

Effect of Interlocking Directorship on Discretionary Earnings Quality: Evidence from Nigeria

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Authors' contributions

This work was carried out in collaboration between all authors. Author PEI designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author OJO guided and supervised the whole study. Author OM guided and supervised the whole study. All authors read and approved the final manuscript.

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ABSTRACT

Aims: To ascertain the effect of firm size on the relationship of interlocking directorship on discretionary earnings quality of quoted companies in the non-financial sector of Nigeria.

Study Design: This study uses quantitative design.

Place and Duration of Study: The study focuses on Nigeria stock Exchange for a period of 15 years from 2002 to 2016.

Methodology: This study has used purposive sampling method; Panel data of 105 companies were extracted from a total population of 130 non-financial companies. Regression and correlation analysis was done including trend analysis.

Results: The beta coefficients of the resulting model, that is, the betas for the variables interlocking directorship and firm size were both statistically significant with p-values = 0.002 and 0.001, respectively which are less than 0.05. Similarly, the coefficient for the combined variables (interlocking directorship and firm size) was also statistically significantly with a p-value of 0.004 which is lower than 0.05. This implies that the null hypothesis $\beta_1=0$ is rejected and the alternative

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hypothesis $\beta_1 \neq 0$ is taken to hold indicating that the model $Y = 0.425$ (Interlocking directorship) + 0.064 (firm size) - 0.028 (interlocking directorship and firm size) + e , is significantly fit. The model $DisEQ = \alpha + \beta$ (Interlocking directorship x firm size) holds as suggested by the above result.

Conclusion: This suggests that there is a significant negative linear relationship between the interlocking director and company's discretionary earnings quality. Therefore, companies with interlocking directors on the board are prone to good discretionary earnings quality. Thus a company with a higher number of interlocking directors reduces discretionary earnings practices.

Keywords: Interlocking director; discretionary earnings quality; corporate governance; stock exchange.

ABBREVIATIONS

Corporate Governance (CG): System by which business corporations are directed and controlled (Cadbury Committee [1]). The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation such as, the board, managers, shareholders and other stakeholders, and spells out the rules and procedure for making decisions on corporate affairs. By doing this, it also provides the structure through which the company's objectives are set and the means of attaining those objectives and monitoring performance (OECD [2]).

Interlocking Directorship (ID): Directors that sits on several boards of companies, whose experience can add great value to boards where they are presence (Johansen and Pettersson [3]). Director is a board member of at least two companies, the director's interlocks these companies (Dooley [4]).

Earnings Quality (EQ): Financial reporting should provide information that is useful to present and potential investors and creditors and other users in making a rational investment, credit and similar decisions (Conceptual Framework [5]).

1. INTRODUCTION

The corporate world is getting dynamic by the day; shareholders are engaging professional managers to manage the affairs of the companies to ensure wealth maximization and report the true state of affairs expected by stakeholders [6]. However, information and reports by the managers to stakeholders may not have been accurate. The composition of the board of director is very vital to the survival of any company and particularly the composition of the board to prevent account manipulation, wealth depletion, and loss of lifetime investment. The presence of an interlocked director on the board should aid fair reporting of the affairs of the firm [7]. Public funds have been used to bail out failed corporation, but when the boards of directors are manned by people of integrity, honesty and courageous, then the list of fraudulent reporting, misleading financial statements, and discretionary earnings adoption will be a thing of the past [8].

Extant literature [9,10] posit that the presence of interlocking director enhanced the strategic performance of quoted companies, also the

importance of interlocking directors in corporate boards has gained considerable attention from eminent scholars. Franses and Non [11] suggest that the presence of interlocking director has enhanced financial performance as a result of interlocking director's wealth, unique knowledge and expertise. The quality of decision relating to the business alliance, corporate acquisition, CEO selection, level of discretionary earnings quality, financial reports and corporate governance performance has improved [8,12].

When a director is a board member of at least two companies, the director locks these companies [13]. As a result, when multiple of these interlocking directors exist for a set of companies, a board-of-directors' network is formed. Thus companies with interlocking directors are expected to have outstanding performance than others. This study, therefore, aims to unearth the effect of interlocking directors on discretionary earnings quality among quoted non-financial companies on Nigeria stock exchange. The study hypothesized that interlocking director does not have an effect on discretionary earnings quality of quoted companies on the Nigeria stock exchange.

