PERFORMANCE CHARACTERISTICS AND ACCRUAL METRICS IN NIGERIAN CONGLOMERATES COMPANIES

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Abstract

This study examines the relationship between performance characteristics and accruals metrics in conglomerates companies in Nigeria. Financial statements are required to provide various users—shareholders, employees, suppliers, creditors, financial analysts, stockbrokers, investors, government agencies with reliable and relevant information useful for making prudent effective and efficient decision. This implies that the income measurement components is a critical challenge. Data for the study were obtained from Nigerian stock exchange fact books and companies financial reports for the period of 2006-2015. The population of the study is the nine conglomerates companies quoted on Nigerian Stock Exchange. All the companies are taken as the sample. Firms under study were dichotomized in to two: those involved in earnings management and those with less evidence. Probit analysis is utilized to estimates the influence of performance characteristics and accruals quality was estimated by modified model of Dechew and Dichev (2002). The result reveals that profitability, liquidity, Firm Growth are significantly and positively associated with the earnings quality at 5%. Therefore, it is recommended amongst others that the companies he shareholders of Nigerian quoted conglomerates should ensure that all the three performance attributes used in this study keep on improving to decrease manipulative accounting in order to increase the quality of accounting information.

Keywords: Earnings quality, Profitability, Liquidity, Firm Growth, Discretionary Accruals.

Introduction

Earnings quality is one of the most important summary characteristics of accounting systems. High quality is said to improve capital market efficiency, therefore investors and other users should be interested in high-quality financial accounting information. For that reason, standard setters strive to develop accounting standards that improve earnings quality, and many recent changes in auditing, performance attributes, and enforcement have a similar objective. Earnings quality is also used in numerous empirical studies to show trends over time; to evaluate changes in financial accounting standards and in other institutions, such as enforcement and performance attributes; to compare accrual quality systems in different countries; and to study the effect of earnings quality on the cost of capital. Dechow, Ge, and Schrand (2010).

Accrual quality identifies discretionary accruals through accounting disclosures and tests the abnormality of such accruals. Lower levels of abnormal accruals disclosed by accounting
statements indicate higher earnings quality. In view of the fact that the main objective of accrual quality is to provide decision makers with information that meets their expectation, an examination of earnings quality and its effect on performance attributes needs is considered imperative. Analysis of relationships between earnings quality and performance attributes improves confidence of decision makers with respect to usage of accounting information and would help in establishing best disclosure practices for firms. The significance of establishing reporting standards in ensuring high earnings quality would help stakeholders to view accounting information as valuable decision tools. The relationship between earnings quality and performance attributes is important to the extent that good earnings quality builds investment efficiency in economy.

Accrual quality is proxied by discretionary accruals estimated by Dechow and Dichev (2002) model as modified by McNichols (2002) and Francis et al (2005) accordingly. The residuals of the model are the nature of discretionary accruals which is the abnormal earnings management. Levit [1998], describes earnings management as a gray area where the accounting is being perverted, where managers are cutting corners, and where earnings reports reflects the desire of management rather than underlying financial performance of a company. If earning is considered to be the most revealing figure of financial reports, then adequate measures need to be put in place to ensure its quality and reliability.

Moreover, concern about accrual quality has grown historically in response to major crises of confidence, fraud and market failure, and with development of advances in our thinking about the role of corporation in the economy and society. The thrust of this study is to look into those areas of performance attributes of a corporation which influence greater to the accrual quality in financial reporting. The objective is estimate the relationship between profitability, liquidity and firm growth on accrual quality. It is hypothesized that accrual quality has no significant relationship with conglomerate firms performance attributes (Profitability, liquidity and firm growth) quoted on Nigerian Stock Exchange.

Many studies have been conducted on the influence of earnings quality on firms. However, most of the studies are foreign based and inconclusive such as (Watts and Zimmerman, 1978, Holthausen and Leftwich 1983, Stolowy and Breton, 2004, Sun and Rath, 2008). Only few studies were conducted in Nigeria. Even the few Nigerian-based studies were mostly concerned with firm characteristics and accounting based attributes of earnings quality (Bello, 2005, Onu, 2007 and Hassan 2012). Few other studies in advance economies such as Levitt, (1998), Deakin and Konzelmann, (2004) and Jiang, Lee, and Anandarajan, (2008) associated earnings equality with performance attributes using the market based attributes of earnings quality. Thus, while empirical studies on earnings quality using Nigerian data exist, none of the studies address accrual metrics and performance attributes despite the influence of each of them on firms. It is evident however that a lot of developments have taken place in Nigeria’s capital market from 2010, after the financial crisis of 2009-2010 that caused an unprecedented crash to performance attributes of firms in Nigeria. The studies therefore did not cover post financial crises reforms in the financial sector of the country championed by the Central Bank of Nigeria (CBN) with a view to repositioning the country’s financial system and addressing the effect of the global financial crises that stroke it from the late 2009 through to mid 2010.

