



Growth in revenue and earnings management practices in Nigeria pre- and post-IFRS adoption periods

Lucky Izobo Enakirerhi^{1*}

Felix Enaibre Ighosewe²

^{1,2}Dennis Osadebay University, Anwai, Asaba Nigeria.

¹Email: lucky.enakirerhi@dou.edu.ng

²Email: felix.ighosewe@dou.edu.ng

Licensed:

This work is licensed under a Creative Commons Attribution 4.0 License.

Keywords:

Domestication and local contents

Growth rate

Income decreasing

Income increasing

Pre IFRS and post IFRS.

JEL Classification:

M40; M41; M48.

Received: 30 August 2023

Revised: 25 October 2023

Accepted: 6 December 2023

Published: 8 January 2024

(* Corresponding Author)

Abstract

The purpose of the study is to examine the revenue growth and association with earnings management practices of firms in Nigeria pre- and post-International Financial Reporting Standards (IFRS) adoption years. The study uses 87 nonfinancial firms over 19 years, nine years pre-IFRS (2003 to 2011), and nine years post-IFRS (2012-2020) for a total of 1566 firm-year observations. The panel regression estimate (fixed effect and random effect) was used to test the association between revenue growth and discretionary accruals, while the paired sample t-test was used to test the effect of IFRS adoption. The finding shows that decreasing growth rates resulted in increasing earnings management practices, probably due to the desire to maintain steady published performance figures in the pre-IFRS era, while decreasing growth rates resulted in income-decreasing earnings management practices in post-IFRS years, a rather surprising result. The finding also suggests that the practice of earnings manipulation is higher post-IFRS, indicating lower earnings quality. While managers engaged in income-increasing earnings management practices pre-IFRS, surprisingly, income-decreasing earnings management practices were detected post-IFRS. The finding deviates from norms and popular assumptions and suggests that the adoption of global standards might not necessarily mean limiting the abilities of managers to manipulate the earnings of companies. While changing standards may affect the nature of earnings manipulation, it is unlikely to prevent or deter the practice in general. The implication is that the application of IFRS will not deter earnings management practices.

Funding: This study received no specific financial support.

Institutional Review Board Statement: Not applicable.

Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Data Availability Statement: The corresponding author may provide study data upon reasonable request.

Competing Interests: The authors declare that they have no competing interests.

Authors' Contributions: The idea for the manuscript was conceived by the lead author who also did the initial draft, methodology, and analysis of data and conclusion, L.I.E.; the proof reading, correction of manuscript in addition to the review of literature, F.E.I. Both authors have read and agreed to the published version of the manuscript.

1. Introduction

Every business exists and has been specially managed to grow in both revenue and assets over time. To survive and become profitable in the long run, managers cannot ignore growth strategies. A good growth strategy to improve the revenues of a firm is paramount to sustainability, survival, performance, and the ability to adapt to changing dynamics, in addition to minimizing waste and cutting down on unnecessary costs. As aptly put in this concept, revenue growth is the panacea for the healthy long-term existence of a firm. For this reason, managers pay great attention to the revenue figures put in the public domain, especially as they know that annual reports are tools for investors to make hold, buy, or sell decisions. As long as annual reports constitute the bulk of the messages of companies' management to the public, it is highly probable that

managers would want to communicate a message to attract more funds to the organization. This, in addition to the trouble that the growth constructs may not be visibly observable, probably explains why research on the growth of firms is not conclusive. For example, [Hassan and Farouk \(2014\)](#) stated that firms' growth has generated mixed results over the years, but they attributed the mixed results partially to the unobservable nature of the growth construct. [Nissim and Penman \(2001\)](#) found that higher-growing firms have less sustainable earnings. As long as the process of growth changes every time, earnings and performance will change, and these will affect the reporting process. This inconsistency in earnings could push managers to engage in accounting manipulations in order to present consistent (smooth) earnings to shareholders, sending an intended message instead of the facts. This is compounded in situations where investors examine present and future earnings to make decisions, and managers' pay is tied to revenue growth.

A growing firm would want to maintain a trend and present consistent results to stakeholders, and as such, would likely engage in earnings smoothing. Also, the pressure to meet earnings benchmarks may contribute to growing firm manipulative practices. While growing firms experiencing declines in growth may want to report the results as they are, there is pressure to manipulate to portray good health to investors, although this practice may be harmful to the company in the long run. [Penman and Zhang \(2002\)](#) provided more detail on this reasoning and showed contextual evidence as to how the accounting system affects the degree to which growth matters. On this note, [Richardson, Sloan, Soliman, and Tuna \(2005\)](#) asserted that growth is linked more with measurement errors and subject to manipulative opportunistic behaviour of managers in addition to growth's effect on the fundamental properties of earnings. The research of [Beaver, Kettler, and Scholes \(1970\)](#) showed that growth opportunities provide managers with both incentives and opportunities to smooth the much volatile income perceived to increase the risk of firms. These managers do in order to reduce the cost of capital for the firm. The studies of [Pincus and Rajgopal \(2002\)](#) and [Firth, Fung, and Rui \(2007\)](#) also support these assertions.