There have been a number of empirical studies such as [14,15,16] on interlocking directorship and earnings quality. Cassell, Myers and Seidel [17] investigate the relation between the interlocking directorship and valuation allowance and reserve accounts and accruals-based earnings management, the findings show that there is well-built evidence that the level of accruals-based earnings management is lower among organisations with interlocking directorship than among organisations without interlocking directorship. It was also revealed that exclusion of interlocking directorship rather than the exclusion of a comprehensive schedule outlining activity in the allowance and reserve accounts that affect earnings management. Thus the presence of interlocking directorship influences the quality of earnings. Franses and Non [11] investigate Dutch companies on the influence of interlocking directors on performance, the find revealed a slightly negative effect of fresh interlocking director on company performance with a time lag after the link is created, while Rommens, Cuyers and Deloof [9] study on Dutch companies on impact of interlocking directors on performance using different data set, findings showed a positive impact of interlocking directors on performance. Cohen, Cohen, West and Aiken [18] find a positive relation between interlocking directors and profitability (Return on Assets - ROA).

Nam and An [10] investigate the impact of the network of interlocking directors' network on Korean-listed firm's value and performance using panel dataset as drawn from 7307 firm-year observations during the period 2000–2014. The result revealed that the existence of interlocking directors affects firm value and performance. Also, interlocking director network has significant and negative effects on firm values measured as Tobin's Q and performance measured as the return of assets and total factor productivity.

Also, Yeh, Chen and Wu [14] examine the association between interlocking directorship and earnings quality, using a sample from quoted companies in Taiwan and Financial-related data are extracted from the Taiwan Economic Journal database. The study covers a period of 10 years, the final sample was 502 companies from an initial 958 companies. The variables were operationalized, earnings quality along four accounting-based attributes. The findings show there is a strong significant association between the presence of interlocking directorship and each of these earnings attributes, implying that

interlocking directorship mechanism can influence earnings quality of financial reporting. In addition, Taiwanese companies show significant improvement on four accounting-based earnings-quality attributes. Also, more transparent firms indeed convey a higher quality of earnings attributes [16,17].

The justification for this study is that it contributes to existing body of knowledge and further extends current literature on the influence of firm size on interlocking directorship and discretionary earnings quality. This study's finding offers results on the effect of interlocking directorship on earnings quality of quoted companies in Nigeria based on regulatory, economic and market operational idiosyncrasy. The result helps regulators, investors, and stakeholders to be able to make the new regulatory framework and better engagement of directors by investors and stakeholders.

1.1 Hypothesis

The hypothesis for this study was stated in the null form.

H_0 = The moderating effect of firm size on interlocking directorship has no significant effect on discretionary earnings quality of listed companies on Nigeria Stock Exchange

2. MATERIALS AND METHODS

This study used panel data to ascertain the effect of interlocking director on discretionary earnings quality over fifteen years period from January 2002 to December 2016. The panel was used because the study observation contains more than one variable over multiple time periods for the same firms. Also, this study involved the use of simple regression, t-test, and correlation. The regression was subject to diagnostic tests.

The study involved the use of secondary data from sample quoted company audited financial reports covering the period January 2002 to December 2016. The data is restricted to the companies that trade at the Nigeria Stock Exchange and have data for the relevant years that this study covers. This is because the data is easily available and that since they are quoted companies their corresponding financial statement data that is needed for this study is also available. The information obtained from the audited financial statements of the quoted

companies was also compared with the documentation of the security and exchange commission, Nigeria stock exchange fact books to ensure accuracy in data collection.

Various tests were done to ascertain the non-collinearity of data set and to be certain that Ordinary Least Squares (OLS) assumptions are addressed, Variance Inflation Factors (VIF) was used on the variance of an estimator, The VIF formula - $1 / (1-R^2)$. While modified Kolmogorov-Smirnov (K-S) test called Lilliefors test for normality was performed to test for normality on the data set, using Statistical Product and Service Solutions – SPSS 24, an IBM software [19, p. 58]. Also, linearity test, Autocorrelation test, and heteroscedasticity test were performed on the data set. To guide against the problem of heteroscedasticity, Breusch-Pagan test was applied to the data set. T-test and F-Statistic at 5% level of statistical significance was used to examine the significance of coefficients of variables in the model. The explanatory power of corporate governance on earnings quality for the total period of observation, adjusted coefficient of determination (R^2) was performed. Also, Ordinary Least Square (OLS) simple, regression analysis, and Pearson correlation test were performed on data set.

2.1 Model Specification

The regression model is specified in the equation (1):

$$DisEQ = \beta_0 + \beta_1 (ID_{it}) + (FS_{it}) + \epsilon_t \tag{1}$$

Where:

β_0 = regression output the constant

β_1 . = the coefficient of the independent variable

DisEQ = earnings quality measure which is discretionary earnings.

ID_{it} = interlocking directorship in time t

FS_{it} = firm size in time t

Interlocking directorship was ascertained by the presence of directors who are also board members of other quoted companies. If present it was assigned 1 and otherwise 0, while firm size was taken as the Net Total asset (Total asset – total liabilities). Discretionary Earnings quality 14 years rolling standard deviations of error in regression of changes in EPS 1 year lagging in EPS.