Furthermore, the peculiar and sensitive nature of the manufacturing industry as well as the reforms it has continued to undergo underscore the need for special attention. So far, the sector has attracted little or no research effort with respect to earnings quality. This study therefore is an
attempt to fill these gaps that have been identified. Our study advances the existing literature by providing empirical evidence that accounting quality relates to the firm performance economic fundamentals. Prior research shows that earnings quality is positively related to investment efficiency (is negatively related to both underinvestment and over investment). Compare with a large literature on developed countries’ accounting systems and management reporting incentives, much less is known about the role of accounting information and its contents in developing countries. The scope of the study is limited to Nigerian Quoted Conglomerates Companies from 2004-2013. The population of the study is the nine companies under conglomerates sector. All the nine companies were taken as the sample because of the availability of the data.

**Literature Review**

The concept of earnings quality is fundamental in accounting and financial economics. Yet, there are deep disagreements about how to define earnings quality. The list of candidate measures is long: earnings persistence, predictability, asymmetric loss recognition, various forms of benchmark beating, smooth earnings, magnitude of accruals, income-increasing accruals, absolute value of discretionary or abnormal accruals, and the extent to which accruals map into cash flows.

The motivation for earnings management or manipulative accounting is to maintain a stable income stream than one which varies considerably from year to year. Consistent with Holthausen & Leftwich (1983) and Watts & Zimmerman (1978), Bello (2005) identified three categories of motivations for earnings management: contracting, asset pricing, and influencing external parties.

Francis, LaFond, Olsson & Schipper, (2004), posit that earnings quality is a multi-dimensional concept. The choice of an earnings quality measure will depend on the research and the availability of data and estimation model. Some researches call for a measure of earnings quality that is linked to investors’ perceptions of earnings. For example, research that examines the value relevance of earnings presumes earnings are useful to a particular class of market participants (namely investors) whose aggregate judgments and decisions are summarized by performance attributes and returns. They argue that, other research focus on direct measures of earnings quality constructed using accounting data alone (i.e., without reference to performance attributes or returns). Yet another dimension that is important for some researches is the distinction among total, innate and discretionary earnings quality.

Earnings quality refers to the ability of the current earnings to forecast future earnings (Penman & Zhang, 2007). Earnings are of good quality if no earnings reversals are forecasted. With valuation in mind, the investors are interested in future earnings, that is, they buy future earnings using the current ones. Further earnings are said to be of poor quality if the current reported earnings are not good indicators of future ones. Schipper & Vincent (2003) assert that earnings are the summary indicator of the economic and institutional forces operating on the accrual quality process. An earnings quality as posit by Ökolie (2006) is an important aspect of evaluating firm’s financial health, even though, investors and other users of financial often ignore it. From the foregoing, earnings quality refers to the one that is free from accruals that is not driven by accounting fundamentals or innate factors (discretionary accruals), but are sustainable and are not being impaired in order to artificially reduce the variability in earnings.

**Accrual Quality**

Francis, LaFond, Olsson & Schipper (2005) state that: “earnings which map more closely into cash flows are more desirable.” Dechow & Dichev (2002) argue that earnings quality can be assessed by mapping of accruals into last, current and next period cash flows. Richardson, Sloan,
Soliman & Tuna (2004) argue that earnings’ cash component provides both relevant and reliable information. Thus, they link earnings quality to cash components of earnings in terms of persistence. Barragato & Markelevich (2003) conclude that earnings are of high quality as the earnings’ closeness-to-cash increases and argue that “an earnings stream that is predictor of future operating cash flows is of high quality.

