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Abstract

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Keywords

board size, firm size, integrated reporting

Corporate Characteristics and Implementation of Integrated Reporting Framework of Listed Oil and Gas Firms in Nigeria

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Abstract

The demand for better corporate information by various stakeholders across the globe has necessitated a paradigm shift from the traditional financial reporting to more comprehensive financial and non-financial information in a single report, known as integrated reporting. The aim of this study is to empirically investigate the effect of corporate characteristics (firm size, board size, share ownership structure and profitability) on the implementation of integrated reporting framework in listed oil and gas firms in Nigeria. A census sampling technique was adopted, using the total population of eleven (11) oil and gas firms listed on the Nigerian Stock Exchange as of 31st December 2020 as the sample, since the firms are few. Data was drawn from annual reports obtained from the companies' websites from the period of 2011 – 2020. The data was analyzed using descriptive statistics, a serial correlation test, and panel least square regression technique. The findings revealed a positive effect of corporate characteristics on integrated reporting frameworks, which is statistically significant for profitability, firm and board size. It was concluded that size of the firm, board size, and profitability have a positive and momentous statistical influence on implementation of integrated reporting framework, while share ownership structure has an insignificant influence. It was recommended that the accounting regulatory authorities consider making an integrated reporting framework mandatory, especially for listed firms in Nigeria, in line with the international integrated reporting council framework.

Keywords: Board size, firm size, integrated reporting, return on equity, share ownership structure

Introduction

The role of information on the decision-making process of a firm and the business environment is germane. The process of making decisions in the business community and investors investment decisions depend greatly on financial information (Mirza et al, 2019). This, in turn, has triggered the evolving concept of corporate reporting, that involves the use of new phenomena to disclose corporate information related to economic, social and environmental matters. This new phenomenon is known as Integrated Reporting (IR) and has continued to attract global attention. It requires firms to prepare annual reports to communicate the value of the firm and its performance. This concept implies movement from the traditional disaggregated pattern of reporting to comprehensive reporting. It involves the presentation of both financial and non-financial information regarding an entity's performance in a single and all-inclusive report, to improve the understanding of the various shareholders (Iredele, 2019).

However, globalization, fluctuation in business undertaking and the potential impacts of firm activity on the environment obligate a greater attention to the reporting of non-financial information (Adelowotan & Udofia, 2021). Also, the scope of corporate reporting was expanded to incorporate integrated reporting, in order to meet the continuous need of various stakeholders of additional reporting of information.

In Nigeria, most of the listed firms in the oil and gas industry have parent bodies that are multinationals, whose headquarters are in a country where IR is mandatory. This has led companies in the oil and gas sector in Nigeria to create annual reports in line IR framework.

Empirical studies from Sri Lanka, Turkey, Colombia and South Africa (from Savindya & Rajapakse, 2021; Uyar & Kılıç, 2012; Rivera-Arrubla et al, 2017; and Iredele, 2019) on firm attributes and IR framework suggest that company characteristics such as firm age, industry type, firm size and share ownership structure have a substantial positive effect on adoption of IR framework. However, there is little empirical proof to support this assertion in literature, especially in the oil and gas industry in Nigeria, hence the necessity for this study. However, this study also furthers the exploration of two variables (board size and profitability) to improve empirical study in Nigeria, in order to determine the degree to which firm characteristics (such as firm size, board size, share ownership structure, and profitability) could drive IR framework implementation in listed oil and gas firms in Nigeria.

The dependent variable of this study, which is implementation of an IR framework, was proxied by the disclosure score index adopted from the International Integrated Reporting Council (IIRC) (2021), that concentrated on the elements of the content, in line with the IR framework. It is comprised of eight (8) classifications: (i) Overview and External Environment, (ii) Governance, (iii) Business Model, (iv) Risk and Opportunities (v) Strategy and Resources, (vi) Performance, (vii) Outlook, and (viii) Basis of Preparation.

The IR framework is becoming globally accepted, given its enormous benefits to firms, various stakeholders, and society at large. This has led to advancement of IR as an area of interest for researchers across the globe. There is a dearth of empirical studies on IR framework in developing countries, especially Nigeria (Iyoha et al, 2017). The existing empirical studies in literature have produced various results in respect to the effects of firm attributes on IR framework implementation, ranging from positive, negative, insignificant, and mixed effects (Adelowotan & Udofia, 2021; Rivera-Arrubla et al, 2017; Iredele, 2019). These results are inconclusive, and this area of research has not been explored fully. It is pertinent, therefore, to investigate the effect of corporate characteristics (firm size, board size, share ownership structure and profitability) on the implementation of IR framework in listed oil and gas firms in Nigeria.

This remaining part of this study is structured as follows: literature review and hypothesis development in the proceeding section, data and methods in section three, data analysis and discussion of results in section four, while section five presents the conclusion and recommendation.

