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Governance Attributes and Real Activities Manipulation of Listed Manufacturing Firms in Nigeria

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Abstract

This paper provides empirical evidence to the effect of governance attributes on real activities manipulation practices of listed manufacturing firms in Nigeria.. The study used four variables for audit committee characteristic-audit committee independence, financial literacy, audit committee size and audit committee meetings and four features of board of directors- inside directors, outside directors, gray directors and women directors for the purpose of explaining and predicting real activities manipulation practice by managers in the listed Nigerian manufacturing firms. Longitudinal panel multiple regression is used as a tool of analysis. The probability of Hausman specification test became less than 5% for all regressions, fixed effect model is interpreted as a panel specification. Secondary data was extracted from the audited annual reports of the sampled firms from 2007–2012. The results reveal that outside directors; gray directors and women directors have found to be positively associated with real activity manipulation which implies that, managers' opportunistic manipulative accounting can be constrained or deter by them. While the inside directors could not prevent managers from abusive accounting. On the other hand, audit committee independence; financial literacy; audit committee size and audit committee meetings are significant in checkmating real activities manipulation. by management in preparing financial statements of the sampled firms. It is therefore recommended among others that the regulatory authorities like SEC and NSE should enforce strict compliance with corporate governance best practice for shareholders and other stakeholders' interest to be fully protected. Also, the financial reporting counsel of Nigeria should make it mandatory that board of listed manufacturing firms should increase the proportion of inside directors on the board as they appear to be efficient in deterring manipulative accounting practice of their companies.

Keywords: Governance Attributes, Real Activities Manipulation, Manufacturing Firms & Nigeria

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1. Introduction

Financial reported earnings have powerful influence on a full range of business activities of a firm and its management decisions. The earnings could either affect investors' evaluation of the firm or impact contractual outcomes which are related to financial leverage or compensation of managers. Therefore managers have strong intentions to adjust earnings numbers to the desirable level. The flexibility of current accounting principles also provides managers with considerable ability to adjust accounting earnings. The practice that the management used judgment in financial reporting and in structuring transaction to alter financial earnings is called "earnings management" (Healy and Wahlen, 1998).

Published annual reports are required to provide various users - shareholders, employees, suppliers, creditors, financial analysts, stockbrokers, management, and government agencies – with timely and reliable information useful for making prudent, effective and efficient decisions. The extent and quality of information within these published reports vary from company to another and also from country to country. Literature reveals that the level of reliable and adequate information by listed companies in developing countries lags behind that in developed ones and government regulatory forces are less effective in driving the enforcement of existing accounting standards (Antonio, 2010).

Real activities manipulation is a purposeful action to alter reported earnings in a particular direction, which is achieved by changing the timing or structuring of an operation, investment or financing transaction, and which has suboptimal business consequences. The idea that firms engage in real activities manipulation is supported by the survey evidence in Roychowdhury (2006); Gunny (2005); Liu (2009); Inaam, Fatma and Khmouss (2012) In particular, the opinion of many of the corporate financial officers (CFOs) is that every company takes actions such of these real activities manipulation to deliver earnings, as long as the real sacrifices are not too large and are within Generally Accepted Accounting Principles (GAAP). In addition, in order to deliver earnings, management would decrease research and development (R&D), advertising and maintenance expenditures, postpone a new project, all of which are real activities manipulation to manage earnings Gunny (2009).

If real activities manipulation turns out to be unexpectedly high (low), managers will decrease (increase) the amount of accrual-based earnings management they carry out.

Effective corporate governance mechanisms safeguard the rights of investors in getting true and fair information of the company (Daniel and Zarowin, 2010).

One high-level governance device, which has been mandated to ensuring the quality of financial reporting, is the audit committee. This is because board of directors often delegates the responsibility for oversight of the financial statement reporting process to an audit committee (Yu, 2008). Given these developments, there has been an emphasis on the need to improve that corporate governance mechanism i.e. audit committee which is saddled with the responsibility of ensuring quality financial reporting process (Chen and Zhou, 2005).

The last few years witnessed a series of accounting and financial scandals leading investors to discredit financial information (Chapman, 2008). In fact, sudden firms' bankruptcies led investors to devote more interest to earnings management policy phenomenon. The earnings management studies state that insiders select accounting techniques and accruals in order to modify reported earnings, misinform investors, cause overvaluation, influence contractual outcomes (Chen 2008, Kim et al. 2010 and Nicola, 2006). This practice tends to mislead financial market and to hide serious risk perception and firm valuation. Thus, wrong firm communication considerably reduces analysts' and investors' valuation precision. Much of the attention focuses on accrual type earnings management such as aggressive revenue recognition and misstatement of inventories or accounts receivable etc. Companies manipulate earnings not only by accruals but also by taking or postponing production or operating actions that adjusts the earnings towards the desired target. The latter type is labeled as "real" earnings management. In contrast to accruals management, real earnings management is likely to lead to value reduction by misallocation of appropriate corporate activities. Prior researches have primarily studied the role of corporate governance in the context of accruals management (Nicola 2006; Dabor and Adeyemi 2009; Zhou and Chen 2008).