**Profitability and Accrual Quality**

Firms’ profitability has been argued to have an influence on the quality of accrual. Richardson, (2003) argued that a profitable firm may feel proud of its achievements and therefore would wish to disclose more information to the public in order to promote positive impressions of its performance. However, even though a study by Healy,P.M., and Wahlen, J.M. (1999) did find a significant positive relationship between return on equity (ROE) with voluntary disclosure, a study by Balsam, S., E. Bartov, and C. Marquardt (2002) on the other hand, had found insignificant relationships. Besides that, the level of profit has also been argued to have an influence on the manipulation of accounting accruals because managers may manage earnings to increase their bonus rewards (Zaluki, N.A.A. 2008). However, Zaluki, N.A.A. (2008) and Rahimah Mohammed Yunos (2011) did not find any significant relationships between the level of net income and discretionary accruals. This inconsistency and insignificance in the results is probably due to the use of current profitability, instead of changes in profits. Therefore, studies by Klein (2002b) and DeFond, M. L., and Park, C. W. (1997) have argued that the changes in profit influence the manipulation of accounting accruals. Both studies have found support for this argument. Their studies indicate a significant positive relationship between changes in net income and accruals in financial accounts.

Earnings manipulation and its resultant favorable accounting figures enable the firm to raise capital in a better term. Earnings management is also forward-looking. Managers are more likely to consider future earnings when they make decisions. On one hand, if current earnings are low and managers believe that future earnings will be high, they tend to engage in income-increasing earnings management (borrowing future earnings). On the other hand, if current earnings are high but managers expect that future earnings will be low, they tend to engage in income-decreasing earnings management (saving today’s income for tomorrow use).

**Liquidity and Accrual Quality**


Jiang W., Lee, P., and Anandarajan, A. (2008) lays out the agency issues raised by excess liquidity and defines free cash flow as cash flow in excess of what is needed to finance all positive net present value projects. By definition, such cash flow should be paid out to the firms’ shareholders since the corporation cannot invest it profitably on their behalf. However, paying out excess cash reduces the resources under management’s control, restricts management’s ability to pursue
corporate growth, and increases the profitability of raising funds externally to finance future projects. Management would rather avoid these things. Thus, self-interested utility maximizing managers would prefer to retain excess liquidity. For instance, due to the concern that regulators, investors, and other users have with regards to companies’ going concern status, highly liquid companies may desire to make their levels of liquidity known through disclosure in their annual reports (Kirshenheiter, M. and Melumad, N.D. 2002).

Kothari and Watts (2005) analyzed the correlation between financial ratios, including liquidity ratio (Current ratio), profitability ratio (Return on Investment), activity ratio (Total Assets Turnover), and solvability ratio (Debt to equity), and both capital gain (loss) and dividend in 135 manufacturing companies listed on Jakarta Stock Exchange. This research discovers that all ratios have positive correlation with capital gain (loss). However, only Current ratio which is statistically significant ($\alpha = 5\%$). Furthermore, for correlation with dividend yield, only Total assets turnover that is proved significant ($\alpha = 10\%$).

**Firm Growth and Accrual Quality**

There is a debate over whether growth, the unobservable construct, or accruals as a measure of growth, affects earnings persistence. The bottom line is that high growth firms have less sustainable earnings (Porporato, M., A. Sandin, and L. Shaw 2002). This finding is not surprising. Earnings summarize performance of the firm’s earnings process during the reporting period. If the fundamental process changes (i.e., grows), so will earnings and properties of earnings like persistence and smoothness will be adversely affected. Studies like Zhang (2008) provide more contextual evidence about how the accounting system affects the degree to which growth matters. In addition to the impact of growth on the fundamental element of earnings properties, growth also is associated with greater measurement error and more manipulation opportunities (Richardson et al., 2005) and (Mahmoud, 2016).

Researchers have, however, examined growth as a determinant of the external indicators of quality. Young K Kwon (2005) and Wuchun, C., et al. (2009) find that young growth firms disclose more internal control weaknesses. Lee et al. (2006), however, do not find evidence supporting the association between restated amounts and growth. Research in finance shows that firm’s characteristics (such as growth, company size, efficiency) can predict the future performance attributes (Joo Ann.H. (2009).

Haghighat, H. and Raigan, E. (2009) studied the correlation between financial indicators and firm’s performance. Growth opportunity is another firm-level characteristic that has been studied frequently. Beaver al (1968) find that growth opportunities provide managers with incentive to smooth earnings volatility increase perceived firm risk which adversely affects the cost of the capital needed by the firm. Collins et al [1997] and Easton and Zmijewski (1989) all find that earning response coefficients are a function of growth and risk. Skinner and Sloan (2001) find that the market severely penalizes growth firm for negative earnings surprise. Thus, managers of high growth firm are likely to have strong incentives to meet earnings benchmarks. Richardson et al. (2002) also find that restatement firm tend to be high growth firm which are under pressure to inflate earning to meet or beat analysts’ forecast. Kothari and Watts (2005) document a positive association between firm growth level and earnings management. They explain that growth firms are more likely to hedge cash flows to assure the availability of funds. Young (1999) finds that discretionary accruals are positively associated with firm growth since experience large growth.
will incur large current assets and current liabilities. He further points out that the impact of firm growth on current assets accruals and current liabilities accruals is not symmetrical; rather, most of the variation in working capital accruals is from current asset. Firth et al (2007) recently point out that it is easier for fast growing firms to engage in earnings management than it is for mature firms since it is difficult to observe the business activities of fast growing firms.