Table 1. Sectoral Breakdown of sampled Nigerian Listed Companies

Sector	Non financial Companies	Sampled Companies
Agriculture	5	5
Conglomerate	5	5
Construction & Real Estate	9	7
Consumer Goods	27	26
Healthcare	11	11
ICT	9	4
Industrial Goods	21	18
Natural Resources	5	4
Oil and Gas	14	10
Services	23	15
Total	130	105

Source: Author's, (2017)

3. RESULTS AND DISCUSSION

This study investigated the effect of interlocking directorship practice moderated by firm size on discretionary earnings quality. The findings of this study are presented in this section including the discussions thereof of the study based on the research objectives and research hypothesis stated in section 1. The results involve descriptive and inferential statistics.

3.1 Trend Analysis for Discretionary Earnings

The results of the trend analysis for the discretionary earnings quality on yearly basis revealed that there was a significant decrease in quality of earnings between 2002 and 2003 and a slight improvement occurred from 2004 to 2005. There was another sharp improvement in quality between 2005 and 2006 and that level was maintained between 2008 and 2009 while a slight decrease in quality was also experienced and remained same till 2013 and by 2014 it had decreased slightly in quality and an improvement was experienced in 2015 but a marginal decrease was suffered by 2016 as presented in Fig. 1. The trend, however, recorded a significant increase in 2003. The fall in discretionary earning quality between 2006 and 2013 can be attributed to manager's discretion as a result of the financial crises among quoted companies occasioned by the global financial meltdown and its ripple effect on Nigeria economy.