The inherent lack of observability in the development construct affords managers with the opportunity to strategically depict growth that aligns with their perception of its healthiness to stakeholders. In essence, manipulation is inevitable to communicate certain messages, but could the adoption of International Financial Reporting Standards (IFRS) mitigate this? Theoretically, the global standards (IFRS) are proclaimed to be superior and could mitigate the manipulative ability of managers, one of the other sound reasons Nigeria adopted them hook, line, and sinker. However, the empirical justification for this total adoption is embroiled in a heated debate. [Enakirerhi, Ibanichuka, and Ofurum \(2020\)](#) explained that the liability for detailed disclosure of activities undertaken by managers to shareholders has been conferred on managers by the IFRS' adoption. Since adoption would ensure that all activities undertaken are properly disclosed, it is expected that fluctuation in growth shouldn't cause manipulation of reported revenue, but managers and owners are pitched in an interest-diverse manner, especially when pay is attached to reported earnings. Conversely, [Sundvik \(2019\)](#) and [Bello, Abubakar, and Adeyemi \(2016\)](#) believed and empirically reported that IFRS is principle-based as opposed to the previously used local standards, the Statement of Accounting Standards (SAS) which is rule-based.

Thus, a principle-based standard would allow more of the discretion of managers to be used than a rule-based standard. This is a clear statement: that as long as financial reports are used as communicative tools, managers will use their discretion to ensure that a healthy and progressive message is sent, signalling manipulations. To this end, IFRS would give more room for managers' discretion, resulting in increased earnings manipulative ability, although this may not abrogate other benefits associated with Nigeria's change to global standards. Thus, growth in revenue is expected to be more strongly correlated with earnings manipulation in the post-IFRS adoption era than in pre-IFRS adoption era, contrary to theoretical assertions that adoption of IFRS would reduce earnings manipulation. Although, manipulation of reported results and IFRS adoption have been subjected to debate with researchers in Nigeria, little or very scarce attention has been paid to the role of revenue in the income smoothing saga. To be precise, research has largely ignored the correlation between revenue and quality reporting prior to and after IFRS's hurried adoption. On this premise, the paper examines the effect of growth on financial reporting quality (FRQ), both before and after Nigeria changed to IFRS use. The paper deviates from the norm and posits that hook, line, and sinker adoption of IFRS may have been hurried through without proper empirical evidence in support of the theoretical proposition.

2. Literature Review

This section examines the empirical literature relating to business growth and its correlation with managers' manipulating abilities. Although, as pointed out earlier, studies on growth constructs and managers' manipulation are scarce, there are couple of other studies on growth and IFRS reviewed in this paper. As [Beaver et al. \(1970\)](#) demonstrated, growth prospects provide managers with both incentives and opportunities to smooth out the erratic income that is supposed to make enterprises riskier. According to [Richardson et al. \(2005\)](#), growth changes the fundamental characteristics of earnings and is associated with more measurement errors and manipulation, contributing to opportunistic managerial behaviour. This is why,

according to [Hassan \(2014\)](#), growth studies have produced contradictory results over time. Earnings manipulation may be more likely when growth volatility is high and less likely when volatility is low.

[Ado, Rashid, Mustapha, and Ademola \(2020\)](#) investigated the financial factors that influence how businesses manage their earnings and profitability. Their study examined data from 84 firms from 2010 to 2018, yielding 756 firm-year observations. The study used panel data and looked at how the independent variables affected earnings management. Among other things, the findings revealed that sales growth has a significant and negative impact on how businesses in Nigeria manage their earnings. As a result, stronger growth appears to result in lower income management of earnings, whereas lower growth appears to result in higher income management of earnings. The study's major flaw was that it failed to disaggregate the study into before and after IFRS periods. This made determining the effect of IFRS on the study difficult. [Debnath \(2017\)](#) used a sample of 756 firm-year observations spanning the years 2007 to 2015 to investigate the impact of growth and performance on earnings management in Indian enterprises. According to the study, growth has a positive and significant impact on organizations' discretionary accruals, whereas performance has a negative and significant impact, suggesting that businesses with increasing growth rates but declining performance tend to conduct increasing earnings manipulation. The fact that [Ado et al. \(2020\)](#) study found the opposite indicates that the impact of growth on earnings management may differ by country.

According to [Hassan and Bello \(2013\)](#), study of enterprise characteristics and the quality of their financial reports, growth rate and financial reporting quality are statistically and favourably correlated. They explained that managers of rapidly expanding Nigerian manufacturing firms are motivated to manage their earnings downward. Earnings are managed to demonstrate consistency once a company has established a consistent revenue stream or pattern. Furthermore, they claimed that companies with slower growth boost their earnings (upward manipulation) to meet the demands of investors and credit providers. In another study of the oil and gas industry, [Hassan and Farouk \(2014\)](#) discovered that growth potential has a positive and significant impact on earnings manipulation. However, it was unclear in their studies what was used as a proxy for financial reporting quality, as reporting quality cannot be observed directly. Furthermore, growth appears to have a significant impact on investment efficiency, which, if consistent, contributes to earnings quality. In his 2014 study of the relationship between Financial Reporting Quality (FRQ) and Investment Efficiency on the Tehran Stock Exchange, Mohammadi discovered that growth is not only directly and significantly related to investment efficiency but also has an impact on the relationship between FRQ and investment quality. The connection between reporting quality, investment efficiency, and growth was further clarified and deepened by the research and findings of [Wang, Zhu, and Hoffmire \(2015\)](#).