Theoretical Framework

The efficient contracting theory suggests a positive association between accounting discretion and long term firm performance and quality of financial information. Accordingly, efficiency contracting theory is utilized to underpin the study. Whereas, managers will be targeting better performance for short term gains, the interest of shareholders would be that of long term benefit of capital appreciation and return (dividend). Within the agency framework, it is both logical and inescapable that management behavior will be self serving (Amat, 1996). The end result will be that of managers manipulating earnings. These two theories; agency theory and opportunisms theory provide a complete framework for understanding the motivations content of earnings management. And these guide us in formulating the following model as frame for the study:

\[ EM = F(PT, LQ, &FG) \] \hspace{5cm} (1)

Transforming 1 above to linear relation we arrived at

\[ Y_{it} = \alpha_0 + \beta_{1it} PT + \beta_{2it} LQ + \beta_{3it} FG + \mu_{it} \] \hspace{5cm} (2)

Methodology

The research design is export-ante with the positivism paradigm. To achieve the objective of the study that is estimating the relationship between performance attributes and accounting ethics proxied by earning management, data were sourced from quoted conglomerate companies listed on Nigerian stock exchange within the period of 2006 to 2015. Annual report compiled by the exchange within the period of the study shows that a total of nine companies were quoted in the sector which were all adopted as a population and sample. A total of 90 observations were recorded.

The study utilizes linear probability model (probit analysis) to estimate the relationship. The justification for adopting LP model lies to the fact that the regressand; earnings management is dichotomized into binary code one and zero.

The study hypothesized that the probability of a firm to engage in earnings management lies on its performance attributes structure. Therefore in linear terms;

\[ EM = F(PT, LQ, &FG) \] \hspace{5cm} (3)

All performance attributes variables are numerical quantitative variable. While the dependant variable; E.M. \( (Y_{it}) \) is a dichotomous variable proxy by 1 if firm engage in earning smoothing and zero otherwise.

The model estimated is as thus:

\[ Y_{it} = \alpha_0 + \beta_{1it} PT + \beta_{2it} LQ + \beta_{3it} FG + \mu_{it} \] \hspace{5cm} (4)
\[ E( y_{it}/X_{it} = \alpha_0 + \beta_0 X + \mu_{it}) \] ............................... (5)

\[ X= \text{Vector of } x_1, x_2, x_3 \] ........................................... (6)

\[ Y \text{ is conditional 1 if firm engage in earnings management practice and 0 otherwise, therefore, the conditional probability is given as:} \]

\[ \text{Pr}(y_{it}=1, 0/X) \] .......................................................... (7)

In running the (4) above first OLS was used. Since we expect:

\[ E(y_{it}=1,0/x_1……3) \] ........................................... (8)

We put a restriction of the coefficient of \( x_i \)………\( x_3 \) as:

\[ 0 \leq E(y_{it}/x_{1}……..x_{3}) \leq 1 \] ................................. (9)

Non fulfillment of (9) led to run second regression using LP logit model.

Where:

\[ \text{EM} = \text{Accrual Quality: Measured by modified Dechow and Dichew (2002), McNicholas (2002 and Francis 2005)} \]

\[ \Delta WC_{it}= \beta_0 + \beta_1 CFO_{it} - 1 + \beta_2 CFO_{it} + \beta_3 CFO_{it} + \beta_4 \Delta REV_{it} + \beta_5 PPE_{it} + \varepsilon \] ............................. (10)

Where:

\[ \Delta WC_{i} \text{ is change in working Capital, CFO is cash flow from operation, } \Delta REV \text{ Change in revenue, PPE is property, plants and equipments and } \varepsilon \text{ is the error term.} \]

\[ \text{PT} = \text{Profitability is Measured by ratio of profit after tax by total assets} \]

\[ \text{LQ} = \text{Liquidity is measured by the ration of current assets over current liabilities} \]

\[ \text{FG} = \text{Firm Growth is measured by change in total sale per annum.} \]

\[ \alpha = \text{constant} \]

\[ \beta_{1\cdot3} = \text{coefficients} \]

\[ \mu = \text{error term} \]

