EFFECT OF FIRM CHARACTERISTICS ON REPORTED EARNINGS QUALITY OF LISTED INDUSTRIAL GOODS COMPANIES IN NIGERIA.

OLOGHODO, Johnbest Churchill1, ZUBAIRU Abdullahi2, AZA, Solomon, Mangba3
PhD Graduate1 Professor of Accounting2 Associate Professor of Accounting3
Department of Accounting, Nasarawa State University, Keffi. Nigeria.

Abstract
The study examined the effect of firm characteristics on reported earnings quality of listed industrial goods companies on the Nigeria stock exchange. The failure of many companies and their inability to perform leading to delisting from the stock market has been a source of great concern. Secondary data were taken from the annual financial statement of a population of 13 companies, with a sample of 13 companies as well. The multiple linear regression models and OLS were employed and all the relevant diagnostic tests were conducted, using Eviews10 software. The result of the study revealed that the age of the firms and their financial leverages have no significant effect on the reported earnings quality of the companies, but that a positive relationship exists between firm age and reported earnings quality while financial leverage revealed a negative relationship with earnings quality, but firm size and firm strategy showed a significant positive effect on the reported earnings quality of listed industrial goods companies in Nigeria. The study recommends that industrial goods companies’ management and shareholders must exercise caution in deciding the level of leverage to be employed in their financial structure and should favour the use of equity capital above debt financing, so as to improve profitability level and reduce debt interest expenses, and create integrating strategy for all stakeholders of the companies in this industry.

Keywords: Financial leverage, Firm age, Firm size, Firm strategy, industrial goods, reported earnings quality.

1. Introduction
The recent financial scandal and crises in different companies in many nations of the world has been attributed to failure in governance practices and has damaged the confidence and trust of quite a number of investors worldwide. This has led to censure in respect of financial accounting reports or quality of earnings reported (Agrawal & Chadha, 2005). There is a growing concern and intensive demand from different stakeholders, for companies to generate dependable, reliable and palpable financial information laden with quality earnings report, due to the extensive failure in the financial disclosures over the years, that has made myriads of investors and employees as well as the general public losing billions of investment funds, pension funds, and disposable income respectively. The quality of reported earnings is useful for the company in the efficient distribution of resources for equity, fairness and justice among the various stakeholders (Oyebamiji, 2020). This allows the company’s boards of directors in assessing the management’s effectiveness and carry out proactive correctional measures, when necessary, to mitigate financial failure conditions of the company. The need to put in place a good and formidable firm structure has become increasingly inevitable (Kelvin, 2020), so as to improve the financial reporting quality with the aim of rebuilding investors and other stakeholders’ confidence. The preparation of high-quality financial reports by firms in this current global economic environment cannot be overemphasized (Waweru, & Riro, 2013). The promotion and demand for assessable, reliable, relevant, and dependable quality financial disclosure must be able to assist users of financial reports in taking objective informed decision-making. A high-level quality financial disclosure is invaluable for the firm as a prospect to reducing investment expenses in debt financing which is a wind pipe to earnings management that is undesirable to the firm. The size of the firm can serve as a major influence in the preparation of quality financial earnings report; this is because large firms comprise a lot of individuals with different background, qualification, experience and expertise in different spheres of life. With these characteristics at the back of the mind of the firm, it will ordinarily motivate the firm to produce report that is comprehensive, inclusive, reliable and of high quality. In the business world of today, corporate reporting has gone beyond financial statement reporting, a whole lot of contents are now being incorporated, to avail investors the relevant required information needed to take decisions regarding their investment opportunities. (Waweru & Riro, 2013; Agrawal & Chadha, 2005; Oyebamiji, 2020). If a financial statement lacks the principles of accuracy, comparability, compatibility, relevance, reliability, and there exists material
The quality of earnings information is determinable in the reported financial statement of a company, over the recent past, a lot of companies have been delisted from the stock market of the Nigeria Stock exchange for example in 2016 the number of industrial goods companies listed was 17, but as of 1st of March, 2021 it has reduced to 13 companies; this is of grave consequence to the economy, and it is a great concern to the board of firms. A careful look at previous studies revealed that numerous studies have been carried out on the effect of firm characteristics on earnings quality both in the developed and developing countries. Majority of the study have used firm specific variables characteristics that affect earnings quality of the company including firm financial leverage, firm size, profitability, size of the audit firm, firm age, liquidity (Moghaddam & Abbaspour, 2017; Putri & Indriani, 2019; Nalarreason et al., 2019), other that relates to the board structure of the company impacting quality of earnings having corporate governance elements such as board composition, size, and ownership structure (Dang et al., 2020; Oyebamiji, 2020). The empirical research studies in the area of industrial goods manufacturing companies are still very few, compared to similar studies in other sectors. Therefore, conducting research in this specific area of the manufacturing sector of the Nigerian economy in developing countries is relevant and needful. Therefore, this study aims to examine the effect of firm characteristics on the reported earnings quality of firms operating in the industrial goods manufacturing sector of the Nigerian economy for the period from 2011-2020. The manufacturing sector of Nigeria, and specifically the industrial goods sector, is an interesting area to study, because of the recent popular vanguard by the Nigerian government to diversify its economy away from oil and gas, of which the manufacturing sector is a key focus. The global financial crises have awakened the consciousness for the need to generate and observe due diligence and efficiency in reported earnings quality (Kelvin, 2020). The study is underpinned by the stakeholder theory, which is the relationship between the firm and the users of financial information.