Furthermore, firms can manage earnings by reducing discretionary expenses such as R&D, advertising, and maintenance.

Because these are expensed in the period they are incurred, a reduction in their spending directly flows through to increase income. Thus, another potential characteristic of firms doing real earnings manipulation is lower discretionary expenses. Last, Managers can affect current period earnings through abnormal production. Using overproduction as the example, while it can produce seemingly higher current period earnings, this action will likely eventually generate lower future period earnings and cash flows. Overproduction can spread fixed overhead costs over a larger number of units, which lowers fixed costs and consequently total costs per unit as long as the reduction in fixed costs per unit is not offset by any increase in marginal cost per unit. Since the unsold production goes to inventory, overproduction effectively allocates more overhead costs to inventory and less to the cost of goods actually sold in the current period.

Assuming relatively fixed revenue per unit, the lower cost of goods sold increases current period operating margin if the holding costs recognized in the current period on the extra inventory from overproduction is smaller than the reduction in cost of goods sold. Since production and holding costs on the overproduced items will lead to higher current production costs that are not recovered through the current period sales, researchers can detect overproduction through a positive level of current period Abnormal production-operating costs. Thus, another potential characteristic of real earnings management firms is that they exhibit high production costs. This study seeks to answer the question whether and what type of corporate governance characteristics constrains all these activities of real earnings management.

This paper aims at providing empirical evidence to the effect of governance attributes on real activities manipulation practices of listed manufacturing firms in Nigeria. It is therefore hypothesized that governance attributes have no significant impact on the real activities manipulation practices of listed manufacturing firms in Nigeria. This study will further enrich the literature of relationship between board monitoring and financial reporting by selecting Nigerian firms for analysis. By now, most previous studies in this field are U.S based, and a few have provided empirical evidence for UK cases. However they only focus on the effects of the proportion of outside directors and the existence of audit committee on the level of earnings management..

The findings of the study will serve as a basis of policy making as well as theoretical and practical contributions to investors, business manager, regulatory bodies (SEC, NSE), standard setters like financial reporting council of Nigeria, educators, researchers, accountants, auditors and scholars particularly in the field of accounting.

2. Literature Review

This section of the paper review empirical studies of both board and audit committee attributes married with real activity manipulation.

Roychowdhury (2006) conducted a study of earnings management through real activities manipulation and empirically came up with methods to detect real activities manipulation via cash flow from operation, production costs, and discretionary expenses variables that captured the effect of real operation suggested to be better than of accruals by Dechow, Kothari and Watts (1998) and others to derive normal levels of cash flow from operation using multiple regression. The study span from 1987 – 2001 with the primary aiming zero target as is more important at the annual level due to the seasonality in business.

The cross sectional analysis reveals that these activities are less prevalent in the presence of sophisticated investors, and concluded that the activities do not contribute to long –run value of a firm.

Amy (2007) study evidence on the tradeoff between real manipulation and accruals manipulation and examined whether managers use real and accrual manipulation as substitutes in managing earnings for a sample of law suit within 1992 – 2003 using model of Roychowdhury (2005). The finding reveals that managers determine real manipulation before accruals manipulation in broad sample, while managers use real and accruals manipulation as substitute in the small sample.

2.1 Board of Directors and Real Activity Manipulation

Springer (2008) examines whether and how the participation of women in the firm's board of directors and senior management do not enhances firm's financial reporting or ability of checkmating opportunistic behaviour of management.

The study finds that women are often appointed to leadership positions under problematic organizational circumstances associated with greater risk of failure and criticism, however, having more women on corporate board and top management does not seem to generate significant excess return and cannot restrained managers opportunistic behaviour. This finding is contrary with that of Adams, Gray and Nowland (2010) who studied does gender matter in the boardroom? Evidence from the market reaction to mandatory new director announcement, the study examine why gender may be value- relevant. As many countries are introducing initiatives to promote gender diversity, cost and benefits of boardroom diversity in publicly traded companies are ultimately borne by shareholders. Their evidence suggests that shareholders may value female directors because they are better monitors and they may alleviate value- decreasing shareholder's conflicts and managers opportunistic behavior.