The IFRS is regarded as a high-quality standard globally, and the quality of financial reporting is anticipated to increase as a result of its extremely rigorous implementation procedure. Contrary to this notion, numerous studies have been conducted to determine how the IFRS influences the quality of information reporting; however, the results have been mixed. [Soye and Raji \(2016\)](#) examined what effect IFRS adoption has on growth, amongst other variables such as performance, size, and leverage. They discovered that the mean values were significantly different in pre- and after-IFRS adoption, indicating a significant difference amongst variables amongst insurance companies in Nigeria. [Bello et al. \(2016\)](#) investigated the impact of IFRS adoption on the earnings management of non-financial enterprises in Nigeria from 2010 to 2014. They chose 75 firms and a dummy variable to divide the data between the years before and after the adoption of IFRS. According to descriptive statistics, correlation, and panel regression, the implementation of IFRS has not reduced the likelihood of Nigerian companies manipulating their earnings, contrary to popular belief. Academics have debated growth and how it may affect financial reporting standards in other countries too. [Hamidzadeh and Zeinali \(2015\)](#) investigated how current and projected sales growth affected the FRQ of Tehran Stock Exchange-listed companies. The researcher carefully established a measure for assessing the standard of reporting, in addition to conducting various statistical and diagnostic examinations on a representative sample of 100 companies spanning the years 2007 to 2011. They came to the conclusion after extensive research that, with both coefficients of determination showing positive values, growth and growth potentials have a significant influence on how successfully enterprises disclose their finances.

[Sanyaolu, Lawal, and Job-Olatunji \(2017\)](#) study included IFRS as an explanatory variable, and financial statement's integrity served as the dependent variable. A sample of 50 questionnaires was examined using inferential statistics, and the findings revealed that IFRS significantly impacts the reliability of financial statements. [Olawale, Daddau, Usman, and Shuaibu \(2017\)](#) examined how, between 2008 and 2015, the IFRS implementation affected how insurance businesses in Nigeria managed their earnings. In this instance, IFRS adoption, firm size, and audit scope were taken into consideration while determining how firms managed earnings. The study found no evidence that the introduction of IFRS altered how quoted insurance firms in Nigeria managed their profitability using the ordinary least squares (OLS) model. [Amaefule, Onyekpere, and Kalu \(2018\)](#) examined how, between 2007 and 2016, IFRS affected the financial performance of industrial companies in Nigeria. The time period was divided into prior-and-after-IFRS, while return on assets and earnings per share were used in the study. The study discovered that IFRS had a moderate, negative impact on enterprises' earnings per share (EPS) but a significant, negative impact on their return on assets (ROA). In the meantime, [Temile \(2018\)](#) research examined how, between 2007 and 2016, Nigeria's listed non-financial enterprises' financial statements relevance was enhanced by the use of IFRS. The research used information

from 2007-2016, for 87 companies and modified the models of Müller and Jones. According to the report, Nigeria's IFRS switch boosted the value-relevance of financial data. This prompted the researchers to conclude that Nigeria's switch to IFRS significantly improved the quality of reported numbers. In the banking sector, [Adewale and Ibukun-Falayi \(2018\)](#) examined the impact of IFRS amendments on the accuracy of the financial statements produced by Nigerian banks. The study discovered that the switch to IFRS drastically changed how goals are compared, how relevant they are, and how clear they are in the Nigerian banking sector. In their 2018 study, [Atoyebi, Salaudeen, and Onyilokwu \(2018\)](#) examined the impact of a change or switch to IFRS on the usefulness of stated information for publicly traded healthcare organizations. They examined the time before adoption, 2008 to 2011 and the time following adoption, 2012 to 2015. The study used share price as the explained variables, and book value per share, the change in earnings per share, and earnings per share as explanatory variables. The result of the multiple regression estimates showed that when IFRS was introduced, the share price was significantly and positively impacted by earnings per share and book value per share.

According to a study by [Odoemelam, Okafo, and Ofoegbu \(2019\)](#), it was more crucial for financial statements to be comparable and understandable in light of the high-profit corporate scandal in the U.S. that caused the economic collapse. Their research sought to determine how the use of IFRS by Nigerian stock exchange companies had altered the status quo. The study examined the value relevance of share price as a function of earnings per share and the book value of owners' equity and used IFRS as a dummy variable from 2006 to 2017. The results showed that the nations' adoption of IFRS has statistically significant benefits and an applicability of profit value in Nigeria. [Abdullahi and Abubakar \(2020\)](#) examined data from 2007 to 2016 to determine how IFRS affected the reporting quality in Nigeria. The authors, as usual, looked at two time frames: 2007-2011 and 2011-2016. This allowed them to compare the calibre of reported numbers between the two time periods, pre- and post-IFRS. The study discovered that Nigeria's financial reporting did improve since IFRS were adopted in Nigeria. [Chukwu and Aloy-Ezirim \(2020\)](#) examined the impact that IFRS had on the accuracy and timeliness of reported numbers by Nigeria's listed insurance companies from 2010-2013. The study examined the relationship between audit lag and profit level, leverage, business size, board size, and independence of the board. The study which used the multiple regression techniques, failed to turn up any evidence that Nigeria's switch to IFRS led to higher-calibre financial reporting. [Yusuf and Ahmed \(2021\)](#) examined whether IFRS adoption has changed the calibre of reported numbers from 2008 to 2015 with 2012 being the year of adoption and marking the post-adoption period in the study. The result of the pooled OLS estimates showed that the adoption of IFRS has improved the calibre of reported numbers in the financial statements of firms in Nigeria.