Literature Review and Hypothesis Development

General overview of Integrated Reporting

Integrated Reporting (IR) is a clear and succinct method of reporting, with reference to a firm's governance, strategy, prospect, and performance, in the perspective of its external environment, with the aim of value creation for its various stakeholders over a period (IIRC, 2021). IR frameworks are principle-based, combining both sustainability and financial reports in a narrative format, with the aim of providing understanding on the major concepts of the six categories of capital, as outlined by the IIRC. They include financial, natural, manufactured, intellectual/human, social, and relational capital, which are seen as the substratum of every firm's activity, and therefore become input for their business models, which are manipulated to their desired levels (IIRC, 2021). In addition, the framework provides the seven regulatory principles that support preparation and presentation of the content. These principles are: strategic focus, future orientation, stakeholder responsiveness, reliability/completeness, connectivity of information, materiality/conciseness, and consistency/comparability (Iredele, 2019). These principles ensure that firms disclose their organizational strategies comprehensively in their IR.

Furthermore, IR framework is comprised of eight elements that are essentially connected. They consist of organizational overview/external environment, opportunities/risks, business model, strategy and resource allocation, performance, governance, outlook, and basis of presentation (IIRC, 2021). These elements safeguard the connection between financial and non-

financial information, to serve as the basis for measuring the present performance and future prospect of the organizations. Integrated thinking, which serves as the basis of decision making, will enhance the quality of IR, which will increase the usability and readability of the IR, and will create value for various stakeholders in the long run (Gnanaweera & Kunori, 2018).
Several laws and regulatory bodies were established in Nigeria to monitor corporate reporting, ranging from the Companies and Allied Matters Act 2020, the Nigerian Code of Corporate Governance 2018, and the Financial Reporting Council of Nigeria in 2011. From 2012, the Financial Reporting Council of Nigeria compulsorily authorized the adoption of the International Financial Reporting Standards (IFRS) for all listed firms, with the objective of refining comparability, integrity, transparency, and credibility of the financial and non-financial reports of listed firms in Nigeria. This was done with the hope of reinstating stakeholder and investor confidence to attract investors across the globe. Even though IR framework remains voluntary in Nigeria, Udofia et al (2020) asserted that five out of eight content elements and three out of the six capital elements (manufacturing, financial and social capital) mandated in the IR framework were presently incorporated in the annual reports of listed companies in Nigeria.

Furthermore, the outcry of the citizens in the Niger Delta area of Nigeria, because of uncontrolled oil spillage, unguided pollution, and neglect of their immediate environment, has created an urgent need for the implementation of IR framework in Nigeria. Multinational firms listed in the oil and gas industry in Nigeria are encouraged to alleviate the sufferings of citizens in regions where crude oil extractive machinery is located, to avoid clashes with the host community. This can be achieved by improvement in corporate social responsibility and environmental activities (Mahjoub, 2019). However, with the stride of globalization, we predict that full implementation of the IR framework will soon dominate corporate reporting in Nigeria.

Corporate Characteristics and Implementation of Integrated Reporting Framework

Corporate characteristics have internal and external effects on company decision making. These attributes of companies can comprise the basis of reporting information on the financial statement of the firm; hence they are regarded as important determinants of integrated reporting. In the context of this study, corporate characteristics are firm size, board size, share ownership structure, and profitability.

Firm Size and Implementation of Integrated Reporting Framework

One of the basic features that differentiates big companies from small companies is the additional requirements of capital. The firms, therefore, must provide the financiers with sufficient information on the firm's activities. This is achieved by providing comprehensive financial and non-financial information in the form of an annual IR, to meet the information requirements of the providers of capital. As a company's size increases, it comes with larger requirements for funds from external sources. This implies that big companies have more stakeholders to satiate, and these stakeholders have various types of information requirements, which have to be met by the organization in order to create value. This is in line with Stakeholders' Theory. Extant studies support the positive impact of firm size on implementation of IR (Adelowotan & Udofia, 2021; Rivera-Arrubla et al, 2017). However, Umoren et al (2015) found that environmental, social and governance (ESG) factors had a negative impact on firm size, while Melloni et al (2016) found no statistically significant impact of size on IR.

Board Size and Implementation of Integrated Reporting Framework

Considering the association between board size and implementation of integrated reporting (IR), there are two views. Some claim that a board must be large to handle the intricacy necessary for supervising, implementing, and preparing a comprehensive IR that will meet the requirements of a variety of stakeholders. The reason for this is the intricacy of information needed for the content that is required for the implementation of IR, which requires knowledgeable competence. Therefore, a large board, with a suitable combination of professionals in the appropriate disciplines, is essential, in this approach (Meuleman, 2018). The second perception is that a small board can work more efficiently than a large board. There are opposing opinions as regards the large board size reducing effectiveness (Iredele, 2019). With these two conflicting opinions, this study regards board size as an appropriate component in the implementation of IR, that is essential for testing. Some studies have revealed that board size has a positive effect on the implementation of IR (Iredele, 2019; Rivera-Arrubla et al, 2017). Others, like Meuleman (2018), found that negative effect exists between board size and IR implementation.