Visvanathan (2008) examines corporate governance and real earnings management considering the role corporate governance (board characteristics) play in restraining real earnings management for a period of 1996 – 2002, and the study finds limited support for some of the factors that have been found to be efficient in constraining real earnings management, having a high proportion of independent directors appear to be helpful in limiting this type of earnings management.

Wenxia and Kim (2007) studied board takeover protection and real earnings management in Canada and the association between board and the level of real activity using logistic regression for a period of 2004 – 2006. They find a significant positive association between board independence (outside directors) and abnormal cutting of research and development cost.

Daniel and Zarowin (2010) examine earnings management behavior around seasoned equity offering focusing on both real activities and accrual- based manipulation and how this behavior varies over time. They used modified Jones model of 1991 for measuring accruals – manipulation and used model of Roychowdhury (2006) and Zang (2007) for measuring real activities manipulation `practice of firms under study. They find that the passage of Sarbanes – Oxley Act has made accrual – based earnings management more costly to the firms and concluded that firms have substitution from accrual – based to real earnings management after the passage of Sarbanes Oxley- Act.

Elizabeth and Wang (2010) investigate the CEO career concerns on accruals – based and real activities earnings management using Dechow et al (1995) to measure total accruals and Roychowdhury (2006) model to measure real activity manipulation. The study find that managers who maximize lifetime compensation in a perfectly competitive market would have little incentives to engage in income increasing accruals manipulation or real activities manipulation earnings management in the early stages of their careers. Managers in later stages of their career are trapped into managing earnings upward in order to influence their signals jamming. The study concluded that younger managers choose the lesser of the two evils by managing accruals rather than undertaking real activities that ultimately have value destroying consequences.

Bita and Noravesh (2005) examine the relationship between board characteristics and earnings management practice in Iran using 6 board characteristics: board size; board independence; board leadership; board meeting; audit committee and institutional investor proportion of director from institutional investors and the study used OLS regression. The study find the following: earnings management is positively related to board size and the larger the board size the less efficient the monitoring of the board, extent of earnings management is negatively to the proportion of outside directors on the board of directors. If firm engage in earnings management information revealed in financial statements is biased and deviate from truth, meaning vagaries stakeholders can bear the consequences of manipulation by relying on information from the financial and make investment and other decisions.

2.2 Audit Committee Characteristics and Real activities manipulation

The results of studies on the relationship between audit committe and earnings management are inconclusive. Zhou and Chen (2002), examine the relationship between audit committee board characteristics and earnings management in commercial banks. Using 989 U.S. banks for the period of 2000-2001, they conclude that board size and independence influence board efficiency and therefore lead to less earnings mangement in commercial banks.

The major draw back of this study is the use of total loan loss provision as the proxy for earnings mangement.

This approach ignores the fact that total loan loss provision is the combination of both discretionery and non-discretionery components.

Xie et al (2001) investigated the roles of the board and audit committee on earnings managment. Using a sample of 282 firm-year observations from the S&P 500 index of each year of 1992, 1994 and 1996, they find that active committee of experienced members, that is members with some financial expertise and/or corporate background is associated with reduced level of discretionery accruals. The result of this sudy may not be consistent with the findings of similar research in a less developed economy like Nigeria. Also, Chtourou et al. (2001) investigate the impact of of corporate governance on earnings managment in U.S. firms. Using a sample drawn from the population of U.S. firms that appear on Compustat 1996, they find that financial expertise, independent directors and active committee (proxied by board meetings) are inversely related with discretionery accruals. The study uses chi-square as a tool for data analysis, which is a less effective tool for establishing cause and effect relationship.

Bradbury, Mak and Tan (2004), board characteristics, audit committee characteristics and abnormal accruals, they study the relation between abnormal accruals and board characteristics in an institutional environment when there is both considerable accounting discretion and fewer governance regulation a joint effect study of Malaysia and Singapore. The study made the following finding: it find no relationship between abnormal accruals and board independence, however both board size and audit committee independence are related to high quality accounting. The findings suggest that, audit committee was found to be effective in the financial reporting process by reducing income increasing abnormal accruals. And lastly, concluded that audit committee can be effective only when comprise independent directors.

Hsu and Wu (2007) in a study of board composition, audit committee structure, grey directors and the incidence of corporate failure in U.K examined the relationship between board structure, audit committee structure and the incidences of corporate failure in England, the study made the following findings : that the greater grey directors on the board and the audit committee, the lower probability of corporate failure, independent outside directors on board and audit committee could not effectively contribute to decrease the likelihood of corporate failure, high percentage of independent outside directors on audit committee is even unfavorable to firm survival and failed firms are more likely to employ key directors (CEO, Chairman and Finance director) on the audit committee.

