b>Within Groups</b>	226.578	307	.738		
<b>Total</b>	389.113	333			

Source: Authors

### Correlation between Gender Diversity and Firm Performance

The analysis in Table 9 shows the correlation between gender diversity and firm performance. It indicates that gender diversity is significantly correlated with firm performance,  $(r = 0.542^{**}, P < 0.01, N = 334)$ .

**Table 9:** Correlation between GENDIV and Firm Performance

Correlations			
		Firm Performance	Gender Diversity
<b>Firm Performance</b>	Pearson Correlation	1	.542**
	Sig. (2-tailed)		.000
	N	334	334
<b>Gender Diversity</b>	Pearson Correlation	.542**	1
	Sig. (2-tailed)	.000	
	N	334	334

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Authors

### Regression analysis, hypotheses testing for GENDIV and firm performance

#### Regression Analysis

Table 10 presents the model summary for gender diversity, with an  $R^2$  of 0.294. This means that 29.4 percent of the variation in firm performance in insurance firms is explained by gender diversity. The analyzed outcome points out that the calculated F-Statistic is  $F(1, 332) = 137.970, p = 0.000 < 0.05$ . Hence, the model is significant in predicting the relationship between gender diversity and firm performance. A unit change in gender diversity causes an increase of 0.514 units in firm performance. From the regression analysis, the findings show that gender diversity positively and significantly influences the performance of insurance firms in Kenya.



**Table 10:** Model summary for gender diversity

<b>Variables</b>	<b>B</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>
<b>(Constant)</b>	2.041	.173	11.798	.000
The proportion (%) of women directors in the board positively affects the performance of insurance firms in Kenya	-.012	.048	-.241	.809
Firms with more female directors will perform better than those with more male directors	.177	.059	3.004	.003
Female directors are more objective than male directors	-.125	.065	-1.934	.054
Female directors are less susceptible to conflict of interest than male directors	.263	.068	3.880	.000
Female directors are more independent minded the male directors	.116	.071	1.646	.101
Female directors are more likely to protect the interests of all stakeholders that male directors	.108	.070	1.544	.123
Boards with more female directors are more likely to be more transparent than those with more male directors	-.104	.064	-1.632	.104
Boards with more female directors are more likely to provide complete corporate disclosure than those with more male directors	.072	.064	1.130	.260
The law should specify the minimum representation female directors in corporate boards	-.030	.051	-.581	.561
<b>Gender Diversity</b>	<b>0.514</b>	<b>0.044</b>	<b>11.746</b>	<b>0.000</b>
F statistics (p value)	137.970(0.000)			
<b>R squared</b>	<b>0.294</b>			

*Dependent Variable: Firm Performance*

**Source:** Authors

### Hypothesis testing for gender diversity

The hypothesis was tested at 95% confidence level using the linear regression model whose results are presented in Table 10. The hypothesis testing criteria was to accept the null hypothesis if the calculated p-value was greater than the critical p-value of 0.05 and to reject the null hypothesis if the calculated p-value was less than the critical p-value of 0.05. The null hypothesis, in this case, was that gender diversity has no effect on firm performance. The calculated p-value for gender diversity is 0.000 which is less than the critical p-value of 0.05. This meant that the null hypothesis had to be rejected. It was concluded that gender diversity has a significant effect on firm performance.

### Discussions

The objective of the study was to assess the effect of gender diversity in the board on the performance of insurance firms in Kenya. It was found that there exists a statistically significant correlation between gender diversity and firm performance. Firms with more female directors were found to perform better than firms with more male directors. This finding concurs with that of Erhardt, Werbel and Shrader (2003) who analyzed data from the boards of 127 large US firms to investigate the effect of gender diversity on financial performance and found positive correlation between board diversity and firm financial performance. This finding is also consistent with that by Catalyst (2004) who examined the link between board gender diversity and firm performance using ROE and Total Return to Shareholders (TRS) as measures of firm performance and found that companies that had better representation of women on the board had higher performance on both ROE and TRS measures. However, the current study contradicts that of Yasser (2012) who examined how gender diversity affects performance of firms listed in the Karachi Stock Exchange and found that there is no significant relationship between gender diversity and firm performance.