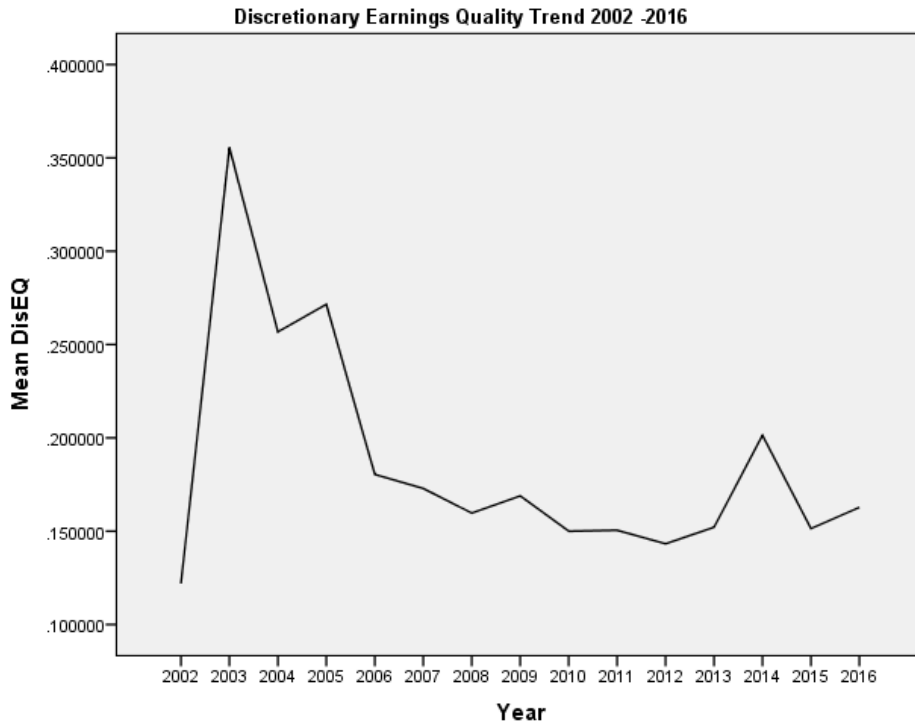


Fig. 1. NSE Non financial companies' Discretionary Earnings Quality Trend

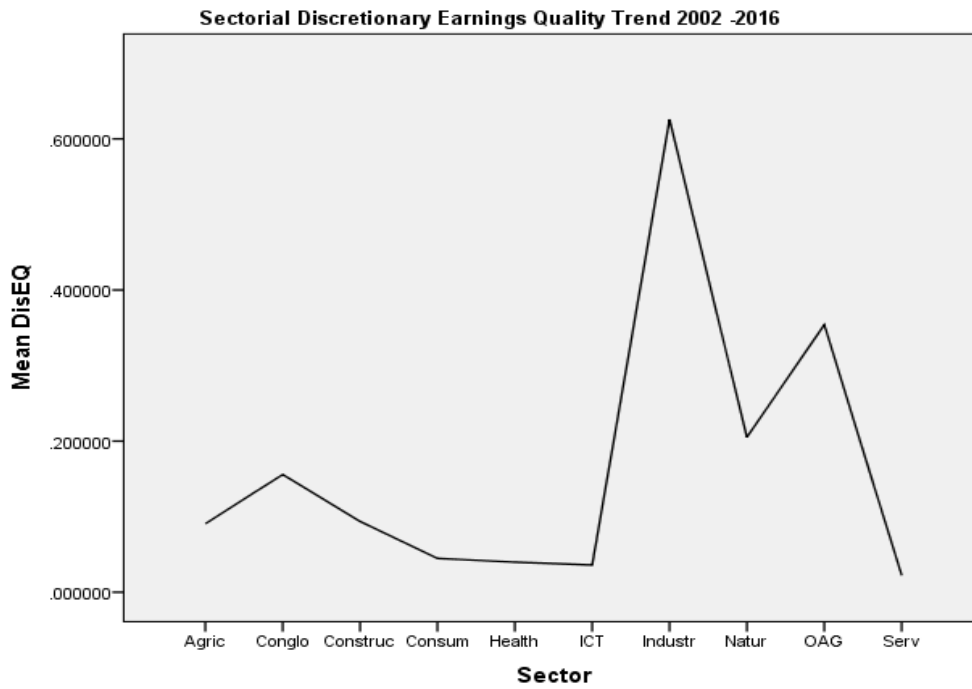


Fig. 2. NSE Non Financial Sectors Discretionary Earnings Quality Trend

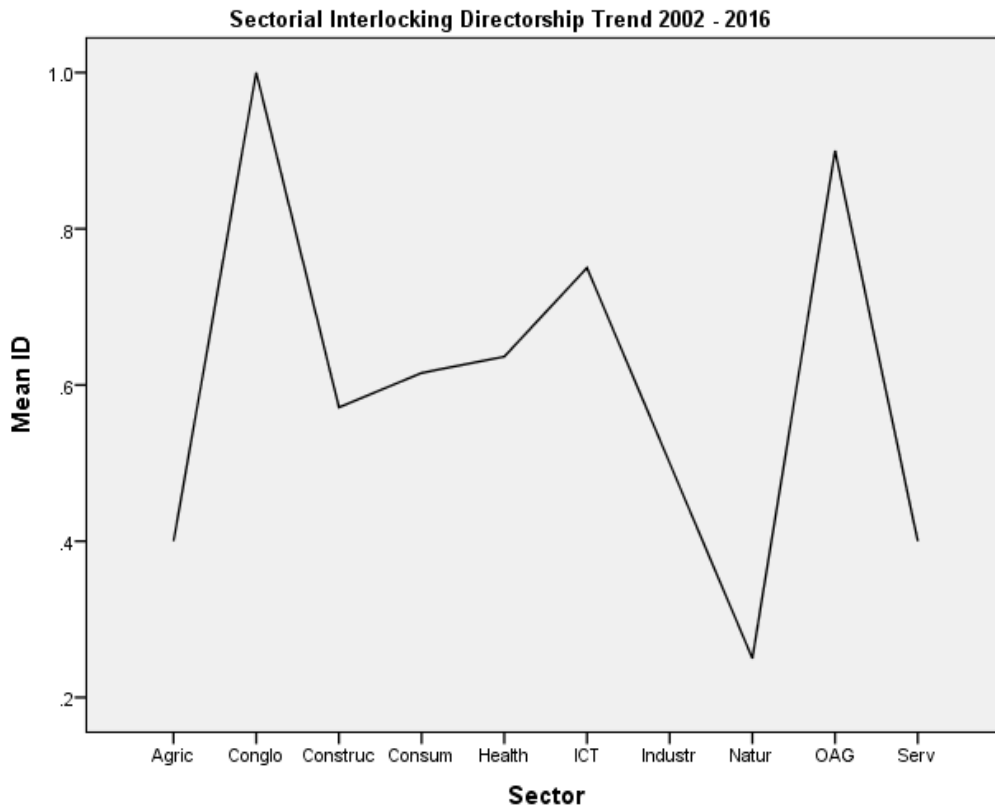


Fig. 3. NSE Non Financial Sectors Interlocking Directorship Trend

In like manner, the trend analysis for discretionary earnings quality for all the ten sectors considered in this study was presented in Fig. 2. It can be observed from the results that the Industrial sector had the lowest discretionary earnings quality during the period under consideration followed by oil and gas and natural sectors respectively. While the information Computer and Technology sector companies recorded the highest discretionary earnings quality. Also, it was observed that none of the sectors had discretionary earnings quality below 0.1 indicating that the companies have poor earnings quality.

Similarly, the result of the trend analysis for all the ten sectors considered in this study for the years under consideration was presented in Fig. 3. It revealed that conglomerate sector had the highest number of interlocking directors on the board of the sector, followed by oil and gas sector. The sector with the least number of interlocking directors is natural sector of the non financial sector of the Nigerian economy.

3.2 Inferential Analysis

The data for the study were subjected to diagnostic tests before being used for inferential analysis. The inferential analyses for this study were Pearson correlation analysis and regression analysis.