Inaam, Fatma and Khmouss (2012) conducted a study on effects of audit committee characteristics (independence, size, meetings and financial literacy) on real activities manipulation in Tunisian. The study use secondary data of 29 non – financial firms for a period of 2000 - 2010 and made the following finding: audit committee independence is efficient in constraining real earnings management and managers opportunistic behavior; there was no significant association between audit committee expertise and sales manipulation and no significant relation between audit committee expertise and over production; that the more audit committee meeting the better opportunity to detect sales manipulation; and lastly, the audit committee size is positively associated with sales manipulation and over production.

Theoretical explanations have been advocated in literature to establish the relationship between earnings quality and monitoring characteristics. Bowen, Rajagopal and Venkatachalam (2008) find that the efficient contracting theory associates managers to exercising accounting discretion in an efficient manner such that in the long run firm value is maximized. The opportunist theory, assumes that managers have a short-term self interest as an incentive to form poor firm structure to manage earnings for their own benefit (Klein (2006). Therefore, in this study the opportunist theory is used to link board and audit committee characteristics with real activities manipulation.

3. Methodology and Data

This study used an ex post factor and correlational research designs. Data was extracted from the financial statements of the sampled manufacturing companies.

The population of this study comprises all the 56 manufacturing companies listed operating in Nigeria as at 31st December, 2012. For the purpose of this study, the whole population is intended to be considered as sample of the study, but some firms were dropped because of the following criteria:

a. Firm must have all data needed for the variables of the study
b. Firm must not be suspended within the period of the study (2007-2012)

After the above criteria 20 firms made up the sample of the study. Only secondary data is used in this study. Longitudinal panel multiple regression is used as a tool of analysis. The probability of Hausman specification test became less than 5% for all regressions, fixed effect model is interpreted as a panel specification. The Houseman specification test is conducted to take care of time variant of our panel data.

The residuals of Roychowdhury (2006) model of abnormal cash flow after inserting the sampled firms' data represents real activity manipulation in the second regression model specified for the study. However, the residual determines the level of manipulation, the larger the residuals, the higher the manipulations vice versa. The results of robustness tests (multicollinearity, heteroscedasticity, cross-sectional dependence, test of serial correlation, Hausman specification and histogram test of residuals) conducted in order to improve the validity of all statistical inferences for the study reveal favourable but not reported for brevity.

3.1 Models Specification and Variable Measurement

The overall regression models that captured the hypothesis of the study are presented below:

$$RAM_{it} = \beta_0 + \beta IDR_{it} + \beta_2 ODR_{it} + \beta_3 GDR_{it} + \beta_4 WDR_{it} + \varepsilon_{it.} \ldots\ldots\ldots\ldots\ldots\ldots i$$

$$RAM_{it} = \beta_o + \beta_1 ACIND_{it} + \beta_2 ACFL_{it} + \beta_3 ACMTG_{it} + \beta_4 ACSIZE_{it} + \varepsilon_{it.} \ldots\ldots\ldots \ldots\ldots ii$$

Where:

RAM= Real Activities Manipulation
IDR = Inside Directors
ODR= Outside Directors
GDR = Gray Directors
WDR= Women Directors
ACIND= Audit Committee independence
ACFL= Audit Committee Financial Literacy
ACMTG = Audit Committee Meeting
ACSIZE= Audit Committee Size

Table 1: Measurement of Variables

S/No	Variable	Measurement
1	Real Activities Manipulation	Residuals of Roychowdhury (2006) model of abnormal cash flow: $CFO_t/TA_{t-1} = \alpha_o + \alpha_1 1/TA_{t-1} + \alpha_2 SL_t/TA_{t-1} + \Delta SL_t/TA_{t-1} + \mu_t$ Where: CFO_t = cash flow from operation of present year TA_{t-1} = total assets at time of previous year α_o = intercept α_1, - α_2,= parameters for estimating normal cash flow SL_t = sales at present year ΔSL_t = change in sales of present year μ_t = residuals
2	Inside Directors	Measured by the proportion of executive directors on the board.
3	Outside Directors	Measured by the proportion of non-executive directors on the board.
4	Gray Directors	Measured by the proportion of gray directors on the board.
4	Gray Directors	Measured by the proportion of gray directors on the board.
5	Women Directors	Measured by proportion of women on the board
6	Audit Committee Independence	Measured by the proportion of outside members in the committee.
7	Audit Committee Financial Literacy	Measured by the proportion of members that are expert in finance in the committee.
8	Audit Committee Meeting	Measured by the number of meetings held in a year by the committee.
9	Audit Committee Size	Measured by the total number of the committee members.