2 Literature Review
2.1 Conceptual Framework

Earnings Quality
Earnings quality is defined as the true representation of a firm devoid of any accounting manipulations, maneuver, one-time item or not easily classified items. It can be the income generated by a company from its core activities (Tuovila & Kindness, 2020). Earnings quality refers to the ability of reported earnings (income) to predict a company's future earnings and formulated by Stock Analysts. The income statement displays a company's operating performance, that is, its net profit or loss, during the reporting period (Ward, 2014). According to Jelodari and Kordshouri (2016), some features of business firm that have been identified to increase quality of earnings in accounting and in financial studies, if the firms possess them are: (a) earnings before tax from operating and repeatable activities, (b) accounting conservative method stability. (c) Independent growth rate and net profit without tax exemption considerations. (d) Capital structure that is suitable, (e) suitable debt level, (f) non-inflation based firm earnings.

Among many measures of earnings quality proposed by many scholars, the ones proposed by Lenz et al. (2003), Pennan (2001), and Brown (2020), seems to be gaining more popularity in the literature. According to them quality of earnings report is measured as the ratio of net cash flow from operating activities divided by the net income. The net cash flow from operating activities can be seen in the cashflow statement of the reported financial statement; while the net income is reported in the income statement of the firm.

Firm age
This is the number of years of incorporation of the firm in which it has existed. It is the age of the company since incorporation (Ilaboya & Ohiohka, 2016). The age of a firm can therefore be said to be the total number of years of its operations from the date of its incorporation up to the current year of study. Firm age is characterized by the length of time it has been in that industry, its attributes, its trademark, its age-long reputation, its goodwill, both purchased and un-purchased which the company has upheld for that period of time.

The relationship between firm age and quality of reported earnings can have a far-reaching effect in such a way that the firm becomes more conscious in terms of what, why and how they engage in their operations (Agawal & Chadha, 2005). This is very vital to firms in order not to undermine the reputation they have built over the years, to maintain their market share to say the least, and to improve on their goodwill for customer satisfaction, through ensuring that the financial report emanating from the firm have the desired quality. This is aimed at boosting investors’ confidence in relying and depending on such report.

H1: firm age has no significant effect on reported earnings quality of listed industrial goods manufacturing companies in Nigeria.

Firm Financial Leverage
According to Bragg (2021) firm financial leverage is the use of money borrowed from outside source to acquire additional assets for the business. One of the primary purposes of leverage financing is to generate and improve additional return on equity. However, caution must not be thrown to the wind when incurring debt finance, because the more the amount of financial leverage the more the risk of failure of the business, because the tendency of the inability to repay the debt.

Many studies have indicated that there is a positive relation between financial leverage and earnings quality (Deumes & Knechel, 2008; Lau et al., 2009; Taylor et al., 2010; Elshandidy et al., 2011; Takhtaei et al., 2014; Uyar et al., 2013). These results indicated that companies with huge debts are enforced to disclose more information to satisfy their creditors (Zare et al., 2013). Thus, agency costs tend to increase in companies that accumulate higher financial leverage; hence, Murcia (2010) submitted that there may be a direct association between financial leverage and earnings quality.
On the other hand, Connors and Gao (2011), Monday and Nancy (2016) found leverage to have a negatively significant association with reported earnings quality. This result is not in conformity with the agency cost theory but is consistent with the argument that companies having higher debt are more inclined to disclose fewer information to the public (Connors & Gao, 2011). However, Rajab and Schachler (2009), Fathi (2013), Haji and Ghazali (2013) and AL-Asiry (2017) in their studies found out that leverage is not statistically significant to explain reported earnings quality in the financial report; Khelif and Souissi, (2010) affirms that the results of these studies gave strong evidential outcome showing that leverage insignificantly exert influence on information quality disclosure. From the above arguments the following study hypothesis is formulated:

H1: There is no significant relationship between firm financial leverage and reported earnings quality of listed industrial goods manufacturing companies in Nigeria.

Firm Size
The size of a firm can be determined by value and volume of its assets, number of staff on the firms’ payroll, the number of branches it can muster and sustain effectively.

Dang et al. (2018) posit that firm size can best be defined in terms of its measures such as total assets, total sales, and market value of equity.

They explained further that some size measures appear to be more “relevant” than others in different areas of research endeavors, meaning that they are more useful as control variables in order that bias in omitted variables can be diminished so as to improve the estimation of the focal coefficients.

Many researchers studied the relation between firm size and EQ and the results were mixed. Agyei-Mensah (2013), Ebrahimabadi and Asadi (2016) Haji and Ghazali (2013), and Monday and Nancy (2016) found a significant positive relation between firm size and EQ. This result demonstrated that big companies have more tendencies to disclose information that are of high-quality because they are more under higher scrutiny (Uyar et al., 2013). In contrast, Abdul Majid and Ismail (2008) as well as Takhtaei and Mousavi (2012) found a negative relationship between firm size and EQ. This finding indicated that small-sized companies have revealed their readiness to disclose more information in order that they might put themselves on competitive advantages and public visibility (Abdul Majid & Ismail, 2008). However, Hosseinizadeh et al. (2014) and Al-Asiry (2017) found an insignificant relationship between company size and EQ. Hence, company size does not significantly influence the quality of financial reporting. Thus, based on these arguments, this study develops the following hypothesis:

H2: There is no significant relationship between firm size and reported earnings quality of listed industrial goods companies in Nigeria.

Firm Strategy
Strategy has been seen to be the determination of the firm’s fundamental long-term goals and objectives and the adoption of necessary methodologies and resources to execute the said goals and objectives (Houq et al., 2015). The goals of the organizational strategy must point to its patterns, perspectives, plans, and positions in the competitive environment. Business strategy is the set of mechanisms created by a firm for which they use to take decisive actions to strengthen their competitive advantage to attract customers’ patronage to their services in the industry where they belong with the primary aim of achieving the goal of the organization. Business strategy is seen as a consistent set of decision packages that streamlines the way a firm competes and intends to compete favorably within a defined product market (Amos et al., 2016). According to Miles and Snow (1978) firms are classified depending on the firm’s market orientation into analyzers, defenders, prospectors, and reactors. They noted that defenders and prospectors are the most dominant among the class. In their study, Snow and Hambrick (1980) investigated the different categorization methods of firm strategy within this typology and they proposed in addition to other categorization options, that the examination of strategy using objective indicators based on financial data collection of sample firms is best.