**Results and Discussion**

Find below is the results of the logit model

The results of the model

Table 4.1. Regression result
Dependent Variable: EM
Method: ML - Binary
Probit (Quadratic hill climbing)
Convergence achieved after
The regression results presented in table 4.1, shows a multivariate binary probit regression convergence achieved after four iterations. Earnings management is proxy for accounting is a proxy of accrual quality (discretionary accruals) was explained with three explanatory variables: Profitability (PT), Liquidity (LQ) and Firm Growth (FG). The overall fitness of the model as revealed in Probability (LR STAT) was good enough to interpret the individual contribution of the regressors as follows:

\[ EM = 3.064568 \times PT + 0.237234 \times LQ + 0.004534 \times FG + \mu_i \]  \hspace{1cm} (11)

On the overall the model fits the data at less than 1% level of significant; meaning that the variables explained in full the regressand. Other indicators of econometric value for inference are Akwaike information centre, Hannan Quin & Swartz criteria all showing a good results of nearly one or closer to unity indicating the data is normal. the overall explanatory power of the model is revealed in Mcfadden R-squared, as usual in binary regression hardly this figure will be high contrary to OLS Adjusted R^2 (Ajoin,& Foster,1984). Mc Fadden R-squared shows significant variation of the regressand is explained by the regressors. Inferentially, performance attributes significantly influences accounting accruals metrics. This confirms the findings of Daniati and Suhairi (2006).
On the individual influence of the regressors to the regressand, Profitability shows a significant negative relationship with accounting accruals, meaning that more independent board (high proportion of non executive directors) the less possibility of firm to engage in unethical practices. This finding corresponds with prior expectation of inverse relation between independent board and earnings management. Furthermore the findings conforms with several empirical research results of Beasley, 1996; Klein, 2002; Abbott, et al., 2004; Krishnan, 2005; Vafeas, 2005; Farber, 2005). However it contradicts the findings in Larcker, et al. (2007).

Liquidity also gives significant contribution however, from statistical results the hypothesis of absence of relationship cannot be rejected. This conforms with Abbott, et al (2000), and contradicts the results of positive relationship in Beasley,( 1996).

Lastly, the hypothesis that firm with good history of Firm Growth will reduce the likelihood of earnings management was accepted at 10% level of significant. This striking findings show that board effectiveness measured by firm growth reduces the possibility of firm to engage in earnings smoothing (opportunistic tendency). This is because earnings positively influence firm growth. And any mistake to alter earnings may affect dividends. The findings proved the opinion of Jensen (1986) Goergen,(2007) and Shehu (2011) accordingly.

Conclusion
The thrust of the paper is to find out the extent of influence of selected performance attributes mechanisms on level of accounting accruals. Profitability, Liquidity and firm growth were considered as performance related mechanisms. The results show a significant positive influence of liquidity and firm growth and negative influence of profitability on the mechanisms on accounting accruals. This led the conclusion that the possibility of firm to engage in earnings management is dependent upon its performance attributes.

Corporate decision makers need to satisfy shareholders and attract potential investors. Measuring the impact of earnings quality allows decision makers to evaluate the role of earnings quality in enhancing shareholders’ perception of the reliability of financial reports. Once shareholders are able to obtain reliable information about corporate performance, their response to financial performance measures becomes greater.

The results from this study will unlock a new door for investors to improve their decision-making process. Measuring the different aspects of earnings quality allows investors to be mindful of management’s capacity to alter accounting earnings for opportunistic purposes, which helps investors in evaluating the reliability and value relevance of accounting earnings.

The results of the study provide market participants with guidance in knowing which factors to take into account when evaluating firms’ financial reports. The results demonstrate that earnings quality affects earnings management and the information content of accounting earnings. The results also show that earnings quality affects the information content of earnings in the presence of earnings management. Thus, a firm’s earnings quality structure and its earning management practices are value relevant information that should be considered by equity market participants in the valuation process.

As a matter of policy input, regulatory authorities and other stakeholders of a concern should strengthen and ensure compliance with performance attributes code and best practice. Ensuring adequate compliance will deter the possibilities of accounting fraud and improve the overall trust and confidence on the financial reports. Further research is recommended in accruals quality and stock price.
References