[Diem \(2023\)](#) examined corporate social responsibility (CSR) and earnings management in Vietnam. The study, which aimed to see if Vietnam firms complied with SCR regulation and whether CEO power affected earnings management, used data from 418 firms listed on the *HoChiMinh Stock Exchange* (HOSE) and Hanoi (HNX) stock exchanges from 2016-2020. Using the general feasible least squares method, the evidence available indicated that firms complied with Corporate Social Responsibility (CSR) regulation for prestige's sake so they could attract more investments and that firms in this category seem to have less management of profitability, probably for the reason of attracting more investment; hence, they have to be transparent. However, the study also stated that the impact of CEOs on earnings management was substantial, but admitted that their study makes it impossible to combine effects of CEO power, CSR on earnings management, and CSR in corporate governance regulation with earnings manipulation. The research sheds light on the positive effect of accountability to society on better reporting figures, and by implication, a better growth in revenue would lead to better accountability and better reporting quality. [Edison and Nugroho \(2020\)](#) studied the effect of leverage and growth on earnings management in Indonesia, using 20 *Badan Usaha Milik Negara* (BUMN) firms from 2015 to 2018. They wanted to see the effect of the gearing ratio (debt to equity) and sales growth on the ability of managers to manipulate earnings. The results indicated that the two variables have a significant effect on the desire and ability to manipulate the accounting numbers. Interestingly, the effect seems rather positive, as an increase in debt burden and increase in sales growth appeared to have influenced earnings management positively. While this study used sales growth, our current study focused on growth rate and disaggregated into pre- and post-IFRS-adoption, effectively testing for the effect of the global standard in the Nigerian social and economic environment.

3. Research Methodology

3.1. Population and Sample

The sample for this analysis includes all publicly traded companies that have been quoted on the floor of the Nigerian Stock Exchange. Nevertheless, the analysis conducted did not include the financial services sector due to its distinctive regulatory requirements and peculiarities. This is to allow for better analysis and comparison, hence the better inferences drawn. In addition to the exclusion of the financial sector from this analysis, all companies that had missing data, incomplete data, or whose information was not available for the study period were equally removed, leaving us with 87 publicly traded companies outside of the financial sector. These firms were listed and remain active on the floor of the NSE for the periods under study. Using

87 companies from both the pre-IFRS adoption (2003-2011) and post-IFRS implementation (2012-2020) periods, researchers analyzed the impact of revenue growth on earnings manipulation. The chosen time frame of nine years pre-post IFRS is for the purpose of using a balance panel to compare post-adoption outcomes to those obtained before adoption. More importantly, the time of nine (9) years is sufficient to determine the impact of the explanatory variables on the explained variable.

3.2. Method of Data Analysis

This research uses a quantitative approach to assess the impact of expansion on FRQ before and after the introduction of IFRS. There are no concrete or direct means of determining how reliably the quality of reported numbers (Financial Reporting Quality) can be observed. The calibre of reported numbers here is evaluated using the earnings manipulative detective method modelled by renowned authors. A version of Jones (1991) modified by Dechow, Sloan, and Sweeney (1995) was used to determine discretionary accruals for both pre- and post-adoption years. A positive discretionary accrual implies income-increasing management practices, while a negative discretionary accrual implies income-decreasing practices. If the discretionary accrual is positive, the management is likely to have taken steps to manipulatively boost profits, whereas a negative number suggests the opposite. Below, we outline Equation 1.

$$TACC_{it}/A_{it} - 1 = \alpha_1 t (1/A_{it} - 1) + \alpha_2 i [(\Delta REV_{it} - \Delta REC_{it})/A_{it} - 1] + \alpha_3 i [PPE_{it}/A_{it} - 1] + \epsilon_{it} \quad (1)$$

Where,

TACC=Total accruals.

Total Accruals=Earnings-operating cash flows.

A_{it}=Total assets.

ΔREV=Change in operating revenues

ΔREC=Change in net receivables.

PPE=Gross property, plant, and equipment

Once the model was estimated, the discretionary accruals which are the residuals of the model both in pre and post IFRS were generated and used as the dependent variable in Equation 2 below to determine the effect of growth on earnings management practice of Nigeria firms:

$$DA_{it} = \beta_0 + \beta_1 Growth_{it} + \beta_2 ROA_{it} + \beta_3 Size_{it} \epsilon_{it} \quad (2)$$

Where

DA=Discretionary accruals from Equation 1.

ROA =Return on assets of firms as control variable.

Size=Measured by the natural log of total assets as control variable.

ε = Error term.

To measure the effect of IFRS on the growth of firms, the study develops the third model using the test of mean difference. The paired sample t-test is used to test for statistical difference between the mean of growth in both periods of the study. The third model as adopted from Enakirerhi, Ewiwile, and Wobo (2022) and Enakirerhi et al. (2020) is stated below Equation 3:

$$t = \frac{\hat{x}_1 - \hat{x}_2}{\sqrt{\left(\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}\right)}} \quad (3)$$

Where:

\hat{x}_1 and \hat{x}_2 represent the sample mean of growth in pre and post IFRS era.

S_1^2 and S_2^2 are the sample variances for both periods.

n_1 and n_2 are the sample size for both periods.

4. Results and Discussion

4.1. Discretionary Accruals (Earnings Management) in Pre and Post IFRS

To determine whether managers engaged in earnings manipulation activities or not, the discretionary accruals were estimated. However, because the data was cut across 87 firms over an eighteen (18)-year period, nine (9) years before and nine (9) years after, we started the analysis with pooled OLS estimates to determine the most efficient analysis to be used. As soon as the pooled OLS estimate had been estimated, panel diagnostic tests were applied to test the robustness of the chosen method, and the result is presented in Table 1.