H3: Firm strategy has no significant effect on reported earnings quality of listed industrial goods companies in Nigeria.

2.2 Empirical Reviews

Alareeni (2018) studied the impact of firm-specific characteristics on earnings management in the Gulf cooperation companies (GCC) countries. The aim is to determine whether or not listed companies in this region are involved in earnings management practices. The sample of the study comprises of 332 listed firms out of a total population of 628 firms which cut across all the GCC countries of (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirate). The study spanned a six (6) year period from 2010 to 2015. The data collected was analyzed using multiple regression analysis, descriptive statistics, and Pearson correlation matrix. The results of the study revealed that firms practiced earnings management excluding firms in Oman whose earnings management test result showed very low practices. It was revealed further that firm size and financial leverage have insignificant impact on earnings management practices in the GCC countries, and firm’s losses significant effect on earnings management in GCC countries, except for firms in Bahrain. The result revealed that most firms in the GCC countries practice earnings management as revealed by the income decreasing discretionary accruals, this they do in order to drive down wages in their territory. This means that there is a huge low quality reported earnings in the GCC firms, so investors are admonished to beware of this territory. The study period is about six years lag, certain events that has happened during this period must have impacted on the result of this finding, further investigation needs to be engaged in, the study was done on the Gulf cooperation firms, and the result of the findings may not be safely generalized.

Ali et al., (2015), conducted a study to evaluate the effect of firm size on earnings management of firms in the Pakistani textile industry for the period from 2004 to 2013 using secondary data source collected from the annual financial reports of fifty (50) firms. Descriptive statistics, Correlation coefficient, Panel data analysis, and simple linear regression models were used to analyze the data collected. The study results revealed a significant positive association between firm size and earnings management because of the
Bassiouny et al., (2016) examined the impact of firm characteristics on firms’ earnings management listed on the stock exchange in Egypt. The study utilized non-financial firms adjudged to be the most active firm on the stock exchange of Egypt. Using secondary data collected from the annual financial statements of the sampled firms for the period between 2007 and 2011. The multiple linear regression models, was used to test for the appropriate model to use was done and the generalized least squares (GLS) random effect was used. The result of the study showed that there is a positive significant relationship existing between the financial leverage of the sampled firms and earnings management; whereas other independent variables of the firm characteristics such as firm age, audit quality, firm size, and firm survival have a negative non-significant relationship with earnings management. The study recommends that the positive relationship between the firm’s financial leverage and earnings management is an indication to the firms to expedite action to put into check to control leverage level to forestall the practice of earnings management. The study also brings to light for shareholders, and investors to seek understanding, and focus on the firm’s leverage level before making investment decisions. The study needs further investigation in respect of recent happenings, using other firm characteristics variables, and by extension to other industries and jurisdictions. The study used the generalized least squares (GLS), but the current study used the multiple linear regression (OLS) models for data analysis

Dachomo, and Bala (2020) investigated the corporate age diversity influence on the relationship existing between corporate attributes and quality of earnings of firms listed on the Nigeria stock exchange, from 2012 to 2018, using 616 firms’ observations, secondary data were extracted from the listed firms’ annual financial reports, and from the DataStream of Thompson Reuters. The quality of earnings was proxy by accruals model developed by Collins et al. (2017). The primary model of the study was estimated using a robust model. The study revealed that the negative relationship that exists between corporate growth and quality of earnings of listed firms in Nigeria is moderated by corporate age. The study submitted that because older companies are more matured than younger companies, they tend to engage less in earnings management in order to protect their reputation, thereby enhancing the quality of earnings of the firm. The study is recent, but information about the sampled firm was not clearly stated, unlike the current study that is based on the industrial goods sector.

Dang et al., (2020) investigated the impact of earnings quality on the value of firms in Vietnam. The data of the study was collected from the firms listed on the Vietnam stock exchange, and the study period spanned from 2010 to 2018, using data from a secondary source collected from the audited annual financial reports of the sampled firms, excluding banks, insurance, and security firms. The data collected were analyzed using the generalized least squares (GLS) regression analysis models, in order to mitigate the defects associated with the regression models such as autocorrelation and multicollinearity. The results of the study indicates that there is a positive statistically significant association between earnings quality and firm value, some other determinants such as financial leverage, market to book value ratio, and revenue growth were seen to report negative influence on firm value. It was also discovered that the determinants of dividend payment ratio, investment in fixed asset ratio, and firm size have a positive influence on the firm value. In contrast, the determinants of financial leverage, such as revenue growth rate, and the market value to book value ratio are inversely associated with the firm value in respect to economic value, Tobin’s Q, or price. The study was done in Vietnam, while the current study is in Nigeria.