3.2.1 Diagnostic test

The different diagnostic tests were carried out in this study and they included normality test, autocorrelation test (also known as a test for independence) and homoscedasticity test.

3.2.1.1 Normality test

A One-Sample Kolmogorov-Smirnov Test was performed to test the normality of the dependent variable discretionary earnings quality. The null and alternative hypotheses were as follows:

- H_0 : The data was normally distributed
- H_1 : The data was not normally distributed

The results obtained in Table 2 indicate that Kolmogorov-Smirnov Z was 0.345 (P value = 0.000). Since the P value is lower than 0.05, the null hypothesis was rejected and concluded that the data was not normally distributed. It was also revealed in the Table that Shapiro-wilk was .351 and P value = .000 respectively indicating that the data are closely related and can, therefore, be relied on for statistical analysis.

Table 2. One-Sample Kolmogorov-Smirnov Test

	Discretionary earnings quality
N	1574
Kolmogorov-Smirnov Z	.345
Shapiro-Wilk	.351
Sig	.000
Asymp. Sig. (2-tailed)	.000

3.2.1.2 Test for Autocorrelation-Durbin Watson statistic for independent and dependent variables

The Durbin-Watson d-test was used to interrogate serial correlation in the data. When d value is approximately 2, an indication is that there is neither positive nor negative first order autocorrelation. Therefore, the null hypothesis that there was no autocorrelation in the data collected was purposed and tested for this study with Durbin Watson Statistics. The results as presented in Table 3 revealed that the Durbin Watson Statistics was 2.1970 with a p-value of 0.073. Since the p-value was greater than 0.05, the null hypothesis which stated that there was no autocorrelation in the data was not rejected. Furthermore, this implies that the residuals were independent of each other. As revealed that Durbin Watson Statistics for lag 1 was 2.1970 with a p-value of 0.073 while the Durbin Watson Statistics for lag 2 and 3 were 2.1875 and 1.9779 with a p-value of 0.096 and 0.108 respectively. Since the p-value was greater than 0.05, the null hypothesis which stated that there was no autocorrelation in the data was accepted. It can, therefore, be said that the discretionary earnings for the year 2003 were not a function of discretionary earnings for the year 2004. Discretionary earnings for 2009 was also not a

function of discretionary earnings for 2010 and soon.

3.2.1.3 Test for Homoscedasticity- Bruisch Pagan statistics for earnings quality

Cohen et al. [18] and Barley [20] posit that heteroscedasticity violation makes it difficult to gauge the true standard deviation of the forecast errors, usually resulting in confidence intervals that are too wide or too narrow. The existence of **heteroscedasticity** is a major concern in the application of regression analysis, including the analysis of variance, as it can invalidate statistical **tests** of significance that assume that the modelling errors are uncorrelated and uniform—hence that their variances do not vary with the effects being investigated. Therefore, to prevent the problem associated with homoscedasticity in research, it is useful to test for homoscedasticity in this study. Thus this study tested the null hypothesis that the data deployed for this study was homoscedastic in variance using Bruisch pagan test.

The result of the test presented in Table 4 revealed that the test statistics was 4.015108 while the P value was 0.55 indicating that the data collected was not heteroscedastic at variance and thus necessitating the acceptance of null hypothesis that the data collected was homoscedastic at variance and can be relied on for regression analysis.

Table 3. Durbin Watson Statistics for Autocorrelation

Lag	D.W Statistics	P-Value
1	2.1970	0.073
2	2.1875	0.096
3	1.9779	0.108

3.2.1.4 Test for collinearity for discretionary earnings

As far as collinearity is concerned, two tests the Tolerance and the Variance Inflation Factor (VIF) tests were used in this study. The Tolerance and VIF values are compared to 1. When the values are close to 1, the data is assumed not to contain statistically significant levels of multicollinearity particularly if it falls between the

Table 4. Test for homoscedasticity

	Test Statistics	Degree of Freedom	Prob.
Bruisch Pagan	4.015108	5	0.5472

values of 1 and 5. As it was observed from Table 5. The tolerance statistics shows .788 for interlocking directors while the VIF results revealed 1.269 for interlocking directors. It, therefore, implies that since the tolerance results are close to 1 and variance inflation factors values are all between 1 and 5. The data does not contain a statistically significant level of multicollinearity.

Table 5. Tolerance and the Variance Inflation Factor (VIF) tests for collinearity

Collinearity statistics		
	Tolerance	VIF
ID	.788	1.269

3.3 Correlation Analysis

Correlation has been defined by Kothari and Garg [21] as a statistical measure that indicates the extent to which two or more variables fluctuate together. A positive correlation indicates the extent to which those variables increase or decrease in parallel while a negative correlation indicates the extent to which one variable increases as the other decreases. Rumsey [22] stated that Pearson Correlation Coefficient is the most widely used method of measuring the degree of relationship between two variables. It ranges from -1 to +1. A correlation coefficient of -1 indicates a perfect negative correlation, 0 indicates no correlation while +1 indicates a perfect positive correlation. It is a statistical test that informs a researcher on the magnitude and direction of the relationship between two variables.