Table 1 presents the diagnostic tests conducted to determine the most suitable analysis to be used to determine the discretionary accruals for the periods. In pre-IFRS, the Joint Significant and Breusch-Pagan tests rejected the pooled OLS estimate in favour of panel variants. The Hausman test, however, rejected the fixed effect model in favour of the Random Effect Model. Consequently, the residual was computed utilising the random effect model.

Table 1. Paneldiagnostic tests.

Tests	Pre-IFRS adoption		Post-IFRS adoption	
	Chi square (p-value)	Decision	Chi square (p-value)	Decision
Joint significance test	57.540 (0.000***)	Reject OLS for panel	19.436 (0.000***)	Reject OLS for panel
Breusch-pagan test	730.125 (0.000***)	Reject OLS for panel	497.092 (0.000***)	Reject OLS for panel
Hausman test	0.725 (0.867)	Reject fixed effect for random effect model	23.584 (0.000***)	Reject random effect model for fixed effect model

Note: *** Significant at 1% level.

Source: Extracted from results of various regression analyses.

In post-IFRS, the pooled OLS was also rejected by the Joint Significant and Breusch-Pagan, tests but the Hausman test opted for the fixed effect model, and as such, the residual was generated using the Fixed effect Model. The regression equation as specified in Model 1 is seen in Table 2.

Table 2. Regression analysis to generate the residuals of the model.

Independent variables	Dependent variable (Total accruals)	
	Pre-IFRS (p-value)	Post IFRS (p-value)
	Random effect model	Fixed effect model
Constant	-8.243 (0.232)	70.025 (0.009***)
1/A <i>it</i>	6798 (0.000***)	-3.534 ⁺⁷ (0.008***)
(ΔREV <i>it</i> - ΔREC <i>it</i>) / A	4111 (0.000***)	1.366 ⁻⁹ (0.928)
PPE <i>it</i> / A	0.120 (0.934)	-120.619 (0.013***)
S.E. of regression	65.246	36.235
Within r-squared		0.088
LSDV r-squared		0.830

Note: ***significant at 1% level.

Source: Extracted from regression results.

The regression in Table 2 is not for interpretative purposes but for the generation of residuals (discretionary accruals both in pre- and post-IFRS). As can be seen, the inverse of assets positively impacts total accruals in pre-IFRS years, but the effect becomes negative in post-IFRS years. The difference between revenue and receivable maintained a positive effect on total accruals for both periods, while the effects of property, plant, and equipment were mixed. As earlier stated, the purpose is to generate the residuals so that a preliminary description can be given to the residuals from Table 2 and other variables of the research in Table 3.

Table 3. Descriptivestatistics.

Statistic	Dis. accruals	Growth	ROA	Size
Pre-IFRS adoption (2003-2011)				
Mean	2.29 ⁻⁷	0.182	0.095	15.708
Std. dev.	65.096	0.350	0.130	1.846
Minimum	-624.34	-0.978	-0.441	7.854
Maximum	129.42	1.646	0.809	21.795
Obs.	783	783	783	783
Post-IFRS adoption (2012-2020)				
Mean	-4.59 ⁻⁷	0.046	0.038	16.293
Std. dev.	32.307	0.253	0.155	1.822
Minimum	-242.55	-0.906	-1.194	11.591
Maximum	200.39	0.996	0.793	21.147
Obs.	783	783	783	783

4.2. Descriptive Statistics of Discretionary Accruals, Growth in Revenue and other controlled variables in Pre & Post-IFRS)

The Table 3 presents the descriptive statistics of key variables for pre- and post-IFRS adoption. From the above table, discretionary accrual increased in post-IFRS adoption periods, suggesting increased earnings

management practices. However, while firms on average engaged in income-increasing earnings management in pre-IFRS adoption, there was income-decreasing earnings management practice in the post-2012 era. This is quite unexpected, as the post-2012 period was actually the boom period for Nigerian firms, especially between 2012 and 2015 before the current administration of President Buhari took over government. One probable reason firms might do this could be the desire to maintain consistent earnings similar to what was obtainable in pre-IFRS years, in line with the assertion of Hassan and Bello (2013) that managers of manufacturing firms in Nigeria with higher growth have the incentive to manage their earnings. However, earnings are managed to show consistency once a firm has established a conservative earnings pattern. One notable defect in this reasoning is that empirically, growth rates were lower after IFRS adoption, with an average of 5% as against 18% in pre-IFRS years. However, one should be mindful of the measure of growth in this study, which is percentage change in revenue. It could be that revenue was much larger in the post-IFRS era. Changes in bigger (revenue) firms that are consolidating might be less than changes in growing firms. Another probable reason firms may want to do this is to evade paying higher taxes as a result of higher declared income. The regulatory system in Nigeria is weak and tax revenue collection is at its lowest when compared to advanced countries like the United Kingdom or Canada. Hence, tax evasion and avoidance blossom at the expense of government revenue. This probably exposes the weakness of the global standards, especially when they allow the use of judgement in the treatment of certain items as opposed to the rule-based local standards. The pre-adoption income-increasing accruals may not be unconnected with the efforts of managers to present growing, performing, and stabilised firms to shareholders and other stakeholders, especially at a time when the world economy was struggling with the Great Depression and Nigerian firms seemed to have developed a shock absorber. While being mindful of our earlier assertions, it should be noted that the post-IFRS study period covers the Nigerian recession years of 2015 and 2016.