Echobu et al., (2017) investigated the determinants of financial reporting quality in Nigeria-listed Agriculture and Natural Resources firms. The study population is nine (9) firms which consist of 5 listed agricultural firms, and 4 listed natural resources firms. The study sample is 7 listed firms drawn from the total population, which was determined by a censoring sampling technique based on data available for the period of study. The study made use of secondary sources of data collected from the annual financial statement of the sampled firms from 2008 to 2015, and adopted the ex-post facto research design. The data collected were analyzed by multiple regression analysis models. The study’s dependent variable is financial reporting quality measured with the residuals of the modified Jones model; while the independent variable was proxied by: board size, leverage, and liquidity. The result of the study revealed that there is a significant positive relationship between board size, leverage, liquidity, and financial reporting quality, using the residuals from the modified Jones model as a measure as prescribed by Dechow, Sloan, and Sweeney (1995). The study recommends the use of more debt financing, and the maintenance of optimum controlled level of liquidity to firms in the sampled sector, and among others in order to promote quality financial reporting. The study also recommends further that more attention should be directed to audit committees’ members’ ability to monitor the activities of managers against earnings manipulations, rather than on the number of the independent committee members. The study is at variance with the study by Bassiouny et al (2016), which reported a negative non-significant relationship between financial reporting quality and leverage, and a positive significant relationship between financial leverage and earnings management. And the study period is also not too recent, as a lot of events capable of impacting the result of the findings must have taken place within this period, and as such further investigation need to be carried out using other variables. The study sample is based on listed Agriculture and Natural Resources firms in Nigeria, but the current study is based on listed Industrial goods sector of Nigeria, the result may not be applicable.
Efuntade and Akinola, (2020) studied firm characteristics and financial performance in quoted manufacturing companies in Nigeria, with a population size of 5 (five) quoted firms which also double as the sample size, data from secondary sources were collected from the annual financial information of these sampled firms, and was analyzed with multiple linear regression using econometric views 7.0. the study revealed that firm age and sales growth have a significant positive effect on financial performance, while liquidity, and leverage showed a negative insignificant effect on financial performance, firm size revealed a positive insignificant effect on financial performance of listed manufacturing companies in Nigeria. The study recommends that companies should optimize the use of acquired assets for maximum profitability.

Houq et al., (2017) investigated if business strategy is associated with the reported earnings quality. A sample of nineteen (19) countries comprising 44,264 firms, the study period was from 1998–2014. The study showed that higher levels of accounting conservatism were demonstrated by prospector-strategy firms while higher levels of earnings management were exhibited by defender-strategy firms. They revealed further that there is a direct link between business strategy and quality of earnings. This finding is believed to have relevance to investors, analysts, and the auditors, aiding auditors in their audit services in having knowledge of the firm’s strategy which illuminates the quality of the firm’s earnings report. This study was carried out among multiple countries, but the current study is based on a single country, a lot can be learnt from the study for application to Nigerian firms.

Kelvin (2020) examined the relationship between firm characteristics and earnings quality of quoted manufacturing firms in Nigeria. The study used secondary data from the annual financial reports of six (6) selected manufacturing firms listed on the floors of the Nigeria Stock Exchange for the period that spanned from 2011 to 2018. The firm characteristics are the independent variable proxied by return on asset (ROA), and current ratio (CR), while the earnings quality is the dependent variable proxied by persistence. The study adopted multiple linear regression models and the ordinary least squares (OLS) panel data analysis to analyze the data. The study revealed there is a positive significant relationship between firm characteristics and earnings quality, and that liquidity has a positive significant effect on earnings quality. The study recommends from the findings of the study that manufacturing firms should finance their operations with debt finance, paying particular attention to low interest rate to enhance liquidity and asset turnover. The study revealed further that increased liquidity, and enhanced asset turnover increases the quality of reported earnings of the firm. The study collected data up to 2018, but the current study collects its data up to 2020. The selected sample firms were not specified for clarity, unlike the current study sample industry.

Nalarreason et al., (2019), studied to determine the effect of leverage and firm size on earnings management. The study is an ex-post-facto research design which used secondary data from the annual reports of listed manufacturing firms on floors of Indonesia Stock Exchange for the period 2013 to 2017. The data was analyzed using econometric views software, the simple linear regression model of random effect appropriate for the study was employed. The result showed that leverage and firm size affect earnings management positively for the Indonesian manufacturing firms, and that the increase in leverage and firm size can encourage management to manipulate earnings. This study was done in Indonesia, and analyzed it data with simple linear regression models, the current study is in Nigeria, and employed the multiple linear regression models.

Putri and Indriani (2019) investigated the impact of firm characteristics, proxy as leverage, profitability, and firm size, on financial reporting quality represented with discretionary accruals. The firm characteristics are the independent variable, while financial reporting quality was set as the dependent variable. The study sample is 36 firms taken from the listed property and real estate firms on the Indonesian Stock Exchange for the study period from 2015 to 2017. The data collected was from a secondary source, which was analyzed by the use of multiple regression method. The study revealed that leverage and profitability have significant positive impact on the financial reporting quality of firms, while firm size did not record any significant impact on the financial reporting quality of the firm. The study was done in Indonesia, on listed property and real estate firms, but the current study is in Nigeria and on listed Industrial firms. Therefore, the result may not be applicable to the Nigerian firms.

Rusdiyanto, and Made (2020), examined the effect of company size, leverage and return on assets on earnings management in Indonesia. The research data was obtained from the annual financial statement of firms listed on the floors of the stock exchange website in Indonesia for the period from 2014 to 2018. The multiple linear regressions were used to analyze the data collected for this study. The firm size, leverage, and the return on asset were the independent variable and earnings management is the dependent variable for this study. The result shows that the firm size does not significantly influence earnings management, and that Leverage has a significant positive effect on earnings management, it was also recorded that the return on asset (ROA), has a significant positive influence on earnings management. The result may not apply to the current study, because the sample firms were not specified, and the jurisdiction is different from that of Nigeria.