Share Ownership Structure and Implementation of IR

Globalization takes firms to the international markets. Few of the oil and gas companies are listed on the stock exchange outside Nigeria since their parent bodies are multinational and listed on stock exchanges within and outside Nigeria. Hence, there are numerous stakeholders that will oblige the firms to improve their preparation of annual reports, to meet the different needs of various stakeholders. This could be done comprehensively, in form of a financial and non-financial report, in accordance with the IR framework. This form of reporting could project legitimacy and corporate prestige globally and bring new entry to the markets (Adelowotan & Udofia, 2021). Firms with foreign institutional shareholders have good corporate governance practices and thus implement the IR framework (Zyznarska-Dworczak, 2018). This is a result of the pressure from the regulatory authorities on their investments. Zhang (2017) affirmed that firms with foreign share ownership had greater information disclosure, in terms of the goals and strategies presented to various stakeholders, while Adelowotan and Udofia (2021) confirmed a negative effect of share ownership structure on the implementation of IR framework. Firms providing quality and comprehensive reports, in line the IR framework, are percived as noble corporate firms, which is in line with Legitmacy Theory.

Profitability and implementation of IR Framework

There are cost implications associated with the preparation and implementation of IR's. Firms that are intentional about producing comprehensive and qualitative reports in line with the IR framework will consider the costs of employing qualified professionals and the procedure of collecting appropriate information, which could be financially challenging (Meuleman, 2018). Hence, highly profitable firms are more likely to have sufficient funds to spend on the preparation and implementation of an IR framework, to meet the information requirements of a variety of stakeholders, this in line with Stakeholder's Theory. From a literature review, there are mixed results from empirical studies on the effects of profitability on the implementation of an IR framework. Meuleman (2018) and Melloni et al. (2016) noted no statistical significant effect of profitability on the implementation of IR, Iredele (2019) found positive effect, and Prencipe (2004) found a negative effect. This study uses return on equity as a proxy for profitability.

Theoretical review

There are several theories that provide a comprehensive basis to confirm proper reporting of financial and non-financial information in a single narrative report, known as IR. They consist of Legitimacy Theory, Stakeholder's Theory, Agency Theory, Sustainability Theory, and Contingency Theory. Emphasis is placed on Legitimacy Theory and Stakeholder's Theory in this study.

Stakeholder's Theory

Richard Edward Freeman proposed the Stakeholder's Theory in 1984. He claimed that the interests of all parties related to the firm have to be safeguarded. Freeman (1984) defined stakeholders as the collection of individuals that get advantage from or are impaired by; and whose privileges are treasured or debased by company activities. They include managers, stockholders, employees, customers, suppliers, creditors, the local community, the government, and the public. The framework of IR emphasizes that financial and non-financial information must be comprehensively provided in the annual report to meet the information requirements of these different stakeholders. If a firm does not exist in isolation but is a product of its association with various stakeholders, provision of regular and comprehensive information in the annual report will safeguard a lifelong relationship between them.

Legitimacy Theory

The Legitimacy Concept of the firm, which later developed to form the foundation of Legitimacy Theory, was advanced by Dowling and Pfeiffer in 1975. The theory submits that firms can efficiently survive until perpetuity when they operate within the framework of society's standards, norms, ethics, and values. Corporate sustainability disclosure aims to legitimize a firm's behavior by providing information, which is intended to influence society's perception about the company (Okaro, Okafor, & Nnabuife, 2019). Firms with definite corporate characteristics, such as share ownership structure, firm size, board size, attainment of long listing age, foreign shareholders, and profitability will do all that is necessary to preserve the image of themselves as a legitimate business with legitimate purposes and techniques of attaining it. Adelowotan and Udofia (2021) also affirmed that companies will aspire to preserve their present prominence with various stakeholders through preservation of upright stakeholder interactions, obedience to the prevailing legal and regulatory frameworks of the business environment, and provision of comprehensive financial and non-financial information to various stakeholders.

Furthermore, as regards compliance with the prevailing legal and regulatory frameworks, this agrees with the requirements of the content elements for IR. Listed oil and gas firms in Nigeria that conform to the legal and regulatory regulations that are related to the content element of the IR framework will be enthusiastic to sustain IR framework implementation to preserve their legitimacy and prominence. Hence, this study is hinged on legitimacy theory.