The revenue of firms grew at an average of 18% in the pre-IFRS adoption period, better than the post-IFRS average growth of 5%. The periods of 2003 to 2011 were good periods of growth for Nigerian firms, as the great depression, especially from 2007 to 2009, did not have much impact on Nigerian firms like their US counterparts. It was thought that the Nigerian capital market developed a shock absorber during these periods. While several other nations experienced a period of economic recession, the Nigerian economy, in contrast had a notable recovery and exhibited growth. However, the post-IFRS adoption period witnessed a sharp decrease in revenue growth from 18% pre-to 5%. Although a number of factors, such as firms becoming larger, and growth slowing down, could be attributed to this, the reduced growth rate may not be unconnected with the recession experienced in 2015 and 2016, a factor that has continued to plague the economy till date. During these periods, many firms struggled to survive, and some became liquidated due to difficulties in operations.

4.3. Growth of Firms and Financial Reporting Quality Pre and Post IFRS Era

After describing and seeing some interesting detail about the data, this section examines the effect growth has on the calibre of reported numbers measured by earnings management in both pre- and post-IFRS periods. There are 1566 firm-year observations divided into 783 firm-year observations, pre- and 783 post-IFRS. To determine the effect of growth on earnings management, the data were pooled together, and again, diagnostic tests were applied to determine the suitability of the OLS estimate. The results are presented below.

Table 4. Panel diagnostic tests.

Tests	Pre-IFRS adoption		Post-IFRS adoption	
	Chi square (p-value)	Decision	Chi square (p-value)	Decision
Joint significance test	58.379 (0.000***)	Reject OLS for panel	0.126 (0.236)	OLS estimate is adequate
Breusch-Pagan test	732.068 (0.000***)	Reject OLS for panel	0.372 (0.417)	OLS estimate is adequate
Hausman test	0.672 (0.879)	Reject fixed effect for random effect model	-	-

Note: ***significant at 1% level.

Source: Extracted from results of various regression analysis.

Table 4 exhibits the results of panel diagnostic tests for growth in revenue and financial reporting quality. In pre-IFRS, the pooled OLS was rejected by the joint significance and Breusch-Pagan tests, while the Hausman test rejected the Fixed Effect Model in favour of the Random Effect Model. However, the adequacy of the pooled OLS was established by both tests in post-IFRS periods. The regression results are presented in Table 5.

Table 5. Regression result of the independent and dependent variables.

Independent variables	Dependent variable (Discretionary accruals from model 1)	
	Pre-IFRS (<i>p</i> -value)	Post IFRS (<i>p</i> -value)
	Random effect model	Fixed effect model
Constant	-36.6863 (0.149)	-74.5964 (0.484)
Growth in revenue	-0.0643 (0.000***)	7.7113 (0.332)
Performance (ROA)	24.0079 (0.198)	70.9036 (0.041**)
Size of firms	2.1961 (0.169)	4.3914 (0.500)
S.E. of regression	18.3620	35.3648
Within R-squared		0.0474
LSDV R-squared		0.0474
F(3, 86)		2.0160(0.117)

Note: ***significant at 1% level **significant at 5% level.

Source: Extracted from regression results.

Growth in revenue has a negative and significant association with discretionary accruals before adoption of IFRS and positive association after the adoption of IFRS. In essence, firms in pre-IFRS era engaged in increasing earnings manipulative practices with decrease in growth rate, while firms in the post-IFRS era engaged in decreasing income smoothing with decrease in growth rate. Also, an increase in revenue growth will foster increased manipulation in the aftermath of changing global standards. Managers tend to smooth off income of a firm and may likely engage in increasing income smoothing in periods of low revenue, while in period of volatile growth revenue, income-decreasing methods may be required to present a consistent result. Recall that firms generally engaged in income-increasing accruals in pre-IFRS periods, and since growth measures the percentage change in revenue year on year, decrease in this change prompted firms to manage earnings upwards to keep up with previous records. In post-IFRS, firms' manager surprisingly, against logic, adopted a different approach to engage in income decreasing accruals in the face of decrease in growth and performance compared to pre-IFRS period. This could probably be for tax purposes and to send a clear signal to regulators who were increasingly reviewing and expanding their tax base during and after the administration of Good luck Jonathan. However, the income-decreasing earnings management practices might not entirely depend on growth in the post-IFRS period as seen in the coefficient of performance (ROA) used in the study. The control variables showed that performance measured by return on assets and size of firms measured by the total assets of firms have positive effects on earnings management measured by discretionary accruals in both pre and post-IFRS periods. However, only the effect in post-IFRS periods was significant, indicating that the driver of manipulation in post-IFRS era was performance figures. The importance of this figure cannot be overstated as it plays a critical role in the evaluation of tax liabilities by regulatory authorities. Succinctly placed, post-IFRS witnessed a direct association between performance and manipulation of earnings, and as earlier pointed, firms engaged in income-decreasing practices. This might be done principally to send a message to the government about the tax liability associated with higher earnings. Such practice, of course, would have resulted in a lower performance level, as captured in the descriptive statistics.

Table 6. Two Sample t-test for the means of growth in revenue of firms (Pre & post-IFRS).

Variable	Obs.	Mean	Std. dev.	[95% conf. interval]	
				Lower	Upper
Growth PRE	783	0.182	0.350		
Growth POST	783	0.046	0.253		
Difference		0.136	0.431	0.095	0.176

Note: Difference = mean (Growth PRE) - mean (Growth POST) t-statistics (Sign two tailed) = 6.569 (0.0000***).