Salah (2018) examined the effect of firm characteristics on earnings quality of listed industrial firm on the stock exchange of Egypt. The study spanned a period of 4 years from 2014 to 2017. The study is a two-fold objective; to examine the relationship existing between the characteristics of the firm and quality of earnings with a sample of 45 firms in the industrial sector that are listed on the stock exchange of Egypt; and to investigate empirically the role of firm size at moderating the relationship between the characteristics of the firm and quality of earnings. Earnings quality is proxied by the discretionary accrual. Ordinary least squares (OLS) regression analysis was used to analyze the data collected. The study results showed that financial leverage and profitability have a negative significant impact on the quality of earnings, whereas firm size could not serve as a moderator. Liquidity was revealed to have significant effects on quality of earnings and the strength of the relationship is subject to changes in the firm size. No impact was noticed by firm age on quality of earnings. The study has notable managerial relevance for managers, academics, investors, and policy makers. The study was done in a similar sector to the choice of the current study, and can provide a useful guide.
Soyemi and Olawale (2019) investigated the impact of firms’ characteristics on the quality of financial reporting of listed Nigeria manufacturing firms. The sample size of the study comprises 25 listed nonfinancial firms on the Nigeria stock exchange for the period from 2009 to 2016, using panel data from the annual financial reports of the sampled companies, the study adopted multiple linear regression models using two-stage regression to analyze the data. The result showed that firm size has a positive significant effect on financial reporting quality. Tangibility and firm growth have a negatively significant effect on audited financial reporting quality. The profitability of the firm positively influences the quality of financial reporting; whereas firm growth negatively affects the quality of financial reporting. The study discovered that large and highly profitable firms have the tendency to produce high-quality financial reports, because of their ability to engage competent audit firms. This should be encouraged among firms. It was revealed further by the accruals model that earnings manipulation has the capability of being influenced by property, plant, and equipment. The study recommends that among the non-financial firms, the entire firm characteristics variable used, except firm growth and tangibility variables, showed a significant effect on the quality of reported earnings, and should therefore be encouraged by governmental agencies as SEC and CAC. The study did not specify the method of sample size selection; it was done in the preferred sector with the current study.

Uwuigbe et al., (2015) investigated the effects of firms’ characteristics on earnings management of firms listed on the Nigeria stock exchange. They used secondary data with a total sample of 20 firms selected using the judgmental sampling technique, for a study period between 2006 and 2010 inclusive. The dependent variable of the study is earnings management proxied by discretionary accruals, and the independent variable is firm characteristics proxied by firm size, leverage, and firm’s corporate strategy, with a control variable of cash holding. The data collected was analyzed by adopting the use of both descriptive statistics and multiple linear regression models, using the pooled ordinary least square (OLS) regression. The result of the study showed that firm size and firm’s corporate strategy reported a significant positive relationship with earnings management, whereas the relationship between financial leverage and earnings management showed a positive non-significant relationship. The study concluded that large firms have the tendency to be engaged in earnings manipulations and exaggerate earnings, because of the complexity and intricacies involved in their operations, and in identifying overstatement. The study report looks interesting and attractive, the study needs further investigation to ascertain the reason for the sample selection method chosen not specified and sampled companies not specified.

2.3 Theoretical Framework

Stakeholder Theory

The word "stakeholder", was first conceived in 1963 in an internal memorandum at the Stanford Research Institute, which is now SRI International, Inc. In the traditional view of the firm, the shareholders or stockholders are the owners of the firm, and the responsibility of the firm is that they have a binding fiduciary duty to cater for their needs first, so as to increase the value for their stock returns (Friedman & Mills, 2002). The term was meant to challenge the popular notion that the management of firms is obliged to respond to stockholders’ groups only (Parmar et al., 2010).

The stakeholder theory is a theory of organizational management and business ethics that accounts for multiple constituencies impacted by business entities like employees, suppliers, local communities, creditors, governmental bodies, political groups, trade associations, and trade unions. Competitors in the status and capacity to impact the organization’s operations are sometimes seen as a type of stakeholder. The nature and meaning of what stakeholders are, can be highly contestable (Miles, 2012), because of the existence of hundreds of definitions in the academic literature (Miles, 2011). The stakeholder theory was originally employed in 1984, by Edward R. Freeman in the theory of organizational management and business ethics that addresses organizational management by moral values. Stakeholder theory addresses business ethics, morals and values when managing stakeholders involved with a project or organization (Parmar et al., 2010). The theory aimed at optimizing the relationships among stakeholders, in order to improve operational efficiencies all through the organization (Friedman & Mills, 2002). Stakeholder Theory view is capitalist in nature that emphasizes a firms interconnected relationship employees, customers, suppliers, investors, the communities and other relevant stakeholders (Friedman & Mills, 2002). The theory is of the view that value creation should not be limited to shareholders alone but be extended to other stakeholders.

According to Harrison et al., (2019) stakeholder theory is a framework that has been used to explain a firm’s earnings management, specifically in respect to earnings quality; which is the selection of a more conservative accounting policy, and earnings announcement timing under the discretion of the management. One of the early examples was put forward by Thomson (1993) with the analysis of stakeholder power in the era of the UK pre- and post-privatization of the electricity industry. Harrison et al., (2019), and Thomson (1993), found out that the pre-privatization focus of primary stakeholder groups namely: consumers, competitors, and government on the rates of return incentivized or encouraged management to reduce profits in order to avoid price-capping, while post-privatization profit-maximizing accounting choices were chosen, as management was motivated to align their interests with those of the recently created shareholders’ bonus and options contracts.

Mangos and Lewis, (1995) affirm that employing the view of socio-economic to examine accounting policy choice, provides a richer, more inclusively robust explanation relating to behavior than a mere reference to economic theories. Due to the various interested parties in the affairs of the company, that needs to be satisfied, this has made the stakeholder theory to be the appropriate underpinning theory for this study.

3 Methodology

The study is an ex-post facto research study using secondary data obtained from the annual financial report of listed industrial goods companies in the Nigeria Stock Exchange for the period between 2011 and 2020, with a population of 13 firms, but the sample size is 13 firms. The multiple linear regression models and the pooled least squares (POLS) method were used to analyze the data and test the hypotheses formulated.
Model and Variable Specification

Dependent variable
The dependent variable of the study is earnings quality proxy by income quality ratio (IQR), and the measure will be; the greater the absolute value of the income quality ratio, the higher the earnings quality and vice versa. Income quality ratio (IQR) = Net cashflow from operating activities/ Earnings Before Interest and Taxes (Pennan, 2001; Lenz et al., 2003).

Independent Variables
The independent variables measure is chosen based on previous studies.