Empirical review

Adelowotan &Udofia (2021) conducted a study on corporate characteristics and integrated reporting in listed firms in Nigeria. The aim of the study was to investigate whether corporate characteristics drove the implementation of IR in listed firms on the Nigerian Stock Exchange. The study adopted content analysis technique to obtain the reporting score of IR and corporate attributes. The sample consisted of 90 listed companies and the study covered 2013 to 2017. The analyses were performed using disclosure methodologies developed by prior scholars in IR studies. The result of the panel least square regressions showed that corporate characteristics have a positive and significant effect on the implementation of an IR framework. Also, share ownership structure and firm age have an adverse effect on corporate implementation of an IR framework. The findings extended IR research in Nigeria from mere primary data analysis to quantitative data analysis.

Tiamiyu, Oyedokun and Adeyemo (2021) studied the company attributes and sustainability reporting of quoted manufacturing companies in Nigeria. The objective of the study was to empirically determine the effect of board size, board independence, firm growth, and firm size on the sustainability reporting of listed manufacturing firms in Nigeria. The study was hinged on Stakeholder and Legitimacy Theories. Data was collected from secondary sources, but mainly from annual reports and accounts of selected manufacturing companies. The data analysis technique was a panel regression model. The result of the empirical study revealed that board size and board independence have a negative effect on the sustainability reporting of the quoted manufacturing firms in Nigeria, while firm growth has a positive influence on sustainability reporting. The study found no statistical association between firm size and sustainability reporting. It was recommended that firms should employ professionals on corporate governance boards.

Udofia, *et al*. (2020) conducted an empirical study on the feasibility of adoption of IR in Nigeria. This aim of the study was to investigate the readiness of Nigeria to adopt IR by evaluating the level of compliance of the annual reports of quoted companies in Nigeria to the IR framework, as developed by the IIRC. A sample size of 90 firms was selected from a population of 170 listed firms on the Nigerian Stock Exchange from 2013 to 2017. Data was analyzed using content analysis and the disclosure index developed by Kilic and Kuzey (2018) to measure the Integrated Reporting Disclosure Score (IRDS). The result revealed that quoted firms in Nigeria comply with the IR framework up to 75% in their annual reports, and the most compliant sectors were financial, manufacturing and extractive. The study noted further that the least-included IR framework content element was performance.

Adegboyegun et al (2020) studied the influence of IR on the performance of companies in Nigeria from 2009 to 2018. The population was 18 banks, while the sample was 13 banks listed on the Nigerian Stock Exchange. The dependent variable was profit-after-tax, while an IR index with a combination of financial and sustainability reports, debt to equity ratios and total assets were used as independent variables. The technique for analysis was ordinary least square and panel cointegration regression. The result revealed that IR has no substantial influence on the performance of companies in the short term, but a substantial influence in the long run. It was recommended that corporate reporting regulating authorities in Nigeria should adopt an IR framework, just like the King's Code of Governance in South Africa, to build up long term prospects with stakeholders.

Iredele (2019) investigated the quality of IRs of quoted companies in South Africa and associated factors. From a population of 100 firms, data was collected from a sample of 20 firms quoted on the Johannesburg Stock Exchange between 2013 and 2017. Data analysis techniques were descriptive statistics, a Kruskal-Wallis H test, and spearman rank correlation. The result revealed a substantial relationship between the quality and length of IRs. Firms varied in the level of quality of their IRs, given differences in profitability, board size, gender of employees, and firm size. The study documented no relationship between the quality of an IR and leverage, suggesting that the length of an IR signals the level of quality of such report.

Okaro et al (2019) examined the sustainability reporting practices of firms listed on the Nigerian Stock Exchange and made the case that companies should transition to IR, to be more globally competitive. The study adopted multiple data collection tools and content analyses through a focus group discussion with 14 doctoral students from a sample of 49 quoted companies. The sustainability practices of quoted Nigerian firms were different regarding sophistication on a sectorial basis. The result showed that no Nigerian firms had reported under the IR framework. It was concluded that Nigerian companies need to transition to an IR framework to remain competitive globally.

Ofoegbu et al (2018) studied the impact of corporate board characteristics on environmental disclosure quantity, from traditional reporting in Nigeria and integrated reporting in South Africa. The study adopted the *ex-post facto* research design and content analysis techniques with populations of 188 and 360 firms and sample sizes of 90 and 213 for South Africa and Nigeria, respectively. The regression result indicates that board independence (BIND) is statistically significant for Nigerian firms, while superior results of BIND were obtained for South African listed firms. The study noted that strong corporate governance arrangements may serve as bonding mechanisms in weak legal environments (traditional reporting framework), signifying a substitutive association between regulatory framework and corporate governance.

Rivera-Arrubla et al (2017) conducted empirical research on the disclosure level and other explanatory factors of IR. The objective was to evaluate the level of information provided, ascertain the trends, and explore the determining factors for IR. The study focused on two of the content elements (business model and governance) and two of the guiding principles (connectivity and materiality) of IR. A voluntary disclosure index was used on the sample of 91 firms in IIRC's pilot program with a hypothesis on corporate variables. It was discovered that the disclosure level is substantially associated with the specific environment of the firm's industry and region, assurance of the publication, and reports on the IIRC's website. It also indicated that the level of disclosure reached the medium level of disclosure.