3.3.1 Pearson correlation analysis for interlocking director and discretionary earnings quality

The Pearson Correlation Coefficient of interlocking directors and discretionary earnings quality was computed and established as -0.521 (P value =0.000) indicating a negative relationship between the interlocking director and discretionary earnings quality. From Table 6, it could then be concluded that there is a moderate negative linear relationship between the two variables since the correlation coefficient is between 0.5 and -0.6 in line with [22] categorization of the correlation coefficient. Falato, Kadyrzhanova and Lel [23] conducted a study of the relationship between an interlocking directorship and earnings among American companies for ten years. The results of the study

indicate an inverse relationship between the two variables.

Table 6. Pearson correlation matrix for independent and dependent variables

	DisEar	ID
DisEar	1	
ID	-.521**	1

* DisEar- Discretionary Earnings, ID- Interlocking Directors

3.4 Regression Analysis

In this subsection, regression analysis was carried out on all the independent variables and the dependent variable in order to ascertain their statistical effect of each independent variable on the dependent variable.

3.4.1 The moderating effect of firm size on the relationship between interlocking directorships and discretionary earnings quality

In order to establish the moderating effect of firm size on the relationship between interlocking directorship and discretionary earnings quality, regression analysis was carried out. The result of the regression analysis as presented in Table 7 revealed that R=0.806 and R²=0.650. This implies that 65% of the variation in discretionary earnings quality can be attributed to the variation of the combined effect of firm size and interlocking directorships. The remaining 35% of the variation can be explained by the variation of other variables such as board size, outside directorship, ownership concentration, and audit assurance system.

Table 7. Model summary for interlocking directorship, firm size, and discretionary earnings quality

R	R Square
.806 ^a	.650

a. Predictors: Interlocking directorships, Firm Size, Interlocking directorship*Firm Size

Furthermore, F-test was carried out to test the null hypothesis that there is no moderating effect of Firm size on the relationship between the interlocking directorship and discretionary earnings Quality. The analysis of variance test in Table 8 reveals that the significance of the F-statistic 0.000 is less than the table value of 0.05 meaning that null hypothesis is rejected and can be concluded that there is a moderating effect of

Firm size on the relationship between the interlocking directorship and Discretionary Earnings Quality.

To test the significance of regression relationship between interlocking directorship, firm size, moderating variable interlocking director*firm size and discretionary earnings quality, the regression coefficients(β), the intercept (α), and the significance of all coefficients in the model were subjected to the t-test to test the null hypothesis that the coefficient is zero. The null hypothesis state that, β (beta) = 0, meaning there is no moderating effect of firm size on the relationship between interlocking directorship and discretionary earnings quality as the slope β (beta) = 0 (no moderating effect of Firm size on the relationship between the two variables). The results on the beta coefficient of the resulting model in Table 9 revealed that the coefficient for interlocking directorship was 0.425 which is significantly different from 0, while the p- value = 0.002 which is lower than 0.05. The coefficient for Firm size= 0.064 was also significantly different from 0 with a p-value=0.001 which is also less than 0.05. Similarly, the coefficient for the combined variable (interlocking directorship and firm size) was -0.028 which is also significantly different from 0 with a p-value of 0.004 which is lower than 0.05.

This implies that the null hypothesis $\beta_1=0$ is rejected and the alternative hypothesis $\beta_1 \neq 0$ is taken to hold indicating that the model $Y=0.425$ (Interlocking directorship) + 0.064 (firm size – 0.028 (interlocking directorship and firm size) + e, is significantly fit. The model $DisEQ = \alpha + \beta$ (Interlocking directorship x firm size) holds as suggested by the above result. This confirms that

there is a significant moderating effect of firm size on the relationship between interlocking directorship and discretionary earnings quality of the listed companies in Nigeria. Therefore, companies with interlocking directors on the board are prone to good discretionary earnings quality. Thus, a company with a higher number of interlocking directors reduces discretionary earnings quality. This result can be interpreted in the context of the agency theory, as the presence of an interlocking director increases the board ability to monitor; and experience from other company, aid to curb the increases in discretionary earnings quality activity, and influence the board's ability to act as an effective monitoring mechanism in mitigating agency conflicts [24].

Increased monitoring through the presence of interlocking director is expected to result in a reduction of information asymmetry and reduction in agency costs, thereby causing an increase in market share and profitability [25]. In addition, De Nez and Da Cunha [26] investigate the influence of interlocking directorship on firms in Brazil, using a sample of 235 companies, the findings reveal that interlocking directorship in Brazilian companies has an inverse influence on earnings.