The result of the current study contradicts with the findings of Dabor et al., (2015) who found no significant relationship between proportion of women on the board and firm performance in Nigeria. It also contradicts Kilic (2015) who examined five-year panel data from a sample of 26 banks to investigate how gender diversity affects performance using ROA and ROE as a measure of performance and found a negative relationship between gender diversity and firm performance. Hassan and Marimuthu (2018) examined the effect of gender diversity on firm value and reveals that gender diversity has no impact on firm value in Malaysia. This agrees with the finding of Ekadah and Mboya (2012) who conclude that gender diversity of boards has no effect on the performance commercial banks in Kenya. The result of the current study supports the finding of Letting et al., (2012) who examined data from 40 firms listed on the NSE in Kenya using ROA and ROE to measure performance and revealed a significant positive relationship between gender diversity and firm performance. Finally, a study by Joecks et al., (2012) shows a negative association between gender

diversity and firm performance, but strong positive relationship is reported after achievement of a critical mass of 30% female board representation.

The present study found that female directors are less susceptible to conflict of interest than male directors, hence improving firm performance. This finding agrees with that of Campbell and Minguez-Vera (2008) who analyzed six-year panel data from 68 non-financial listed firms in Spain to investigate the effect of gender diversity on firm value. Their findings illustrate that the percentage of women serving on the board of directors has a positive impact on firm value. The finding of this study also concurs with that of Fraga and Silva (2012) who investigated gender diversity of Brazilian boards and found that although female representation on Brazilian boards was minimal, those firms that had at least one female director outperformed those that did not have any female director. Contrary, Adams and Ferreira (2008) found a negative effect of gender diversity and firm performance and concluded that any attempt to legislate to balance board gender diversity must be motivated by reasons other than contribution to firm performance.

Another variable of interest to the study under the gender diversity objective was whether boards with female directors were likely to be more transparent than those with more male directors. The study found a negative but insignificant relationship between gender diversity and transparency. It did not find it significant that boards with more female directors are more likely to be more transparent than those with more male directors. This finding contradicts that of Julizaerna and Sori (2012) who analyzed data from 280 listed firms using ROA as a proxy for performance and found a positive association between gender diversity and financial performance, suggesting the positive influence of female directors. Oba and Fodio (2013) analyzed three-year data from 30 listed firms, using ROCE to measure performance, and reported positive association between both the presence female directors and their proportion in the board and firm performance. They recommended managerial and regulatory intervention to achieve gender balance in boards of companies. Gitundu et al., (2015), on the other hand, examined the effect of corporate governance on the performance of privatized Kenyan companies, focusing on variables that include board gender diversity and its effect on performance and found a negative relationship between board gender and firm performance.

## Conclusions

This study examined the effect gender diversity on the performance of insurance firms in Kenya. The variable was analyzed in terms of proportion of women directors, firm performance, objectivity of directors, conflict of interest, independent mindedness, protection of stakeholder interest, transparency, corporate disclosure, and minimum female representation in the board. The mean for parameters of gender diversity ranged from 3.31 to 3.57. The study reveals that the standard deviation ranged from 1.213 to 1.418, which means that the variables were highly dispersed. The findings from the One-way ANOVA reveals a statistically significant mean score difference between gender diversity and firm performance with a p-value of 0.000, which is significant at 0.01. Gender diversity caused 29.4 percent variation in firm performance, ( $R^2=0.294$ ). The linear regression analysis shows that gender diversity significantly predicts firm performance  $\beta = 0.514$ ,  $t(334) = 11.746$ ,  $p < 0.01$ .

This study established that gender diversity affects firm performance and drew to a conclusion that gender diversity in the boards positively and significantly affects the performance of insurance firms in Kenya. The study also concluded that company boards with more women directors are more transparent, provide more complete corporate disclosure, and are less susceptible to conflict of interest, leading to improved firm performance.

Gender diversity has a positive significant effect on the performance of insurance firms in Kenya. The study recommends insurance companies to consider female directors in their boards as they are found to be less susceptible to conflict of interest than male directors. Reduced conflict of interest within the board helps avoid negative energy and hostility within the company, avoids rushed and costly decisions and ensures sustainable business relationships, while pursuing positive engagement for the mutual benefit of the firm and all other stakeholders.

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