The review of extant related literature of empirical studies revealed that most of the empirical studies in Nigeria concentrated on corporate attributes variables such as firm age, industry type, firm size and share ownership structure. Moreover, most of the research focused on developed countries and countries which have fully mandated the adoption of an IR framework. Also, the sparse empirical studies in Nigeria focused on the performance of IR in the financial sector, leaving out the oil and gas sector in Nigeria. This is concerning, given that the oil and gas sector in Nigeria was the most accused of environmental degradation because of its indiscriminate waste disposal and unguided oil spillage. This study contributes to extant empirical studies in developing nations, and especially Nigeria, that uphold the implementation of IR by examining the effect of firm size, board size, share ownership structure and profitability on the implementation of integrated reporting in listed oil and gas firms in Nigeria.

Extant related theories and literature to the study were reviewed, which led to the development of the null hypothesis that:

H_0: Corporate characteristics have no significant effect on the implementation of an IR framework within listed oil and gas firms in Nigeria

Data and Methods

The *ex-post facto* research design was used for this study; the reason for this is that the data was already in existence and could not be changed by the researcher. The Integrated Reporting Disclosure Score (IRDS), adopted from the IIRC (2021), was used to measure the implementation of an IR framework, which is the dependent variable. The scoring measures the eight (8) content elements of IIRC framework. Companies are categorized into four (4) categories; 1 is assigned to good disclosure, 2 to average, 3 to bad and 0 to non-disclosure. The population for this study includes the eleven (11) firms listed in the Nigerian Stock Exchange as of 31st December 2020. A census sampling technique was adopted, using the total population of eleven (11) firms as a sample. The variables for proxy corporate characteristics, which are the independent variable of this study, are firm size, board size, share ownership structure and profitability.

Secondary data was gathered from the annual reports on firms' websites for the period of 2011 to 2020. The justification for base year 2011 is that 2010 was the year of implementation of the International Financial Reporting Standard (IFRS) across the globe, which is the basis of IR and place emphasizes on full disclosure. Data gathered was analyzed using descriptive statistics, including the mean, median, skewness and kurtosis of the variables, and a panel least regression technique using E-view 10.0 statistical packages. The panel least square regression equation to investigate the effect of corporate characteristics on the implementation of integrated reporting framework was adopted from Kilic and Kuzey (2018) and formulated as follows:

$IR_{it} = \alpha_0 + \beta_1 SIZ_{it} + \beta_2 BSIZ_{it} + \beta_3 INSOWN_{it} + \beta_4 FOROWN_{it} + \beta_5 ROE_{it}\ U_{it}$……………Eqn. 1

Where;

IR = Implementation of Integrated Reporting Framework; SIZ = Firm size; BSIZ = Board size; ROE = Return on equity; SOS = Share ownership structure; INSOWN = Institution ownership structure; FOROWN = Foreign ownership structure; U = error term; α = beta coefficient; β_1 to β_5 = coefficient of slope parameter; $_{it}$ =The different independent variables of firm *i* at time *t* (2011-2020).

The *a-priori* expectation based on literature reviewed is that determinants will have a positive effect on the quality of environmental disclosure. It is statistically shown as $\beta_1 > 0$, $\beta_2 > 0$, $\beta_3 > 0$, $\beta_4 > 0$, $\beta_5 > 0$. The variables used are described in Table 1.

Table 1 Measurement of Variables

Variables	Description	Measurement	Source in literature
Firm size (FSIZ)	This is the company's total assets compared to the industry total assets	Ratio of company's total assets and industry total assets	Iredele (2019)

Board size (BSIZ)	This is the total number of members of the board of Directors.	This is the total number of members of the board of directors.	Tiamiyu, *et al.* (2021)
Share ownership Structure (INSOWN & FOROWN)	(i.) Institution ownership: proportion of shares owned by body corporate or government agency. (ii.) Foreign ownership: proportion of shares owned by foreign investor.	i.) Institution ownership: The percentage of equity owned by body corporate or government agency to total equity. (ii.) Foreign ownership: The percentage of equity owned by foreign investor to total equity.	Adelowotan & Udofia, (2021)
Profitability: Return on Equity (ROE)	This is the ratio of operating profit to shareholder's fund. .	This is the ratio of operating profit to shareholder's fund.	Kilic & Kuzey, (2018)
Integrated Reporting framework implementation (IR)	The scoring measures the eight content elements of IIRC framework namely, (i) overview and external environment (ii) governance (iii) business model (iv) risk and opportunities (v) strategy and resource (vi) performance (vii) outlook (viii) basis of preparation.	Integrated Reporting framework scoring index ranked the firms into three (4) categories; value of 1 for good, 2 for average and 3 for bad disclosure & 0 non-disclosure.	Kilic & Kuzey (2018)