4. Result and Discussion

4.1 Descriptive Statistics for all the Two Models

Model 1

	Min	Max	Mean	STD Dev	Skewness	Kurtosis
RAM	.01	.44	.0503	.05452	2.185	.052
IDIR	.15	.65	.5670	.18951	.119	-.928
ODIR	.10	.40	.2683	.11412	-.044	-1.054
GDIR	.10	.25	.2909	.14040	2.301	.187
WDIR	.10	.30	.2788	.13291	2.880	.924

Model 2

	Min	Max	Mean	STD Dev	Skewness	kurtosis
RAM	.01	.44	.0503	.05452	4.185	24.05
ACI	11.07	72.98	19.4859	7.24122	4.443	28.650
ACFL	.10	.93	.4339	.20945	.186	- .870
ACS	.10	.55	.2683	.11412	-.044	1.054
ACM	.10	.99	.2788	.13291	2.880	12.924

Source: SPSS Output

Table 2 shows the: mean; standard deviation; skewness, kurtosis, minimum and maximum values of variables developed in the study. The table 2 for model 1 indicates the average board of directors' characteristics of listed manufacturing firms in Nigeria is: inside directors .5670; outside directors .2683, gray directors .2909 and women directors accounted for .2788 respectively. The standard deviation of inside directors is .18951; outside directors .11412; gray directors .14040 and women directors accounted for .13291 respectively. The results of skewness ranges from -.044 and 2.880 where as the results of the kurtosis is in the range of -.928 and .928, a cursory look at the observations in all the variables disclosed data non – normality distribution portrayed by the kurtosis and the level of descriptive statistics.

From the second table in model 2, the average of audit committee characteristics: audit committee independence, is 19.4859, audit committee financial literacy .4339, audit committee size.2683 and audit committee meeting accounted for .2788 respectively of listed manufacturing firms in Nigeria.

The standard deviation of audit committee independence, which is the highest is 7.24122, audit committee financial literacy .20945, audit committee size .11412 and audit committee meeting is .13291 respectively. The result of skewness ranges between - .044 and 4.443 where as the result of the kurtosis is in the range of -.870 and -1.054. A cursory look at the observations in all the variables disclosed data non- normality distribution. This can be buttressed from both the kurtosis and the level of descriptive statistics.

Correlation Matrix for all the Variables in the Models

Numbers are Pearson coefficients; go from – 1 to 1. Closer to one means strong correlation, while a negative value indicates an inverse relationship (when one goes up the other goes down).

Correlation Matrix of dependent variable (RAM) one and four independent variables Board of directors characteristics

	RAM	IDR	ODR	GDR	WDR
RAM	1				
IDR	-.315**	1			
	.000				
ODR	.302**	- .590**	1		
	.001	.000			
GDR	.181*	-.183*	.464**	1	
	.048	.046	.000		
WDR	.612**	-.043	.184*	.157	1
	.000	.641	.044	.087	

Correlation matrix of dependent variable (RAM) and four independent variables of Audit committee characteristics

	RAM	ACI	ACFL	ACS	ACM
RAM	1				
ACI	.661**	1			
	.000				
ACFL	-.502	.145	1		
	.586	.114			
ACS	.302**	.221*	-.011	1	
	.001	.015	.907		
ACM	.612**	.685**	.045	.184*	1
	.000	.000	.623	.044	

Source: SPSS Output

The symbol ** represents significant at 1 % and the other symbol * represent significant at 5 % level.

Model 1

The results presented in the table above, shows that board characteristics: outside directors, gray directors and women directors are positively correlated with the dependent variable real activity manipulation. This therefore, indicates that an increase in outside directors, gray directors and women directors on board may lead to an increase in real activities manipulation practice of listed manufacturing firms in Nigeria. On the other hand inside directors are negatively related to the dependent variable real activity manipulation. This indicates that an increase in inside directors on the board may lead to decrease in real activity manipulation practice of listed manufacturing firms in Nigeria. Thus, inside directors may appear to be effective in restraining manager's opportunistic manipulative behavior.

Model 2

The results presented in the second table shows that audit committee independence is positively related to the dependent variable at 1% level of significance while audit committee financial literacy is negatively related to the dependent variable real activities manipulation but not significant. Audit committee size is positively related to the dependent variable and significant at 1 % level. Audit committee meetings are positively related to the dependent variable at 1 % level of significance and audit committee independence is positively related to the dependent variable real activities manipulation and significant at 1%. This therefore, indicates that an increase in audit committee independence, audit committee size, and audit committee meetings can lead to increase in real activities manipulation practice of listed manufacturing firms in Nigeria. However, audit committee financial literacy is better at restraining listed manufacturing firms opportunistic behavior of accounting manipulation by their management.