Ho: diff = 0 H1: diff ≠ 0.

Degrees of freedom = 783.

4.4 Impact of IFRS Adoption on Revenue Growth

Table 6 shows the result of the paired sample for the mean values of growth in revenue in pre- and post-IFRS adoption years. The result of the paired sample t-test above indicates that there is a 99% confidence interval that the mean of the post-IFRS adoption period is statistically different from the mean of pre IFRS adoption period. Hence, the null hypothesis that there is no significant difference between growth in pre and post IFRS adoption eras is hereby rejected in favour of the alternate. With a 1% significant level and a mean difference of 14%, we can conclude that IFRS has had a significant impact on the growth of firms in Nigeria. However, this effect is rather negative. Hence, the introduction of IFRS has affected growth negatively. As

pointed out earlier, the results could have been affected by the recession in the economy of Nigeria in the year 2015 and 2016. This result agrees with the results of [Soye and Raji \(2016\)](#).

4.5. Summary of Findings

The results of the analysis have been presented above. From the discussion of results, the following are the findings:

1. Against the popular belief that IFRS adoption would curb managers' ability to manipulate earnings, manipulations were higher in post-IFRS periods, suggesting an increase in earnings smoothing practice and consequently a lower calibre of reported figures with the adoption of IFRS.
2. The results showed that a decreasing growth rate has resulted in increasing earnings management practices, probably to maintain steady published performance figures in pre-IFRS era, while decreasing growth rate resulted in income-decreasing earnings management practices in post-IFRS years, a rather surprising result.
3. Firms engaged in income-increasing manipulative practice in pre-IFRS adoption and income-decreasing practices in post-IFRS adoption years.
4. Generally, average growth was higher in pre-IFRS periods than in post-IFRS period. The reduced growth in post IFRS period may not be unconnected with the economic contraction of 2015 or 2016.
5. The study results showed that while changing standards (whether rule or principled based) may affect the nature of earnings management, but very much unlikely to prevent earnings management practices.

5. Conclusion

The study examined the revenue growth and association with earnings management practices of firms in Nigeria pre- and post-IFRS adoption years. It aimed at determining, amongst others, what association revenue growth rate has with earnings manipulative practices. The results showed that decreasing growth rate has resulted in increasing earnings manipulative practices probably to maintain steady published performance figures in pre-IFRS era, while decreasing growth rate has resulted in income-decreasing earnings management practices in post-IFRS years, a rather surprising result. Overall, earnings management practices increased after the adoption of IFRS and conversely, it could be argued that reporting quality decreased with the adoption of IFRS in Nigeria. Thus, while changing standards (whether rule, or principled-based) may affect the nature of earnings management, it is very unlikely to prevent earnings management practices. Given that earnings management practices were more pronounced or increased during the principle-based standards, the paper therefore recommends that Nigeria look into the adoption of IFRS, which were adopted hook line and sinker, with the intention of including those aspects of the local GAAPS that could help deter efforts by managers to engage in pervasive earnings management behaviours. Thus, IFRS should be domesticated with local contents. For further study, the paper recommends that a year-on-year analysis be attempted in future research. This might explain why, although post-IFRS witnessed a lower average growth rate, its effect on earnings management seems to be positive, and vice versa for pre-IFRS adoption periods.

References

- Abdullahi, A., & Abubakar, M. Y. (2020). International financial reporting standards and reporting quality in Nigeria: An assessment of selected quoted firms. *International Business and Accounting Research Journal*, 4(1), 11-22. <https://doi.org/10.15294/ibarj.v4i1.90>
- Adewale, A. A., & Ibukun-Falayi, O. R. (2018). *The impact of international financial reporting standards adoption on the quality of financial statements of banks in Nigeria electronic copy*. Retrieved from <https://ssrn.com/abstract=3099851>
- Ado, A. B., Rashid, N., Mustapha, U. A., & Ademola, L. S. (2020). The financial determinants of earnings management and the profitability of listed companies in Nigeria. *Journal of Critical Reviews*, 7(9), 31-36. <https://doi.org/10.31838/jcr.07.09.06>
- Amaefule, L. I., Onyekpere, U. R., & Kalu, E. O. (2018). International financial reporting standards and manufacturing firms' financial performance in Nigeria: A study of selected quoted firms. *International Journal of Accounting and Taxation*, 6(1), 103-114. <https://doi.org/10.15640/ijat.v6n1a9>
- Atoyebi, T. A., Salaudeen, Y. M., & Onyilokwu, J. Y. A. (2018). International financial reporting standards adoption and value relevance of financial information of quoted healthcare firms in Nigeria. *Applied Economics and Finance*, 5(4), 174-184.
- Beaver, W., Kettler, P., & Scholes, M. (1970). The association between market determined and accounting determined risk measures. *The Accounting Review*, 45(4), 654-682.
- Belloa, A., Abubakar, S., & Adeyemi, T. (2016). *IFRS adoption and earnings management in Nigerian non-financial quoted companies*. Paper presented at the Proceedings of the International Conference on Accounting Studies 2016 15-18 August 2016, Langkawi, Kedah, Malaysia.
- Chukwu, G. J., & Aloy-Ezirim, H. N. (2020). IFRS adoption and timeliness of financial reporting of insurance firms in Nigeria. *International Journal of Managerial Studies and Research*, 8(5), 1-9. <http://dx.doi.org/10.20431/2349-0349.0805001>
- Debnath, P. (2017). Assaying the impact of firm's growth and performance on earnings management: An empirical observation of Indian economy. *International Journal of Research in Business Studies and Management*, 4(2), 30-40. <https://doi.org/10.22259/ijrbms.0402003>
- Dechow, P., Sloan, R., & Sweeney, A. (1995). Detecting earnings management. *The Accounting Review*, 70(2), 193-225.