Source: Author's compilation (2021)

Data Analysis and Discussion of Findings

Descriptive Statistics

The results presented in Table 2 represent the descriptive statistical results obtained. It is evident from Table 2 that implementation of an IR framework, returns on equity, institution ownership, foreign ownership, size of the firm, and board size average 0.02400, 0.0699, 12.72000, 0.1476, 0.04575, and 0.02627, respectively. The descriptive statistics results also showed that all series display a high level of consistency, as their mean and median values are within the minimum and maximum values of the series. Also, the variables have standard deviations of 0.01885, 0.1299, 2.1497, 0.0458, 0.0389, and 0.01540 for the respective variables. The variables also exhibit increasing return to scale, given the Jaque Bera statistics values of 2.36179, 20.328, 0.51846, 0.9836, 1.46791, and 0.85769, respectively.

The deviations of the actual data from their mean value are very low, as indicated by the relatively low values of the standard deviations. The statistics show that the series are positively and negatively skewed, which indicates that the distribution has both a right and left tail, because the tail of the distribution is pointed towards the upper end of the distribution. The homogeneity of the series is measured by the low value of the standard deviation, which indicates that there is little dispersion in the distribution, as all the scores are relatively smaller to one another. The statistics are also positively, negatively, and symmetrically skewed, which means that the series are normally distributed. The scores are centrally spread across the distribution, as revealed in the kurtosis, which shows the distribution is normal. The sum of square deviation for the distribution is large for one of the variables, which indicates that they are widely distributed. The smallness of some shows that they are clustered around the mean score.

Table 2 Descriptive Statistics

	IR	ROE	INSOWN	FOROWN	FSIZ	BSIZ
Mean	0.02705	0.1143	13.0880	0.3869	0.06544	0.02532
Median	0.02400	0.0699	12.7200	0.1476	0.04575	0.02627
Maximum	0.06968	0.4800	16.0100	0.2769	0.13326	0.04481
Minimum	0.00863	0.0483	9.59000	0.0984	0.02507	0.00298
Std. Dev.	0.01885	0.1299	2.14971	0.0458	0.03894	0.01540
Skewness	1.15789	2.5562	0.05542	0.0798	0.77961	-0.27402
Kurtosis	3.55268	7.7592	1.89003	2.9467	1.95509	1.67405
Jarque-Bera	2.36179	20.328	0.51846	0.9836	1.46791	0.85769
Probability	0.30700	0.0000	0.77164	0.2649	0.48000	0.65125
Sum	0.27053	1.1431	130.880	1.0943	0.65444	0.25326
Sum Sq. Dev.	0.00320	0.1520	41.5913	0.0764	0.01364	0.00213
Observations	110	110	110	110	110	110

Source: Authors' computation (2021)

Test for serial correlation

Table 3 Serial correlation results

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	6.174981	Prob. F(8,1)	0.3021
Obs*R-squared	6.701587	Prob. Chi-Square(8)	0.2792
Scaled explained SS	0.053915	Prob. Chi-Square(8)	1.0000

H_0: Residual of the Panel Least Square Model is not serially correlated

Source: Authors' computation (2021)

The serial correlation test in Table 3 uses the Breusch-Pagan-Godfrey Serial Correlation LM Test, comparing the observed r-squared value of 6.701587 and the corresponding probability value of 0.2792, which is higher than 5%, meaning that we cannot reject the null hypothesis that the residual of the least square model is not serially correlated, which is a desirable result.

Corporate Characteristics and Implementation of Integrated Reporting Framework

Panel least square regression analysis was conducted to test the formulated hypothesis, the result of which is presented in Table 4. The r-squared statistic, 0.69491 (Table 4) indicates that there is approximately 69.49% logical variation in the implementation of IR, which is the dependent variable, and is explained by the combination of the explanatory variables, i.e., return on equity, institution ownership structure, foreign ownership structure, size of the firm, and board size. The f-statistic of 22.55553 is significant at 1%, as the probability value estimate of 0.002128 has indicated. The f-statistic shows that returns on equity, institution ownership structure, foreign ownership structure, size of the firm, and board size are jointly significant in explaining implementation (dependent variable). Similarly, the Durbin-Watson statistic value is 2.817337, which is greater than 2 (rule of thumb) and is also greater than the r-squared statistic value of 0.69491. The implication of this is that the model is not spurious and can be accepted.