4.3 Regression Results for the Two Models

Board of directors' characteristics and (RAM) on one hand, and Audit committee characteristics and (RAM) on the other hand

Variables		model 1		model 2
Constant		.039		- .053
R		.678		.723
R^2		.460		.52
Adj R^2		.441		.50
F		24.473		31.573
F – Sig		.000		.000
DW		2.031		2.029
Coefficient	IDIR	- .091	ACI	.003
	ODIR	.008	ACFL	-.033
	GDIR	.012	ACS	.071
	WDR	.243	ACM	.114
T – Values		-3.189		5.053
		2.178		-1.952
		2.380		2.241
		8.451		3.135
P - Values		.0002		.000
		.049		.053
		.046		.027
		.000		.002

Source: SPSS Output

Model 1

The estimated equation of the model 1 is presented as follows:

$$RAM = .039 + -.091\,(IDIR) + .008\,(ODIR) + .012\,(GDIR) + .243\,(WDR)$$

The results show that the estimated model of the study is fit because all the explanatory variables: inside directors; outside directors; gray directors and women directors are significant in determining the dependent variable real activities manipulation.

The regression results reveal that, the coefficient in respect of inside directors is - .091 and the t – value of -3.189 which is significant at 1 % level. This signifies that, board characteristics especially inside directors are negatively related to the dependent variable real activity manipulation of listed manufacturing firms in Nigeria. The implication of this is that, the higher the inside directors on the board of listed manufacturing firms the lesser the accounting manipulation of their earnings, and the higher the real activity manipulation the lower the board of directors monitoring of the firm.

The coefficient in respect of outside directors; gray directors and women directors were found to be positively related to the real activities manipulation practice of listed manufacturing firms in Nigeria, as depicted in their coefficients .008; .012 ,.243 and respective t – values 2.178; 2.380 and 8. 451 outside and women directors are significant at 1 % level, while gray directors are significant at 5 % level. The implication of this, is that as outside directors; gray directors and women directors have found to be positively correlated with dependent variable real activity manipulation, managers opportunistic manipulative accounting can be constrained or deter by three mention board of directors.

The cumulative impact of all the independent variables put together is able to explain the dependent variable up to (67.8 %, 46 % and 44.1 %) as indicated by the (R, R^2 and Adj R^2) and the remaining 32.2% , 54 % and 55.9 %) was controlled by other factors that were unable to captured by the model. Similarly, the result of the F-statistics value of 24.473 implies that the model is well fitted and significant at 1 % level. The Durbin Watson of (2.031) is clear indications that model is fit.

The tolerance value and the variance inflation factor (VIF) are advanced measures of assessing multicollinearity between the independent variables of the study. The variance inflation factors were consistently less than (10) indicating absence of multicollinearity as was observed by (Casey, et al 1999). This shows the appropriateness of fitting the model of the study with four independent variables. In addition, the tolerance values are consistently smaller than 1.00 thus, further substantiates the fact that there is absence of harmful multicollinearity among the independent variables (Tobachmel and Fidell, 1996).

The regression results on corporate governance attributes and real activities manipulation of listed manufacturing firms in Nigeria are presented in this section. The study used four explanatory variables audit committee characteristic (Audit committee independence, financial literacy, audit committee size and audit committee meeting) for the purpose of explaining and predicting the effects of audit committee attributes and real activities manipulation practice of listed manufacturing firms in Nigeria. The priori expectation is that, no significant relationship exists between audit committee characteristic and real activities manipulation practice of listed manufacturing firms in Nigeria.

Model 2

The estimated equation of the model 2 is presented as follows:

$$RAM = -.053+.003(ACI) + (-.003)\ (ACFL) +.071(ACS) +.114(ACM)$$

The results show that the estimated model of the study is fit because all the explanatory variables audit committee independence; financial literacy; size and audit committee meetings are significant in determining the dependent variable real activities manipulation. It has therefore, been stated that corporate governance attributes (audit committee characteristics), financial literacy constrained real activity manipulation of listed manufacturing firms in Nigeria while, audit committee meeting, size and independence cannot restrain real earnings management.