Firm Age (FAG) is the sum total of the number of years from the date of incorporation of the company (Mohammed et al., 2018).
Firm Size (FSZ) is measured by the Logarithms of total assets (Nguyen et al., 2021).
Firm Strategy (FSG) is Total Assets minus Book Value divided by Total Assets (Uwuigbe et al., 2015).
Firm Financial Leverage (FFL) is measured by the ratio of Total Debt to Total Asset (Bala and Kumai, 2015).

\[ \alpha = \text{Intercept}, \beta = \text{Coefficient}, \epsilon = \text{Error terms}. \]

The model for the study is mathematically specified as below:

\[ \text{IQR} = \beta_0 + \beta_1 \text{FAG} + \beta_2 \text{FSG} + \beta_3 \text{FSZ} + \beta_4 \text{FFL} + \log \text{IQR} + \epsilon \]

The working model:

\[ \log \text{IQR} = \beta_0 + \beta_1 \text{FAG} + \beta_2 \text{FSG} + \beta_3 \text{FSZ} + \beta_4 \text{FFL} + \epsilon \]

4 Data Presentation and Analysis

Table 1. Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>IQR</th>
<th>FAG</th>
<th>FSG</th>
<th>FSZ</th>
<th>FFL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.58823</td>
<td>47.4555</td>
<td>0.55032</td>
<td>8.79823</td>
<td>0.4421</td>
</tr>
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<td>45</td>
<td>0.56</td>
<td>8.99</td>
<td>0.41</td>
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<tr>
<td>Maximum</td>
<td>71.19</td>
<td>98</td>
<td>1.16</td>
<td>11.66</td>
<td>2.2</td>
</tr>
<tr>
<td>Minimum</td>
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<td>0.03</td>
<td>4.9</td>
<td>0.04</td>
</tr>
<tr>
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<td>20.43863</td>
<td>0.2744</td>
<td>1.61557</td>
<td>0.2806</td>
</tr>
<tr>
<td>Skewness</td>
<td>5.85185</td>
<td>0.502517</td>
<td>0.00321</td>
<td>-0.50961</td>
<td>1.3347</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>47.4942</td>
<td>2.806491</td>
<td>1.89268</td>
<td>2.77006</td>
<td>8.8558</td>
</tr>
<tr>
<td>Sum</td>
<td>789.41</td>
<td>10440</td>
<td>121.07</td>
<td>1935.61</td>
<td>97.26</td>
</tr>
<tr>
<td>Sum Sq. Dev.</td>
<td>11415.4</td>
<td>91484.55</td>
<td>164893</td>
<td>571605</td>
<td>17.24</td>
</tr>
<tr>
<td>Observations</td>
<td>130</td>
<td>130</td>
<td>130</td>
<td>130</td>
<td>130</td>
</tr>
</tbody>
</table>

Source: Author’s Computation summary from EViews 10.

Table 1 Show the mean value of earnings quality (EQ) to be 3.58823, with a corresponding standard deviation of 7.21976, with the minimum value of 0.1, and a maximum value of 71.19. This implies that the average value of earnings quality (EQ) in the industrial goods company is 3.58823 Naira to 71.19, and the deviation from both sides of the mean. The value of the standard deviation is seen to be higher than the mean, which indicates that the data are fairly dispersed from the mean. The table also showed a mean value firm age (FAG) of 47.4555 with a corresponding standard deviation value of 20.43863, with the minimum value of 6 and a maximum value of 98, meaning that the average value of firm age (FAG) in the industrial goods company is 47.4555 compared to the maximum value of 98; the standard deviation value is lower than the mean which indicates that the data are not far apart from the mean.

The table in like manner showed a mean value of firm strategy (FSG) of 0.55032 with a corresponding standard deviation value of 0.2744, with the minimum value of 0.03 and a maximum value of 1.16, meaning that the average value of firm age (FAG) in the industrial goods company is 0.55032 compared to the maximum value of 1.16; the standard deviation value is lower than the mean which indicates that the data are not dispersed from the mean.

The table also showed a mean value of firm size (FSZ) of 8.79823 with a corresponding standard deviation value of 1.61557, with the minimum value of 4.9 and a maximum value of 11.66, meaning that the average value of firm size (FSZ) in the industrial goods company is 8.79823 compared to the maximum value of 11.66; the standard deviation value is lower than the mean which indicates that the data are not far apart from the mean.

The table also showed a mean value for financial leverage (FFL) of 0.4421 with a corresponding standard deviation value of 0.2806, with the minimum value of 0.04 and a maximum value of 2.2, meaning that the average value of financial leverage (FFL) in the industrial goods company is 0.4421 compared to the maximum value of 2.2; the standard deviation value is lower than the mean which indicates that the data are not dispersed from the mean.
Table 2 Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>IQR</th>
<th>FAG</th>
<th>FSG</th>
<th>FSZ</th>
<th>FFL</th>
</tr>
</thead>
<tbody>
<tr>
<td>IQR</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FAG</td>
<td>0.081832</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FSG</td>
<td>-0.22982</td>
<td>-0.1131</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FSZ</td>
<td>0.035656</td>
<td>-0.06453</td>
<td>-0.15255</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>FFL</td>
<td>0.187021</td>
<td>0.25427</td>
<td>-0.43776</td>
<td>0.348077</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Author’s Computation summary from EViews 10.

Table 2 helps to analyze the correlation association between the independent variables. According to Moghaddam and Abbaspour (2017), high or intense correlation exist if the value is greater than (> 0.80), otherwise it is low or no correlation. From table 2, it can be seen that all the associations between the variables are less than (<) 0.80, with the highest value is correlation between FSZ and FFL (0.348077); meaning that there is multicollinearity among the variables.