The results corroborate those of Drago, Millo, Ricciuti, and Santella [27] who studied the effect of interlocking directorship (ID) on company earnings for main Italian firms listed on the Italian stock exchange for 10 years. The study used a diff-in-diff approach, the results showed a negative correlation between the presence of interlocking directors and earnings performance of Italian companies one.

Table 8. ANOVA Results for Interlocking directorship, Firm Size versus DisEQ

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	2617.328	3	872.443	972.524	.000 ^b
Residual	1409.331	1571	.8971		
Total	4026.659	1574			

a. Dependent Variable: Discretionary Earnings Quality

a. Predictors: Interlocking directorship, Firm Size, and interlocking directorship*Firm Size

Table 9. Coefficient for Interlocking directorship, firm size, and discretionary earnings quality

	Unstandardized coefficients		Standardized Coefficients	T	Sig.
	B	Std. error	Beta		
Interlocking directorship	0.425	.071	.723	3.185	.002
Firm Size	0.064	.003	.869	14.279	.001
Interlocking directorship *Firm Size	- 0.028	.006	-.737	-4.131	.004

a. Dependent Variable: Discretionary Earnings Quality

This finding is also supported by Santos, Da Silveira and Barros [28] who investigated the simultaneous participation of directors in 320 Brazilian-listed companies for 3 years period. It uses simple regression and the findings show that interlocking directorates are a common practice in Brazil. Firm value is, on average, negatively impacted by interlocking directorships, especially in firms in which a majority of directors hold three or more board positions. The findings are much more in medium size firms relative to large firms. Furthermore, the study finds evidence of a nonlinear relationship between interlocking and return on assets. Kaczmarek, Kimino and Pye [29] investigated the relationship between interlocking director's ties and firm performance and firm size. The study used a sample of UK-listed financial and utility companies over a ten year period. The study revealed that interlocking directors may not add value to the firm especially large firms.

Siudak [30] studied the effect of interlocking directorship on corporate value and earnings of companies on Warsaw Stock Exchange, the findings reveal that the presence of interlocking directorship leads to increase in earnings and by extension increase in corporate value. Nam and An [10] reported that interlocking directors have significant and negative effects on firm values measured as Tobin's Q and performance measured as the return of assets and total factor productivity.

4. CONCLUSION

This study sought to examine the effect of interlocking directorship on discretionary earnings quality. The results reveal that there is the influence of interlocking directorship on discretionary earnings although 60% of the variation can be attributed to the other corporate governance mechanism such as board diversity and age of board.

This confirms that there is a significant negative linear relationship between the interlocking director and company's discretionary earnings quality. Therefore, companies with interlocking directors on the board are prone to good discretionary earnings quality. Thus a company with a higher number of interlocking directors reduces discretionary earnings practices.

This, therefore, implies that the null hypothesis was rejected and thus conclude that interlocking directorship has a significant effect on

discretionary earnings quality among quoted non financial companies in Nigeria. Listed companies in Nigeria should allow more interlocking directors as this act increases board ability to monitor the practice of discretionary earnings and interlocking directors wealth of experiences from other company aid to curbed increases in discretionary earnings practices, influences the board's ability to act as an effective monitoring mechanism in mitigating agency conflicts.

Regulatory bodies and policy makers should formulate guidelines that will ensure an increase in the number of interlocking directors on the board of listed companies in Nigeria. This will impact the Nigeria economy by way of trust in our financial reports issued by companies and by extension increase in the flow of foreign direct investments and local investments leading to high gross domestic product and employment.