The regression results reveal that, the coefficient in respect of audit committee independence, audit committee size, financial literacy and audit committee meeting are (0.003, -0.033, 0.071 and 0.114) respectively and the t- value is (5.053, -1.952, 2.241 and 3.135). The audit committee independence, size and audit committee meetings are all significant at 1 % level, while audit committee financial literacy is significant at 5% level. This signifies that, audit committee independence, audit committee size and audit committee meeting have positive impact on real activities manipulation of listed manufacturing firms in Nigeria. The implication of this is that, the higher the audit committee independence, audit committee size and audit committee meetings the higher the real activities manipulations practice of listed manufacturing firms in Nigeria.

In relation to the restrain of real activity manipulation, audit committee financial literacy was found to be effective in restraining real earnings management. Lastly, corporate governance attributes (audit committee characteristics specifically, financial literacy) was found to be check-mating real activities manipulation practice of listed manufacturing firms in Nigeria and audit committee independence, size and audit committee meetings are not restraining real activities manipulation practice of listed manufacturing firms in Nigeria. The cumulative impact of all the independent variables put together explain by the dependent variable are up to (72.3% , 52.3% and 50.7%) respectively as indicated by the (R, R^2 and Adj R^2) and the remaining (28% , 48% and 49.3%) was controlled by other factors that were unable to be captured by the model of the study. Similarly the result of F –statistic value of 31.573 implies that the model is well fitted and significant at 1 % and 5%. This provides evidence that the model fits the data well and the joint effect of explanatory variables is statistically significant in explaining the dependent variable. Adjusted R^2 of (.507%) and Durbin Watson of (2.029) are clear indications that the model is fit.

The tolerance value and the variance inflation factor (VIF) are two advanced measures of assessing multicollinearity between the independent variables of the study. The variance inflation factors were consistently less than (10) indicating absence of harmful multicollinearity (Casey, et el; 1999). This shows the appropriateness of fitting the model of the study with the four independent variables. In addition the tolerance values are consistently smaller than 1.00 thus, further substantiates the fact that there is absence of harmful multicolinearity among the independent variables (Tobachmel and Fidell, 1996).

Board characteristics such as outside directors; were found to be positively related with the dependent variable real activity manipulation, this is in line with the finding of Weanxia and Kim (2007) and contradict the finding of Nicola (2006), and Felo *et al* (2003).

It has been hypothesized that, audit committee characteristics have no significant effect in restraining real activities manipulation practice of listed manufacturing firms in Nigeria.

The results features of audit committee characteristics confirmed that, audit committee characteristics especially financial literacy was found to be negatively related with the dependent variable real activity manipulation practice of listed of manufacturing firms in Nigeria, this is in line with the finding of Visvanathan (2008) and Abbot and parker (2002).

Other audit committee characteristics, like audit committee size, were found to be positively related to the dependent variable real activity manipulation practice of listed manufacturing firms in Nigeria, this is in line with the finding of Inaam, Fatma and khmouss (2012) found that audit committee size is positively correlated with the dependent variable real activity manipulation practice of listed Tunisian firms and concludes that size forms a motivation for managers to upward earnings while it contradict the finding of Kothari *et al* (2009) and Felo et al (2003).

Audit committee meetings, were found to be positively related to the dependent variable real activity manipulation practice of listed manufacturing firms in Nigeria this also is in line with the finding of Inaam, Fatma and Khmouss (2012) and contradict the finding of Klein (2006) and Bita and Noravesh (2005).

Major Findings and Policy Implication

1. Board of directors characteristics especially inside directors were found to be effective in restraining real activities manipulation practice of listed manufacturing firms in Nigeria.
2. Board of directors characteristics like outside directors were found to be non effective in restraining real activities manipulation practice of listed manufacturing firms in Nigeria.
3. Gray directors on the board were found to be less effective in constraining real activities manipulation behaviour of listed manufacturing firms in Nigeria.
4. It was also revealed that, women directors on the board were found to be less effective in hindering real accounting manipulation of listed manufacturing firms in Nigeria.
5. Audit committee characteristics especially financial literacy was found to be effective in restraining real activities manipulation practice of listed manufacturing firms in Nigeria.

6. Audit committee independence was found to in effective in restraining real activities manipulation practice of listed manufacturing firms in Nigeria.
7. Audit committee size was found to be less effective in deterring real activities manipulation practice of listed manufacturing firms in Nigeria.
8. It was also discovered that, audit committee meetings were found to be non effective in restraining real activities manipulation practice of listed manufacturing firms in Nigeria.
9. Based on the finding of this study, it was discovered that audit committee characteristics is better than board of directors in restraining real activities manipulation practice of listed manufacturing firms in Nigeria.