- Diem, N. P. N. (2023). The impact of corporate social responsibilities on earnings management: Evidence from Vietnam. *International Journal of Professional Business Review*, 8(2), 1-18. <https://doi.org/10.26668/businessreview/2023.v8i2.1065>
- Edison, A., & Nugroho, A. P. A. (2020). The effect of leverage and sales growth on earning management. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(4), 3442-3454.
- Enakirerhi, L. I., Ewiwile, S., & Wobo, O. H. (2022). Leverage of firms and earnings management practices in Nigeria pre and post IFRS adoption periods. *Asian Journal of Economics, Business and Accounting*, 22(3), 52-63. <https://doi.org/10.9734/ajeba/2022/v22i330551>
- Enakirerhi, L. I., Ibanichuka, E. A., & Ofurum, C. O. (2020). Firms' profitability and financial reporting quality: Pre and post ifrs adoption in Nigeria. *International Journal of Research and Innovation in Social Science*, 4(1), 249-255.
- Firth, M., Fung, P. M., & Rui, O. M. (2007). Ownership, two-tier board structure, and the informativeness of earnings—Evidence from China. *Journal of Accounting and Public Policy*, 26(4), 463-496. <https://doi.org/10.1016/j.jaccpubpol.2007.05.004>
- Hamidzadeh, S., & Zeinali, M. (2015). Sales growth and growth potential effect on financial reporting quality at listed companies in Tehran stock exchange. *Arabian Journal of Business and Management Review(OMAN Chapter)*, 4(7), 115 – 120. <https://doi.org/10.12816/0019076>
- Hassan, S. U. (2014). Financial reporting quality, does monitoring characteristics matter? An empirical analysis of Nigerian manufacturing sector. *The Business & Management Review*, 3(2), 147-161.
- Hassan, S. U., & Bello, A. (2013). Firm characteristics and financial reporting quality of listed manufacturing firms in Nigeria. *International Journal of Accounting, Banking and Management*, 1(3), 1-16.
- Hassan, S. U., & Farouk, M. A. (2014). Firm attributes and earnings quality of listed oil and gas companies in Nigeria. *Research Journal of Finance and Accounting*, 5(17), 10-18.
- Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research*, 29(2), 193-228. <https://doi.org/10.2307/2491047>
- Nissim, D., & Penman, S. H. (2001). Ratio analysis and equity valuation: From research to practice. *Review of Accounting Studies*, 6, 109-154.
- Odoemelam, N., Okafo, R. G., & Ofoegbu, N. G. (2019). Effect of international financial reporting standard adoption on the earnings value relevance of quoted Nigerian firms. *Cogent Business and Management*, 6(1), 1-22. <https://doi.org/10.1080/23311975.2019.1643520>
- Olawale, O. I., Daddau, H., Usman, A., & Shuaibu, H. (2017). Adoption of international financial reporting standards and earnings management practices in Nigerian listed insurance firms. *KASU Journal of Accounting Research and Practice*, 6(2), 1-11.
- Penman, S., & Zhang, X. (2002). Accounting conservatism, the quality of earnings and stock returns. *The Accounting Review*, 77(2), 237-265. <https://doi.org/10.2308/accr.2002.77.2.237>
- Pincus, M., & Rajgopal, S. (2002). The accrual anomaly: International evidence. *The Accounting Review*, 82, 169-203.
- Richardson, S. A., Sloan, R. G., Soliman, M. T., & Tuna, I. (2005). Accrual reliability, earnings persistence and stock prices. *Journal of Accounting and Economics*, 39(3), 437-485. <https://doi.org/10.1016/j.jacceco.2005.04.005>
- Sanyaolu, W. A., Lawal, A., & Job-Olatunji, K. (2017). IFRS adoption and quality of financial statement: Perspective of auditors, chartered accountants and graduates of accounting. *International Journal of Innovative Finance and Economics Research*, 5(2), 1-10.
- Soye, Y. A., & Raji, O. A. (2016). The comparability of pre and post adoption IFRS in Nigeria insurance companies. *Journal of Management and Corporate Governance*, 8(2), 41-53.
- Sundvik, D. (2019). The impact of principles-based vs rules-based accounting standards on reporting quality and earnings management. *Journal of Applied Accounting Research*, 20(1), 78-93. <https://doi.org/10.1108/jaar-05-2018-0063>
- Temile, S. O. (2018). *An analysis of the effect of IFRS adoption in Nigeria on the quality of published financial information*. An unpublished Ph.D. Thesis Submitted to Department of Accounting and Finance, University of Salford, Manchester, United Kingdom.
- Wang, F., Zhu, Z., & Hoffmire, J. (2015). *Financial reporting quality, free cash flow, and investment efficiency*. Paper presented at the SHS Web of Conferences, 01027(2015). EDP Sciences.
- Yusuf, Y., & Ahmed, S. H. (2021). International financial reporting standards and reporting quality of quoted firms in Nigeria. *The International Journal of Business & Management*, 9(1), 342-345. <https://doi.org/10.24940/theijbm/2021/v9/i1/BM2101-024>