Furthermore, the coefficients of the independent variables are positive, such that the coefficient of returns on equity, institution ownership structure, foreign ownership structure, size of the firm, and board size are 0.049427, 0.000798, 0.432487, 0.305028, and 0.055923, indicating that a unit increase in returns on equity, institution ownership structure, foreign ownership structure, size of the firm and board size will increase implementation of integrated reporting by 4.9%, 0.08%, 43.24%, 30.50%,, and 55.92% respectively. Returns on equity, size of the firm, and board size are statistically significant to implementation of an IR framework, as their probability values are less than 5% (the significant level). Institution ownership structure and foreign ownership structure are not statistically significant to implementation of an IR framework, as their probability values are greater than the 5% significance level upon which this study is based.

The result obtained agrees with the study of Tiamiyu et al. (2021) and Iredele (2019), who discovered that size of the firm, profitability and board size had a positive and significant association with the level of IRs in Nigeria and South Africa. Other studies that agree with this result are those of Udofia et al. (2020), and Kilic and Kuzey (2018), who found an affirmative and significant influence of size of the firm and implementation of an IR framework. Moreover, the result is in conformity with the study conducted by Adelowotan and Udofia (2021), who revealed that institutional ownership structure and foreign ownership structure have an insignificant relationship with the implementation of an IR framework in Nigeria.

Contrarily, Meuleman (2018) found a negative and insignificant influence of profitability on the implementation of an IR framework, while Umoren et al. (2015) found that environmental, social and governance (ESG) factors have a negative impact on firm size. However, Melloni et al. (2016) found no statistically significant impact of firm size on implementation of IR. The results of this empirical study are in accord with Legitimacy Theory, which calls for firms to observe prevailing norms and adopt a regulatory framework for the geographical location in which their businesses operate. This is to gain and sustain societal recognition and improve the prestige of the firm.s Therefore, board size, firm size and profitability are corporate characteristics that drive firms in supporting the implementation of the innovative IR framework.

Table 4 Panel least square regression results

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.010466	0.019297	0.542359	0.6109
ROE	0.049427	0.003372	2.114818	0.0081
INSOWN	0.000798	0.001220	-0.653752	0.5421
FOROWN	0.432487	1.0876	0.2930	0.6708
FSIZ	0.305028	0.076778	3.972841	0.0106
BSIZ	0.055923	0.139574	0.400671	0.0421
Weighted Statistics				
R-squared	0.69491	Mean dependent var		0.027053
Adjusted R-squared	0.67054	S.D. dependent var		0.018857
S.E. of regression	1.5797	Sum squared resid		168.2570
F-statistic	22.55553	Durbin-Watson stat		2.817337
Prob(F-statistic)	0.002128			

Source: Authors' computation (2021)

Conclusion and Recommendations

This empirical research studies the influence of corporate characteristics on implementation of an IR framework in the listed oil and gas firms in Nigeria. The proxies of the independent variable are firm size, board size, share ownership structure, and profitability. Integrated Reporting Disclosure Score was used to extract information from annual reports for the dependent variable, which is implementation of an IR framework. The findings show that the examined corporate characteristics impound a positive effect on IR frameworks among listed oil and gas firms in Nigeria, with a statistically significant influence on profitability and firm and board size. It was concluded that size of the firm, board size, and profitability have a positive and momentous statistical influence on the implementation of an IR framework, while share ownership structure has an insignificant influence. The study further upholds extant literature in developing countries and can serve as a reference point in implementation of IR frameworks for listed oil and gas firms in Nigeria.

The implication of the findings is that firms with high profitability will likely have enough resources for implementation of an IR framework. This will also enable efficient decision-making at the board of director level and improve information available to various stakeholders.

Implementation of an IR framework is recommended to the regulatory authorities to be done in piecemeal, starting from the listed large-size firms in the oil and gas sector in Nigeria, to improve global corporate legitimacy and stakeholder confidence. Nigeria's Code of Corporate Governance for quoted firms should also be revised to incorporate mandatory implementation of an IR framework as part of listing requirements. This, in the long run, will give a global competitive advantage to firms, and increase foreign direct investments in the country.

References

Adegboyegun, A.E., Alade, M.E., Ben-Caleb, E., Ademola, A.O., Eluyela, D.F., & Oladipo, O.A. (2020). Integrated reporting and corporate performance in Nigeria: Evidence from the banking industry. *Cogent Business & Management, 7*(1), 1-12, https://doi.org/10.1080/23311975.2020.1736866.

Adelowotan, M.O., & Udofia, I.E. (2021). Do corporate attributes drive integrated reporting amongst listed companies in Nigeria? *Journal of Economic and Financial Sciences, 14*(1), 1-8.

Dumay, J., Bernardi, C., Guthriea, J., & Demartini, P. (2016). Integrated reporting: A structured literature review. *Accounting Forum*, 1-20. http://dx.doi.org/10.1016/j.accfor.2016.06.001.

Gnanaweera, K.A., & Kunori, N. (2018). Corporate sustainability reporting: Linkage of corporate disclosure information and performance indicators. *Cogent Business and Management, 5*(1), 1-21. http://doi.org/10.1080/23311975.2018.1423872.