Table 3 Hausman Test

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi-Sq. d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>217.765877</td>
<td>5</td>
<td>0.2120</td>
</tr>
</tbody>
</table>

Source: Author’s Computation summary from EViews 10

Table 3 shows the Hausman test to verify the appropriate model to be used in the research estimate, the Null hypothesis is accepted because of the insignificant probability value of 0.2120; meaning that the Random effect model is the appropriate model to be used to test the hypothesis.

Table 4 Breusch-Pagan (BP) Test

Langrange Multiplier Test for Random Effects
Null hypothesis: No effects
Alternative hypothesis: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives.

<table>
<thead>
<tr>
<th>Cross-section</th>
<th>Test Hypothesis</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time.</td>
<td>388.1464</td>
<td>1.16867</td>
</tr>
<tr>
<td>Breusch-Pagan</td>
<td>(0.0000)</td>
<td>(0.2460)</td>
</tr>
</tbody>
</table>

Source: Author’s Computation summary from EViews 10

Table 4 above revealed that the Null hypothesis which states that pooled ordinary least squares (POLs) method is appropriate is rejected, since the probability value using the Breusch-Pagan test is significant at 0.000 < 0.05; therefore, the appropriate model to use for the estimate is the random effect model.

Table 5 Regression Analysis Result

Dependent Variable: LOGIQR
Method: Panel EGLS (Cross-section random effects)
Date: 10/14/21 Time: 08:54
Sample: 2011 2020
Periods included: 10
Cross-sections included: 13
Total panel (balanced) observations: 130
<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-3.23E-15</td>
<td>2.60E-16</td>
<td>-12.44702</td>
<td>0.0000</td>
</tr>
<tr>
<td>FAG</td>
<td>2.94E-18</td>
<td>1.92E-18</td>
<td>1.532582</td>
<td>0.1269</td>
</tr>
<tr>
<td>FSG</td>
<td>1.10E-15</td>
<td>1.55E-16</td>
<td>7.087234</td>
<td>0.0000</td>
</tr>
<tr>
<td>FSZ</td>
<td>2.73E-16</td>
<td>2.50E-17</td>
<td>10.91811</td>
<td>0.0000</td>
</tr>
<tr>
<td>FFL</td>
<td>-1.95E-16</td>
<td>1.62E-16</td>
<td>-1.203580</td>
<td>0.2301</td>
</tr>
</tbody>
</table>

**Effects Specification**

<table>
<thead>
<tr>
<th>S.D.</th>
<th>Rho</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.97E-16</td>
<td>0.0881</td>
</tr>
<tr>
<td>1.60E-15</td>
<td>0.9119</td>
</tr>
</tbody>
</table>

**Weighted Statistics**

| R-squared | Mean dependent var | 0.297872 |
| Adjusted R-squared | S.D. dependent var | 1.000000 |
| S.E. of regression | Sum squared resid | 1.157535 |
| F-statistic | Durbin-Watson stat | 1.000000 |

**Unweighted Statistics**

| R-squared | Mean dependent var | 0.417635 |
| Sum squared resid | Durbin-Watson stat | 0.828362 |

Source: Author's Computation from Eview 10.

**Discussion of results**

From table 5 it can be observed that the value of the coefficient of determination \( (R^2) \) is 1.000, and the adjusted \( R^2 \) is also equal to 1.0000, it shows that the model is appropriate to estimate and test the formulated hypotheses, and it shows that the individual independent variables perfectly explained the variance in the dependent variable of the study. The value of the F-statistics is 7.03E+32 with a corresponding probability of Prob(F-stat) of 0.0000, meaning that all the variable jointly have significant positive effect on the reported earnings quality of all the listed industrial companies in Nigeria. From hypothesis \( (H_1) \) the regression result showed that firm age (FAG) has a positive insignificant effect on earnings quality (EQ), with a coefficient of 2.94E-18, and a probability value of Prob (0.1269>0.05) (12.69%) which is greater than 0.05 or (5%); this implies that a 1% increase in firm age will result in a 29% increase in the reported earnings quality of listed companies in the chosen industry. Therefore, the null hypothesis is **accepted**.

Hypothesis: \( (H_2) \) the regression outcome reported that firm financial leverage has a negative insignificant effect on the reported earnings quality of listed industrial goods companies in Nigeria, with a coefficient of -1.95E-16, a probability value of Prob (0.2301>0.05); 23.01%, which is greater than 0.05 (5%), implying that a 1% increase in firm financial leverage will result in a decline of 19.5% reported earnings quality of listed companies in the chosen industry. Therefore, the null hypothesis is **accepted**.

Hypothesis: \( (H_3) \) it was reported also that firm size has a significant positive effect on reported earnings quality of industrial goods company in Nigeria, with a coefficient of 2.73E-16, a probability value of Prob (0.000<0.05); which is less than 0.05 (5%), the implication is that a 1% increase in the firm size will result in a 27.3% increase in earnings quality of the companies in this chosen industry. Therefore, the null hypothesis is **rejected**.

Hypothesis: \( (H_4) \) the table finally revealed that firm strategy has a positive significant effect on the reported earnings quality of listed industrial goods companies in Nigeria, with a coefficient of 1.10E-15, a probability value of Prob (0.000<0.05); which is less than 0.05 (5%), meaning that a 1% increase in firm strategy will result in a 11% increase in earnings quality of the listed companies in the chosen industry. Therefore, the null hypothesis is **rejected**.
Table 6 Normality test

<table>
<thead>
<tr>
<th>Series: Standardized Residuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample 2011 2020</td>
</tr>
<tr>
<td>Observations 130</td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>Median</td>
</tr>
<tr>
<td>Maximum</td>
</tr>
<tr>
<td>Minimum</td>
</tr>
<tr>
<td>Std. Dev.</td>
</tr>
<tr>
<td>Skewness</td>
</tr>
<tr>
<td>Kurtosis</td>
</tr>
<tr>
<td>Jarque-Bera</td>
</tr>
<tr>
<td>Probability</td>
</tr>
</tbody>
</table>

Source: Author’s Computation summary from EViews 10

Figure 1 on table 6 is a check for the normality of residuals from the regression line, which is a combination of the transformed and standardized total observations of the study. The report showed a Jarque-Bera statistical value of 1.018138 with a corresponding probability value of 0.601056 or (60.11%). The null hypothesis of normality is accepted since the probability value at 60.11% is greater than 5% critical value. The implication is that the residual of the population is normally distributed, fulfilling the good regression line assumption.