5. AREAS FOR FUTURE RESEARCH

This study had various limitations the solution to which may call for further studies to address them. Firstly, it focused on the non financial listed companies leaving out the financial sectors that supply funds to drive the economy. The financial sector earnings quality would be vital to understanding the effect of corporate governance on it. Accordingly, a study is suggested to test the effect of corporate governance on earnings quality of all listed companies (Financial and non financial) to evaluate if the findings would be the same to the ones in this study. Secondly, the study did not consider small and medium size organizations, their corporate governance aspects as well as their earnings quality attributes. The findings of this study are therefore limited to public listed companies yet small and medium size organizations play a significant part in the Nigerian economy. It, therefore, seems suitable to recommend a study to evaluate the influence of corporate governance on earning quality of small and medium size organizations.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Cadbury A. Report of the committee on the financial aspects of corporate governance. Gee; 1992.
2. OECD O. The OECD principles of corporate governance. *Contaduría y Administración*. 2004;(216).
3. Johansen TR, Pettersson K. The impact of board interlocks on auditor choice and audit fees. *Corporate Governance: An International Review*. 2013;21(3):287-310.
4. Dooley PC. The interlocking directorate. *The American Economic Review*. 1969; 59(3):314-23.
5. International Accounting Standards Board, IASB. *Conceptual Framework of Financial Reporting 2014 (IFRS)*; 2014. Available:<http://www.iasplus.com> (Accessed 19th June, 2016)
6. Osemeke L, Adegbite E. Regulatory multiplicity and conflict: Towards a combined code on corporate governance in Nigeria. *Journal of Business Ethics*. 2014;133(3):431–451. DOI: 10.1007/s10551-014-2405-3
7. Kroll M, Walters Ba, Wright P. Board vigilance, director experience, and corporate outcomes. *Strategic Management Journal*. 2008;29:363–382.
8. Mcdonald Lm, Westphal Jd, Graebner Me. What Do They Know? The effects of outside director acquisition experience on firm acquisition performance. *Strategic Management Journal*. 2008;29:1155–1177.
9. Rommens A, Cuyers L, Deloof M. Interlocking directorates and business groups: Belgian evidence. Paper presented at the annual meeting of the Financial Management Association. 2008; Prague.
10. Nam HJ, An Y. The effect of interlocking directors network on firm value and performance: Evidence from korean-listed firms. *Global Economic Review*. 2017;1-23.
11. Franses PH, Non M. Interlocking boards and firm performance: Evidence from a new panel database. Working Paper; 2007. SSRN: 978189.
12. Diestre L, Rajagopalan N, Dutta S. Constraints in acquiring and utilizing directors' experience: An empirical study of new-market entry in the pharmaceutical industry. *Strategic Management Journal*. 2015;36(3):339-359.
13. Dooley PC. The interlocking directorate. *American Economic Review*. 1969;59(3): 314–323.
14. Yeh YMC, Chen HW, Wu MC. Can information transparency improve earnings quality attributes? Evidence from an enhanced disclosure regime in Taiwan. *Emerging Markets Finance and Trade*. 2014;50(4):237–253. DOI: 10.2753/ree1540-496x500414
15. Yeo HJ, Pochet C, Alcouffe A. CEO reciprocal interlocks in French corporations. *Journal of Management and Governance*. 2003;7:87–108.
16. Eshleman JD, Guo P. Do Big 4 auditors provide higher audit quality after controlling for the endogenous choice of auditor?. *Auditing: A Journal of Practice & Theory*. 2014;33(4):197-219.
17. Cassell CA, Myers LA, Seidel TA. Disclosure transparency about activity in valuation allowance and reserve accounts and accruals-based earnings management. *Accounting, Organizations and Society*. 2015;46:23–38. DOI: 10.1016/j.aos.2015.03.004
18. Cohen J, Cohen P, West SG, Aiken LS. *Applied multiple regression/correlation analysis for the behavioral sciences*. Routledge; 2013.
19. Hejase AJ, Hejase HJ. *Research Methods, A Practical Approach for Business Students*, (2nd edition), Philadelphia: Massadir Inc; 2013.
20. Barley SB. Corporate governance and firm performance. *Journal of Corporate Finance*. 2009;14:257-273.
21. Kothari CR, Gaurav Garg. *Research methodology*, Third edition, new. Age International Publishers, New Delhi; 2014.
22. Rumsey DJ. *How to interpret a correlation coefficient r*. *Statistics For Dummies*; 2016.
23. Falato A, Kadyrzhanova D, Lel U. Distracted directors: Does board busyness hurt shareholder value?. *Journal of Financial Economics*. 2014;113(3):404-426.
24. Xie B, Davidson WN, DaDalt PJ. Earnings management and corporate governance: The role of the board and the audit committee. *Journal of Corporate Finance*. 2003;9(3):295–316. DOI: 10.1016/s0929-1199(02)00006-8

25. Nelson D, Artiach T, Lee D, Walker J. The determinants of corporate sustainability performance. *Accounting & Finance*. 2010; 50(1):31-51.
26. De Nez E, Da Cunha PR. Influence of board interlocking of the selection of the audit firm on the mandatory caster. *Contaduría y Administración*; 2017.
27. Drago C, Millo F, Ricciuti R, Santella P. Corporate governance reforms, interlocking directorship and company performance in Italy. *International Review of Law and Economics*. 2015;41:38-49.
28. Santos RL, Da Silveira ADM, Barros LA. Board interlocking in Brazil: Directors' participation in multiple companies and its effect on firm value and profitability. *Latin American Business Review*. 2012;13(1): 1-28.
29. Kaczmarek S, Kimino S, Pye A. Interlocking directorships and firm performance in highly regulated sectors: The moderating impact of board diversity. *Journal of Management & Governance*. 2014;18(2):347-372.
30. Siudak D. Interlocking directorates strategy vs. corporate value. *Financial Sciences* 2017;1(30). e-ISSN: 2449-9811.

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