International Integrated Reporting Council (IIRC). (2021). Integrated Reporting Framework. 1-58, https://integratedreporting.org/wp-content/uploads/2021/01/InternationalIntegratedReportingFramework.pdf.

Iredele, O.O. (2019). Examining the association between quality of Integrated reports and Corporate characteristics. *Heliyon, 5*(1), 1-9.

Iyoha, F.O., Ojeka, S.A., & Ogundana, O.M. (2017). Bankers' Perspectives on Integrated Reporting for Value Creation: Evidence from Nigeria. *Banks and Bank System, 12*(2). 100–105. http://doi.org/10.

Kilic, M., & Kuzey, C. (2018). Determinants of forward-looking disclosures in integrated reporting. *Managerial Auditing Journal , 33*(1), 115–144. https://doi.org/10.1108/MAJ-12-2016-1498.

Mahjoub, L.B. (2019). Disclosure about corporate social responsibility through ISO 26000 implementation made by Saudi listed companies. *Cogent Business and Management, 6*(1), 1-23. http://doi.org/10.1080/23311975.2019.1609188.

Melloni, G., Stacchezzini, R., & Lai, A. (2016). Journal of Management & Governance. *The tone of business model disclosure: An impression management analysis of the integrated reports, 20*(2), 295-320. https://doi.org/10.1007/s10997-015-9319-z.

Meuleman, M. (2018). Determinants of Integrated Reporting in Europe: an Empirical Study . *(Unpublished Master's Dissertation). Faculty of Economics, University of Gent, Belgium.*

Mirza, A., Malek, M., & Abdul-Hamid, M.A. (2019). Value Relevance of Financial Reporting: Evidence from Malaysia. *Cogent Economics and Finance, 7*(1), 1–19. http://doi.org/10.1080/23322039.2019.1651623.

Navarrete-Oyarce, J., Gallegos, J.A., Moraga-Flores, H., & Luis Gallizo, J. (2021). Integrated Reporting as an Academic Research Concept in the Area of Business. *Sustainability, 13*(1), 1-16. https://doi.org/10.3390/su13147741.

Ofoegbu, G.N., Odoemelam, N., & Okafor, R.G. (2018). Corporate board characteristics and environmental disclosure quantity: Evidence from South Africa (integrated reporting) and

Nigeria (traditional reporting). *Cogent Business and Management, 5*(1), 1-27. http://doi.org/10.1080/23311975.2018.1551510.

Okaro, S., Okafor, G., & Nnabuife, E. (2019). From Sustainability to Integrated Reporting-A paradigm shift for Nigeria's Global Competitiveness. *International Journal of Accounting & Finance*, 40-51.

Prencipe, A. (2004). Proprietary costs and determinants of voluntary segment disclosure: evidence from Italian listed companies. *European Account Review, 13*(2), 319-340.

Rivera-Arrubla, Y.A., Zorio-Grima, A., & García-Benau, M.A. (2017). Integrated reports: Disclosure level and explanatory factors. *Social Responsibility Journal, 13*(1), 155–176. https://doi.org/10.1108/SRJ-02-2016-0033.

Savindya, K.P., & Rajapakse, R.P. (2021). The Determinants of Integrated Reporting Quality of Sri Lanka. *Student Conference in Finance. 4*, 44-46. Nugegoda, Sri Lanka: Department of Finance, Faculty of Management Studies and Commerce, University of Sri Jayewardenepura.

Tiamiyu, M.A., Oyedokun, G.E., & Adeyemo, A. (2021). Firm Characteristics and Sustainability Reporting of Listed Manufacturing Companies in Nigeria. *AFAR Multidisciplinary Journal of Management Sciences, 3*(1), 1-18.

Udofia, I.E., Fagboro, G.D., & Adeyemi, S.B. (2020). Feasibility of adoption of integrated reporting in Nigeria. *Global Journal of Accounting, 6*(1), 1–11.

Umoren, A.O., Udo, E.J., & George, S. (2015). Environmental, social and governance disclosures: A call for integrated reporting in Nigeria. *Journal of Finance and Accounting, 3*(6), 227–233. https://doi.org/10.11648/j.jfa.20150306.19.

Uyar, A., & Kılıç, M. (2012). Value relevance of voluntary disclosure: Evidence from from Turkish firms. *Journal of Intellectual Capital, 13*(3), 363–376, https://doi.org/10.1108/14691931211248918.

Zhang, J. (2017). *Users perceptions of the drivers for corporate sustainability disclosures made by Chinese listed companies.* Unpublished thesis submitted to Editth Cowan University.

Zyznarska-Dworczak, B. (2018). The Reliability of Integrated Reporting. *Poznań University of Economics and Business, 50*(3), 1-10. DOI: 10.15611/pn.2018.503.4 4.