Table 7 Multicollinearity Test

<table>
<thead>
<tr>
<th>Model</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>1</td>
<td>FSz</td>
</tr>
<tr>
<td></td>
<td>FA G</td>
</tr>
<tr>
<td></td>
<td>FS G</td>
</tr>
<tr>
<td></td>
<td>FFL</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
</tr>
</tbody>
</table>

a. Dependent Variable: LOGIQR

Source: Author’s Computation summary from EViews 10

Table 7 Showed that the variance inflation factor (VIF) showed a tolerance value that is consistently lower than 1, which indicates the absence of multicollinearity among the independent variables, it is therefore, fit for the estimate.

Table 8 Cross-section Dependence Test

Residual Cross-Section Dependence Test

Null hypothesis: No cross-section dependence (correlation) in residuals
Equation: Untitled
Periods included: 10
Cross-sections included: 13
Total panel observations: 130

Note: non-zero cross-section means detected in data
Cross-section means were removed during computation of correlations

<table>
<thead>
<tr>
<th>Test</th>
<th>Statistic</th>
<th>d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breusch-Pagan LM</td>
<td>327.4917</td>
<td>78</td>
<td>0.1320</td>
</tr>
<tr>
<td>Pesaran scaled LM</td>
<td>1.122346</td>
<td>0.2617</td>
<td></td>
</tr>
<tr>
<td>Pesaran CD</td>
<td>-0.264742</td>
<td>0.7912</td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s Computation from Eviews 10.

The null hypothesis is accepted which indicates that no cross-section dependence in the residuals, as can be seen in the probability value outcomes for various test methods in table 8 above but particularly Breusch-Pagan LM test as the pivot test where the period ‘T’ (10) is less than (<) cross-section ‘N’ (13).
Table 9 Stationarity Test/Panel Unit Root Test

<table>
<thead>
<tr>
<th>Methods</th>
<th>IQR</th>
<th>FSG</th>
<th>FSZ</th>
<th>FFL</th>
<th>FAG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levin, Lin &amp; Chut⁸</td>
<td>-9.4052</td>
<td>0.0000</td>
<td>-10.1493</td>
<td>0.0000</td>
<td>-7.1923</td>
</tr>
<tr>
<td>Lm, Pesaran and Shin W-stat</td>
<td>-0.4599</td>
<td>0.0000</td>
<td>-4.5590</td>
<td>0.0000</td>
<td>-2.7896</td>
</tr>
<tr>
<td>ADF – Fisher Chu-Square</td>
<td>98.0334</td>
<td>0.0000</td>
<td>98.7566</td>
<td>0.0000</td>
<td>90.6583</td>
</tr>
<tr>
<td>PP – Fisher Chi-square</td>
<td>115.018</td>
<td>0.0000</td>
<td>62.9697</td>
<td>0.0000</td>
<td>86.5281</td>
</tr>
</tbody>
</table>

Order Level Level Level Level Level

Source: Author's Computation from Eview 10.

From table 9, is a summary of all the variables showing stationarity at level by all the methods used for the test, where the Null hypotheses that states ‘residual has unit root’ were rejected, based on the probability values being lower than 0.05; which implies that the independent variables can cause changes in the dependent variable in the current year. This test is desirable because it has greater power to test the Null hypothesis with multiplicity of methods as shown on the table above compared to the standard time-series test that is just a single test method.

Table 10 Heteroskedasticity Test

<table>
<thead>
<tr>
<th>Heteroskedasticity Test Breusch-Pagan Godfrey</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistics</td>
</tr>
<tr>
<td>Obs*R-squared</td>
</tr>
<tr>
<td>Scaled explained SS</td>
</tr>
</tbody>
</table>

From table 10 above Obs. R-squared showed a value of 8.895420, with a corresponding probability outcome of 0.2812, which is greater than 0.05 benchmark, this indicates that there is no heteroskedasticity in the residuals, and it is desirable.

Conclusion and recommendation

The aim of the study was to determine the effect of firm characteristics on reported earnings quality of listed industrial goods companies on the Nigeria stock exchange. The result of the analysis showed that the age of the firms and their financial leverage have no significant effect on the reported earnings of firms, but that a positive relationship exists between firm age and reported earnings quality while financial leverage revealed a negative relationship this is consistent with the findings by (Efuntade & Akinola 2020; Oyebamiji 2020). The firm size and the unique strategy of the firm showed a positive and significant effect on the reported earnings quality of listed industrial companies in Nigeria, this finding support the outcome of the study by (Oyebamiji 2020; Houqe, et al., 2017), but inconsistent with the findings by (Efuntade & Akinola, 2020; Ali et al., 2015).

Recommendations

The following suggested recommendations are adduced based on the findings of this study which are:

i) The management and shareholders of industrial goods firms should issue more shares and reduce debt/leverage financing to enhance profitability and profit level can increase, to mitigate earnings smoothing, and reduce interest liability to creditors.

ii) Firm should endeavor to devise unique strategy that is all encompassing to promote higher level transparency and integrate forward and or backward so as to increase market control and share, and to achieve the goals/objectives of the firm.

iii) Firms are advised to invest in capital assets considering the nature of the industry they operate in, so as to enhance cost effectiveness in their operations for expansion, and growth.

iv) The age-long standing image reputation and goodwill of companies in the industry must be identified, guided, and improved upon.
REFERENCES