Accidental Findings:

a. Firms used real earnings management to avoid debt covenant violation, if they are likely to do so when their ability to renegotiate the technical covenant violation is restricted.
b. Manufacturing firms with limited available funding sources, real earnings management appear to be a viable strategy for managing regulatory dividend constrained.
c. Manufacturing firms reduce prices and increase promotional activities when incentives to boast earnings are stronger for a shorter period, despite it has long time destroying economic consequences.
d. The level of real earnings management is high in countries with strong legal system because accrual earnings management is likely to attract auditors' scrutiny than real earnings management.

With regard to the relationship between the results of this study and the one obtained by previous researchers as highlighted above, the finding in respect to each of the hypotheses considered in the work, have policy implications for the regulatory bodies. The results of the study have thrown more light on the explanatory variables that have important effect in explaining the explained variables real activities manipulation practice of listed manufacturing firms in Nigeria.

Board of directors characteristics, more specifically inside directors were found to be efficient in restraining real activities manipulation practice of listed manufacturing firms in Nigeria.

The implication of this finding is that the more inside directors on the board the less real activities manipulation practice of listed manufacturing firms in Nigeria, and the better board monitoring of opportunistic accounting behaviour of listed manufacturing firms in Nigeria. In addition, other board features such as outside directors; gray directors and women directors were found to be non effective monitors in constraining real activities behaviour of listed manufacturing firms in Nigeria. The implication of this finding is that as outside directors, gray and women directors increase, real manipulation of the firm increase which affect the earnings quality of the firm and rendered their monitoring less effective, talk less of restraining managers' opportunistic behaviour.

Audit committee characteristics, especially financial expertise was found to be effective in deterring real activities manipulation practice of listed manufacturing firms in Nigeria. The implication of the finding is that as member with financial expertise increase in the audit committee, the member will use his acumen and knowledge in constraining manipulative accounting behaviour in listed manufacturing firms in Nigeria. However, other audit committee attributes like audit committee size, independence and audit committee meetings were found to be non significant in restraining real activities practice of listed manufacturing firms in Nigeria.

Audit committee characteristics were found to be effective to board of directors in restraining real activities manipulation practice of listed manufacturing firms in Nigeria.

Real activities manipulation practice of listed manufacturing firms in Nigeria is a challenge to the whole accounting profession, as accountants are expected to be good custodian of public documents by producing what is true and fair, and the public can really on it and make various decisions. Where an accountant of a particular corporation cooks the book through manipulative accounting, it means the financial reports of those corporations are no longer reliable which may mar its credibility. This practice is also a challenge to the financial reporting counsel of Nigeria, Security and exchange commission as the surveillance body of listed firms in Nigeria and Nigerian stock exchange as they are providing avenue for firms to trade in their securities in the market.

These findings should aid in monitoring the activities of the management of listed manufacturing firms in Nigeria and deter the manipulative accounting practice. Firms engaging in real activity manipulation were found to be over – valued during equity offering, seasoned equity offering or initial public offering.

5. Conclusion and Recommendations

The following are the conclusions that are drawn from the findings of the study:

i. Board of directors characteristics particularly inside directors were found to be important monitoring and control device for deterring managers opportunistic behaviour, but other board features like outside directors; gray and women directors cannot be of any help in preventing abusive accounting practice of listed of listed manufacturing firms in Nigeria.
ii. Audit characteristics especially financial literacy was found to be effective in restraining manager's manipulative accounting behaviour and improved the earnings quality of listed manufacturing firms in Nigeria.

Below are the recommendations drawn from the conclusions of this study:

i. Regulatory authorities like SEC, and NSE should make sure that listed manufacturing firms in Nigeria are strictly complying with corporate governance best practice to ensure that, shareholders and other stakeholders interest are fully protected.
ii. Financial reporting counsel of Nigeria, should make it mandatory that board of listed manufacturing firms should increase the proportion of inside directors on the board as they appear to be efficient in deterring manipulative accounting practice of their companies.
iii. Despite the agitation of women diversity on board, their presence seems to be of no significance in restraining manager's opportunistic practice in listed manufacturing firms.
iv. Gray and outside directors appear to be less effective in hindering manipulative accounting practice of Nigerian listed manufacturing firms, so increasing their proportion on the board is not advisable.

v. Audit committee of listed Nigerian manufacturing firms, should increase the member with financial sophistication to the audit committee, this can increase overseeing financial reporting and constraining management opportunistic behaviour.
vi. Size of the audit committee, is not a factor in check – mating managers opportunistic attitude.
vii. Meetings of the audit committee is not the number of meeting that determine the monitoring, but acumen of the member who may be able understand which directions management are going and its economic implication to the firm.

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